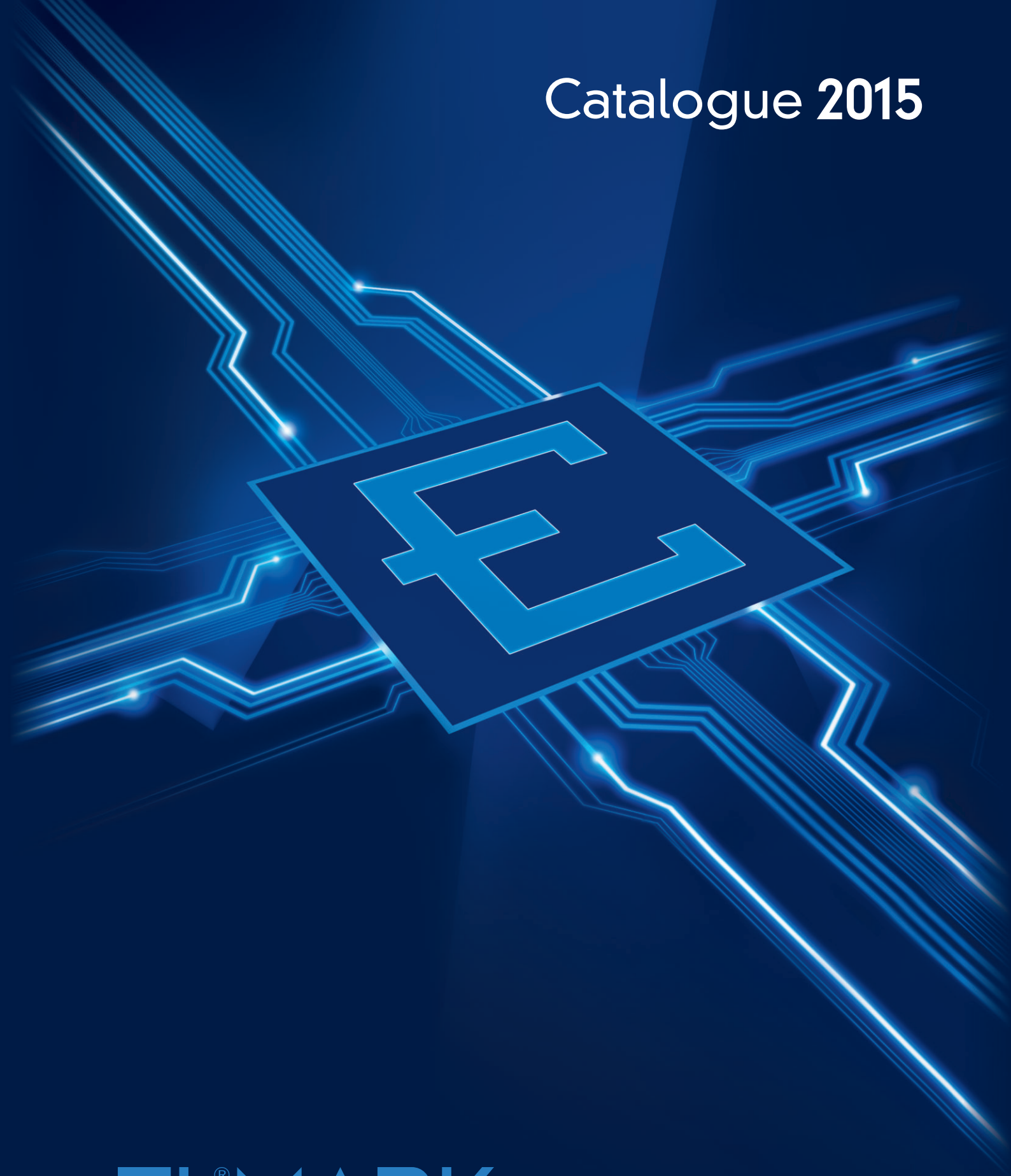
Catalogue **2015**



ELMARK®

The Brand of Electricity

ELMARK®

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25 Auxiliary devices for circuit breakers


26 - 30 High power safety devices and isolating switches


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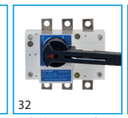
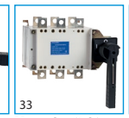

32 Isolating switches ISS2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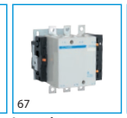
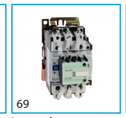
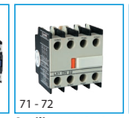
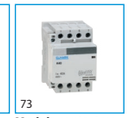

67 Low voltage contactors LT1-F


68 Low voltage contactors- LP-1D


69 Low voltage contactors CJ19-43


70 Low voltage reverse contactors


71 - 72 Auxiliary contact blocks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ELMARK

COMPANY INFORMATION



ELMARK

is a leading European certified trademark of LOW VOLTAGE ELECTRICAL AND LIGHTING EQUIPMENT, complying with the applicable European standards, incl. the Directive 2006/95/EC (ex.73/23/EEC) Low Voltage Directives (LVD), INTERTEK, RoHS, EMC, ISO 9001:2008 and in reference with the requirements for CE marking.

The holder of the trademark ELMARK is the European company **ELMARK HOLDING SE with HEADQUARTER in LONDON, UK.**

It represents a group of 14 affiliate companies in 10countries: United Kingdom, Bulgaria, Romania, Hungary, Slovenia, Croatia, Serbia, Bosnia and Herzegovina, Greece, United Arab Emirates.

INTERNATIONAL TRADE OFFICE

ELMARK TRADE LTD, Varna, Bulgaria

Our professional team of International Trade Managers is dedicated to expand our ELMARK sales network and establish close relations with our clients around the globe and offer quick and competent assistance on any enquiries and questions.

EUROPEAN FACTORY AND WAREHOUSE

ELMARK INDUSTRIES SC, Dobrich, Bulgaria

The facilities manufacture and maintain significant stock availabilities and provides competitive and quick distribution throughout Europe.

MIDDLE EAST FACTORY AND WAREHOUSE

ELMARK INDUSTRIES SC Branch, Dubai, UAE

As located in Dubai Silicon Oasis, we are able to provide faster and cost effective solutions

to our clients in Middle East and Africa as well as keep close relationship with our partners to handle and satisfy all demands and requirements.

Our successful commercial policy is due to the high quality of the product range and the successful balance of supply and demand of electrical and lighting equipment. As a result, **ELMARK HOLDING SE** has been a reliable and reputable partner on the European and world market for already fifteen years, offering good quality products at competitive prices.

SOLUTIONS

Over 7000 LOW VOLTAGE ELECTRICAL AND LIGHTING SOLUTIONS

QUALITY

Up to 7 YEARS WARRANTY

LIABILITY

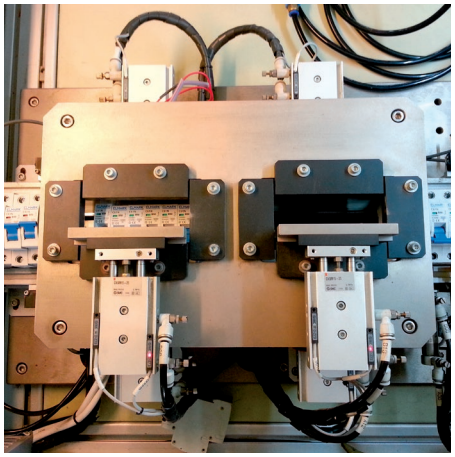
1 500 000 EUR ALLIANZ GERMANY

CERTIFICATES

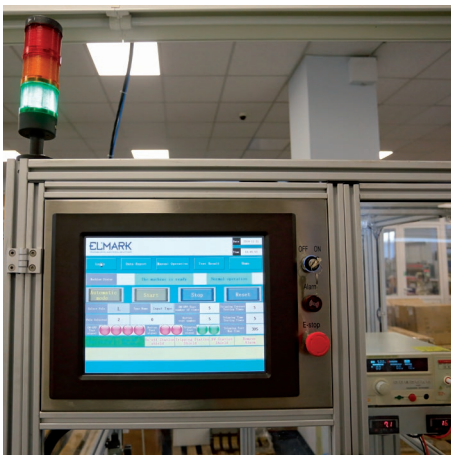
IEC IECEE Intertek RoHS CE EMC LVD


CENTRAL WAREHOUSE
ELMARK
PROFESSIONAL ELECTRICAL EQUIPMENT
ELMARK INDUSTRIES





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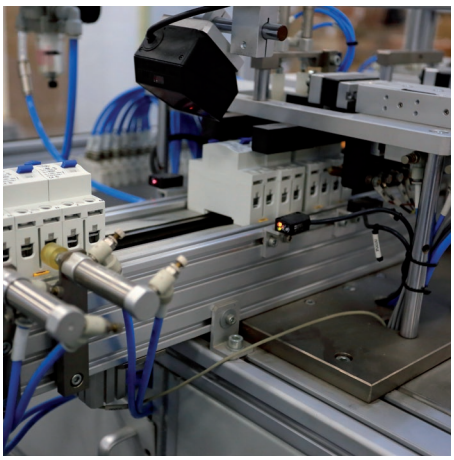
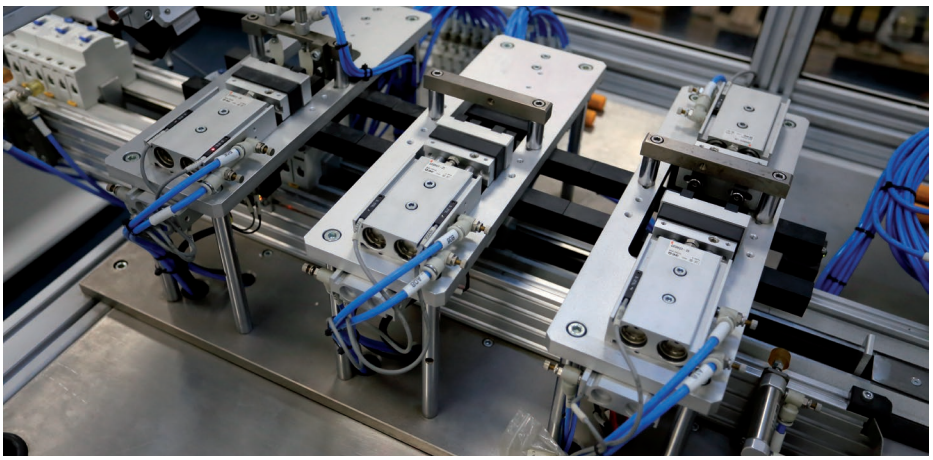




Allianz Bulgaria
Insurance Co. Ltd.

General Insurance

TO WHOM IT MAY CONCERN

CERTIFICATE OF COVER

This is to certify that we, "Allianz Bulgaria" Insurance Co., Ltd., Bulgaria, Sofia, in our capacity as Insurers, have issued an insurance Policy No 13000150390000001 and effected Product Liability insurance as follows:

ASSURED:	ELMARK INDUSTRIES AD, BULSTAT No. 124634156, Dobrich, Dobrudzha 2 Boul.
Interest	Production of Miniature Circuit Breakers (MCB), Molded Case Circuit Breakers (MCCB), Residual Current Devices (RCD) and Contactors and Devices for Control and Protection of Electrical Motors. Assembly and testing of Fluorescent, Industrial and LED lighting.
Limits:	1 500 000 EUR any one occurrence 1 500 000 EUR in aggregate for the insurance period
PERIOD:	TWELVE MONTHS with effect from 01-01-2015
Territorial Scope:	Worldwide except USA and Canada and the territories under their jurisdiction

Warranties, if any :

In the event that the Assured or anyone acting on his behalf uses the above information as evidence for insurance or evidence of financial responsibility under any applicable law relating to financial responsibility, or otherwise shows or offers it to any other party as evidence of insurance, it must be clearly understood that this confirmation relates only to the dates set out above and that such insurance is subject to General Conditions of "Allianz Bulgaria", attached clauses and terms, conditions, limitations, exclusions and other provisions of the Insurance Policy issued.

Issued on December 15TH 2014

Place of issue: Varna

№ 0090356

Allianz Bulgaria Insurance Co. Ltd. 039

"ALLIANZ BULGARIA" INS Co., LTD

Allianz

ORIGINAL

ELMARK

BUREAU VERITAS
Certification

ELMARK INDUSTRIES SC
2, Dobrudzha Blvd., 9300 Dobrich, Bulgaria

Bureau Veritas Certification Holding SAS – UK Branch certify that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2008

Scope of certification

Production and trade of Miniature Circuit Breakers (MCB), Molded Case Circuit Breakers (MCCB), Residual Current Devices (RCD), Contactors and Devices for Control and Protection of Electrical Motors. Assembly and testing of Fluorescent, Industrial and LED lighting.

Certification cycle start date: **16 March 2015**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **16 March 2018**

Original certification date: **07 April 2009**

Certificate No: BG120416.1Q Version 1, Revision date: **12 January 2015**

alf of BVCH SAS UK Branch

ion body address: 66 Prescot Street, London, E1 8HG, United Kingdom
fice: 81A, Bulgaria Blvd., 1404 Sofia, Bulgaria

clarifications regarding the scope of this certificate and the applicability of the ment system requirements may be obtained by consulting the organization. k this certificate validity please call: +359 (2) 983 60 44

UKAS MANAGEMENT SYSTEMS
008

Page 1 of 1

BUREAU VERITAS
Certification

ELMARK INDUSTRIES SC
BRANCH
B-06, LIU-4, Dubai Silicon Oasis, Dubai UAE

Bureau Veritas Certification Holding SAS – UK Branch certify that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2008

Scope of certification

Production and trade of Miniature Circuit Breakers (MCB), Molded Case Circuit Breakers (MCCB), Residual Current Devices (RCD), Contactors and Devices for Control and Protection of Electrical Motors. Assembly and testing of Fluorescent, Industrial and LED lighting.

Certification cycle start date: **12 January 2015**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **11 January 2018**

Original certification date: **12 January 2015**

Certificate No: BG120416.2Q Version 1, Revision date: **12 January 2015**

Signed on behalf of BVCH SAS UK Branch

Certification body address: 66 Prescot Street, London, E1 8HG, United Kingdom
Local Office: 81A, Bulgaria Blvd., 1404 Sofia, Bulgaria

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization. To check this certificate validity please call: +359 (2) 983 60 44

UKAS MANAGEMENT SYSTEMS
008

Page 1 of 1



Intertek

Certificate

for European Product Safety

Reference No. 1313575

akers for overcurrent protection

C61N, C62N, C63N, C64N

Elmark Industries SC
2 Dobrudzha blvd.,
Dobrich
BULGARIA

EN 60898-1:2003 and A1+A11+A12 +A13

16 October 2018

The product satisfies the provisions for CE marking according to the Low Voltage Directive 2006/95/EC.

Elmark Industries SC
2 Dobrudzha blvd.,
Dobrich, BULGARIA

des production control, constitutes sufficient support for an EC Declaration of
g, according the principle of presumption of conformity, of the product
ge Directive 2006/95/EC
re before end of validity of this certificate due to new issued Standard or
within the EU legislation.

Intertek Semko AB, Product Certification — Place Kista - Stockholm

Paul Klemets — Date 16 October 2013

IEC TECEE CB SCHEME — Ref. Certif. No. SE-74386

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME — SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE — CERTIFICAT D'ESSAI OC

Product / Produit	Circuit-breakers for overcurrent protection
Name and address of the applicant / Nom et adresse du demandeur	Elmark Industries SC 2 Dobrudzha blvd., Dobrich, BULGARIA
Name and address of the manufacturer / Nom et adresse du fabricant	Same as applicant
Name and address of the factory / Nom et adresse de l'usine	Same as applicant
Ratings and principal characteristics / Valeurs nominales et caractéristiques principales	See page 2
Trademark (if any) / Marque de fabrique (si elle existe)	ELMARK
Type of Manufacturer's Testing Laboratories used / Type de programme du laboratoire d'essais constructeur	-
Model / Type Ref. / Ref. De type	C61N, C62N, C63N, C64N
Additional information (if necessary may also be reported on page 2) / Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	-
A sample of the product was tested and found to be in conformity with / Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60898-1:2002+A1+A2
As shown in the Test Report Ref. No. which forms part of this Certificate / Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	13070002 1SHA-001 13070002 1SHA-002 13070002 1SHA-003 13070002 1SHA-004

This CB Test Certificate is issued by the National Certification Body / Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

Intertek Semko AB
Box 1103
SE-164 22 Kista, Sweden
tel +46 8 750 00 00

Intertek — Signature: Paul Klemets

Date: 16 October 2013

1/2 — TIB



Intertek

Certificate

for European Product Safety

Reference No. 1313618

rrent operated circuit-breakers without
ercurrent protection for household and
similar uses (RCCB's)

JEL1

Elmark Industries SC
2 Dobrudzha blvd.,
Dobrich,
BULGARIA

EN 61008-2-1:1994 and A11
EN 61008-1:2012

17 October 2018

The product satisfies the provisions for CE marking according to the Low Voltage Directive 2006/95/EC.

Elmark Industries SC
2 Dobrudzha blvd.,
Dobrich,
BULGARIA

des production control, constitutes sufficient support for an EC Declaration of
g, according the principle of presumption of conformity, of the product
ge Directive 2006/95/EC.
re before end of validity of this certificate due to new issued Standard or
within the EU legislation.

Intertek Semko AB, Product Certification — Place Kista - Stockholm

Paul Klemets — Date 17 October 2013

IEC TECEE CB SCHEME — Ref. Certif. No. SE-74398

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME — SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE — CERTIFICAT D'ESSAI OC

Product / Produit	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCB's)
Name and address of the applicant / Nom et adresse du demandeur	Elmark Industries SC 2 Dobrudzha blvd., Dobrich, BULGARIA
Name and address of the manufacturer / Nom et adresse du fabricant	Same as above
Name and address of the factory / Nom et adresse de l'usine	Same as applicant
Ratings and principal characteristics / Valeurs nominales et caractéristiques principales	U_e= 240V~(1P+N), 415V~(3P+N) I_n=10, 16, 20, 25, 32, 40, 63A $I_{\Delta n}$= 0,03, 0,1, 0,3A; type AC & type A, I_{nd}= I_{cn}= 6000A
Trademark (if any) / Marque de fabrique (si elle existe)	ELMARK
Type of Manufacturer's Testing Laboratories used / Type de programme du laboratoire d'essais constructeur	-
Model / Type Ref. / Ref. De type	JEL1
Additional information (if necessary may also be reported on page 2) / Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	-
A sample of the product was tested and found to be in conformity with / Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 61008-2-1:1990 IEC 61008-1:2010 + A1
As shown in the Test Report Ref. No. which forms part of this Certificate / Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	13070002 3SHA.001, 13070002 3SHA-002

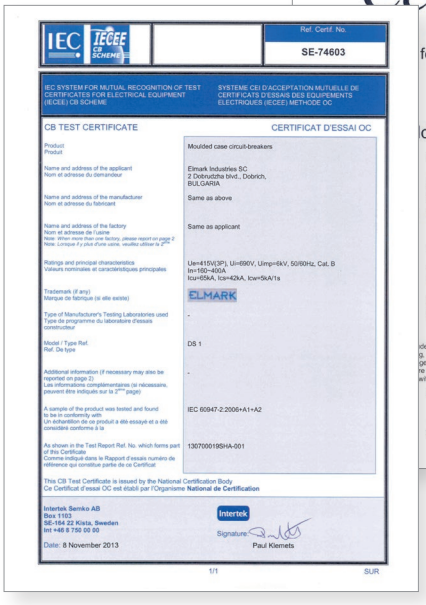
This CB Test Certificate is issued by the National Certification Body / Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

Intertek Semko AB
Box 1103
SE-164 22 Kista, Sweden
tel +46 8 750 00 00

Intertek — Signature: Paul Klemets

Date: 17 October 2013

1/1 — SUR



Intertek

Certificate

for European Product Safety

Reference No. 1314640

ded case circuit-breakers

DS 1

Elmark Industries SC
2 Dobrudzha blvd., Dobrich,
BULGARIA

EN 60947-2:2006 + A1+A2

8 November 2018

The product satisfies the provisions for CE marking according to the Low Voltage Directive 2006/95/EC.

Elmark Industries SC
2 Dobrudzha blvd., Dobrich,
BULGARIA

des production control, constitutes sufficient support for an EC Declaration of
g, according the principle of presumption of conformity, of the product
ge Directive 2006/95/EC
re before end of validity of this certificate due to new issued Standard or
within the EU legislation.

Intertek Semko AB, Product Certification — Place Kista - Stockholm

Paul Klemets — Date 8 November 2013

IEC TECEE CB SCHEME — Ref. Certif. No. SE-74603

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME — SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE — CERTIFICAT D'ESSAI OC

Product / Produit	Moulded case circuit-breakers
Name and address of the applicant / Nom et adresse du demandeur	Elmark Industries SC 2 Dobrudzha blvd., Dobrich, BULGARIA
Name and address of the manufacturer / Nom et adresse du fabricant	Same as above
Name and address of the factory / Nom et adresse de l'usine	Same as applicant
Ratings and principal characteristics / Valeurs nominales et caractéristiques principales	Ue=415V(3P), Ui=690V, Uimp=6kV, 50/60Hz, Cat. B In=160~400A Icu=65kA, Ics=42kA, Icw=5kA/1s
Trademark (if any) / Marque de fabrique (si elle existe)	ELMARK
Type of Manufacturer's Testing Laboratories used / Type de programme du laboratoire d'essais constructeur	-
Model / Type Ref. / Ref. De type	DS 1
Additional information (if necessary may also be reported on page 2) / Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	-
A sample of the product was tested and found to be in conformity with / Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60947-2:2006+A1+A2
As shown in the Test Report Ref. No. which forms part of this Certificate / Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	13070001 9SHA-001

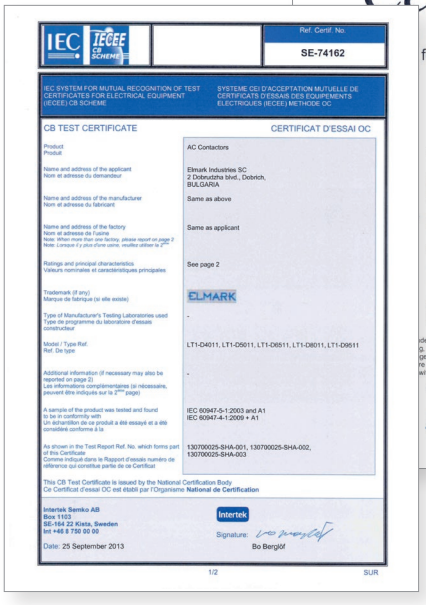
This CB Test Certificate is issued by the National Certification Body / Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

Intertek Semko AB
Box 1103
SE-164 22 Kista, Sweden
tel +46 8 750 00 00

Intertek — Signature: Paul Klemets

Date: 8 November 2013

1/1 — SUR



Intertek

Certificate

for European Product Safety

Reference No. 1312433

AC Contactor

LT1-D4011, LT1-D5011, LT1-D6511, LT1-D8011, LT1-D9511

Elmark Industries SC
2 Dobrudzha blvd.,
Dobrich,
BULGARIA

EN 60947-5-1:2004 and A1
EN 60947-4-1:2010+A1

25 September 2018

The product satisfies the provisions for CE marking according to the Low Voltage Directive 2006/95/EC.

Elmark Industries SC
2 Dobrudzha blvd., Dobrich,
BULGARIA

des production control, constitutes sufficient support for an EC Declaration of
g, according the principle of presumption of conformity, of the product
ge Directive 2006/95/EC.
re before end of validity of this certificate due to new issued Standard or
within the EU legislation.

Intertek Semko AB, Product Certification — Place Kista - Stockholm

Bo Berglöf — Date 25 September 2013

IEC TECEE CB SCHEME — Ref. Certif. No. SE-74162

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME — SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE — CERTIFICAT D'ESSAI OC

Product / Produit	AC Contactors
Name and address of the applicant / Nom et adresse du demandeur	Elmark Industries SC 2 Dobrudzha blvd., Dobrich, BULGARIA
Name and address of the manufacturer / Nom et adresse du fabricant	Same as above
Name and address of the factory / Nom et adresse de l'usine	Same as applicant
Ratings and principal characteristics / Valeurs nominales et caractéristiques principales	See page 2
Trademark (if any) / Marque de fabrique (si elle existe)	ELMARK
Type of Manufacturer's Testing Laboratories used / Type de programme du laboratoire d'essais constructeur	-
Model / Type Ref. / Ref. De type	LT1-D4011, LT1-D5011, LT1-D6511, LT1-D8011, LT1-D9511
Additional information (if necessary may also be reported on page 2) / Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	-
A sample of the product was tested and found to be in conformity with / Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60947-5-1:2003 and A1 IEC 60947-4-1:2009 + A1
As shown in the Test Report Ref. No. which forms part of this Certificate / Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	13070002 5-SHA-001, 13070002 5-SHA-002, 13070002 5-SHA-003

This CB Test Certificate is issued by the National Certification Body / Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

Intertek Semko AB
Box 1103
SE-164 22 Kista, Sweden
tel +46 8 750 00 00

Intertek — Signature: Bo Berglöf

Date: 25 September 2013

1/2 — SUR

*You can find the full size and information about the certificates on our website www.elmarkholding.eu



Intertek

Certificate

for European Product Safety

Reference No. 1313882

d Case Circuit-breakers with motor protection

TM2

Elmark Industries SC
2 Dobrudzha blvd., Dobrich
BULGARIA

EN 60947-2:2006 and A1
EN 60947-4-1:2010+A1

23 October 2018

The product satisfies the provisions for CE marking according to the Low Voltage Directive 2006/95/EC

Elmark Industries SC
2 Dobrudzha blvd., Dobrich
BULGARIA

ides production control, constitutes sufficient support for an EC Declaration of g, according the principle of presumption of conformity, of the product ge Directive 2006/95/EC re before end of validity of this certificate due to new issued Standard or within the EU legislation.

user instructions shall be written in a language acceptable to the country used.

Intertek Semko AB, Product Certification — *Place* Kista - Stockholm

Bo Bergl*f* — *Date* 23 October 2013

IEC IECEE CB SCHEME — Ref. Certif. No. SE-74455

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE — CERTIFICAT D'ESSAI OC

Product / Produit	Moulded case circuit-breakers with motor protection
Name and address of the applicant / Nom et adresse du demandeur	Elmark Industries SC 2 Dobrudzha blvd., Dobrich BULGARIA
Name and address of the manufacturer / Nom et adresse du fabricant	Same as above
Name and address of the factory / Nom et adresse de l'usine	Same as applicant
Ratings and principal characteristics / Valeurs nominales et caractéristiques principales	See page 2
Trademark (if any) / Marque de fabrique (si elle existe)	ELMARK
Type of Manufacturer's Testing Laboratories used / Type de programme du laboratoire d'essais constructeur	-
Model / Type Ref. / Ref. De type	TM2
Additional information (if necessary may also be reported on page 2) / Les informations complémentaires (si nécessaire, peuvent être indiquées sur la 2ème page)	See page 2
A sample of the product was tested and found to be in conformity with / Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60947-2:2006 and A1 IEC 60947-4-1:2009 + A1
As shown in the Test Report Ref. No. which forms part of this Certificate / Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	130700026SHA-001, 130700026SHA-002

This CB Test Certificate is issued by the National Certification Body / Ce Certificat d'essai OC est établi par l'Organisme National de Certification

Intertek Semko AB
Box 1103
SE-164 22 Kista, Sweden
Int +46 8 750 00 00

Intertek

Signature:

Date: 23 October 2013

Bo Bergl*f*

1/2 — ASE



AOV

Test Report NO.: A07090441A3028 Date: Sep 17, 2007 Page 1 of 8

Customer: ELMARK INDUSTRIES SC
Address: 2"DOBRUDJA" BOULEVARD DOBRICH, BULGARIA
Report on the submitted sample said to be
Sample name: Residual Current Device (RCD)
Model: JEL1 2P/4P 16/25/40/63/80A 30/100/300/500mA
Item/Lot No.: /
Material: /
Buyer: /
Supplier: /
Manufacturer: /
Sample received date: Aug 27, 2007
Testing period: From Aug 27, 2007 to Sep 04, 2007

Testing Requested

As specified by client, to determine the Lead, Cadmium, Mercury, Hexavalent Chromium, PBB & PBDE content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).

Testing method:

With reference to IEC 62321, Ed. 111/54CDV

Testing Item	Pretreatment method	Measuring instrument	Report Limit
Lead (Pb)	IEC 62321, section 11/12/13	ICP-OES	2mg/kg
Cadmium (Cd)	IEC 62321, section 11/12/13	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321, section 10	CV-AAS	2 mg/kg
Chromium (Cr VI)	IEC 62321, section 9	UV-VIS	2 mg/kg 0.02 mg/kg
PBBs/ PBDEs	IEC 62321, section 7	GC-MS	5 mg/kg

Conclusion:

-When tested as specified the submitted sample complied with the requirements of commission Decision of 18 Aug 2005 amending Directive 2002/95/EC notified under document 2005/618/EC

******FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)******

Signed for AOV Ltd.

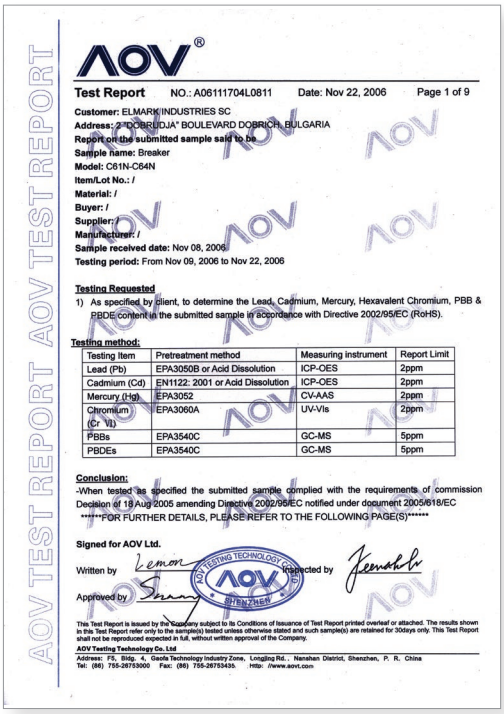
Written by Andy — Inspected by Wally

Approved by Jeremy

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

AOV Testing Technology Co., Ltd.

Address: Bldg. 4, Gaofa Technology Industry Zone, Longjing Rd., Nanshan District, Shenzhen, P. R. China
Tel: (86) 755-26753000 Fax: (86) 755-26753435 Http://www.aovt.com



AOV TEST REPORT AOV TEST REPORT

AOV

Test Report NO.: A06111704L0811 Date: Nov 22, 2006 Page 1 of 9

Customer: ELMARK INDUSTRIES SC
Address: 2"DOBRUDJA" BOULEVARD DOBRICH, BULGARIA
Report on the submitted sample said to be
Sample name: Breaker
Model: C61N-C64N
Item/Lot No.: /
Material: /
Buyer: /
Supplier: /
Manufacturer: /
Sample received date: Nov 08, 2006
Testing period: From Nov 09, 2006 to Nov 22, 2006

Testing Requested

1) As specified by client, to determine the Lead, Cadmium, Mercury, Hexavalent Chromium, PBB & PBDE content in the submitted sample in accordance with Directive 2002/95/EC (RoHs).

Testing method:

Testing Item	Pretreatment method	Measuring instrument	Report Limit
Lead (Pb)	EPA3050B or Acid Dissolution	ICP-OES	2ppm
Cadmium (Cd)	EN1122: 2001 or Acid Dissolution	ICP-OES	2ppm
Mercury (Hg)	EPA3052	CV-AAS	2ppm
Chromium (Cr VI)	EPA3060A	UV-Vis	2ppm
PBBs	EPA3540C	GC-MS	5ppm
PBDEs	EPA3540C	GC-MS	5ppm

Conclusion:

-When tested as specified the submitted sample complied with the requirements of commission Decision of 18 Aug 2005 amending Directive 2002/95/EC notified under document 2005/618/EC

******FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)******

Signed for AOV Ltd.

Written by Lemon — Inspected by

Approved by

AOV TESTING TECHNOLOGY CO., LTD. SHENZHEN

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

AOV Testing Technology Co. Ltd

Address: F5, Bldg. 4, Gaofa Technology Industry Zone, Longjing Rd., Nanshan District, Shenzhen, P. R. China
Tel: (86) 755-26753000 Fax: (86) 755-26753435. Http: //www.aovt.com



AOV

IQNet IRQC-MEA CNAS No. L2631

Test Report NO.: A07082429F2801 Date: Aug 24, 2007 Page 1 of 12

Customer: ELMARK INDUSTRIES SC
Address: 2 "DOBRUDJA" BOULEVARD, DOBRICH, BULGARIA
Report on the submitted sample said to be
Sample name: MCCB
Model: DS1-125, 160, 250, 400, 630, 800, 1250, 1600
Item/Lot No.: /
Material: /
Buyer: /
Supplier: /
Manufacturer: /
Sample received date: Jul 28, 2007
Testing period: From Jul 28, 2007 to Aug 13, 2007

Testing Requested

As specified by client, to determine the Lead, Cadmium, Mercury, Hexavalent Chromium, PBB & PBDE content in the submitted sample in accordance with Directive 2002/95/EC (RoHS).

Testing method:

With reference to IEC 62321, Ed. 111/54CDV

Testing Item	Pretreatment method	Measuring instrument	Report Limit
Lead (Pb)	IEC 62321, section 11/12/13	ICP-OES	2mg/kg
Cadmium (Cd)	IEC 62321, section 11/12/13	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321, section 10	CV-AAS	2 mg/kg
Chromium (Cr VI)	IEC 62321, section 9	UV-VIS	2 mg/kg 0.02 mg/kg
PBBs/ PBDEs	IEC 62321, section 7	GC-MS	5 mg/kg

Conclusion:

-When tested as specified the submitted sample complied with the requirements of commission Decision of 18 Aug 2005 amending Directive 2002/95/EC notified under document 2005/618/EC

******FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)******

Signed for AOV Ltd.

Written by — Inspected by Wally

Approved by

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

AOV Testing Technology Co., Ltd.

Address: Bldg. 4, Gaofa Technology Industry Zone, Longjing Rd., Nanshan District, Shenzhen, P. R. China
Tel: (86) 755-26753000 Fax: (86) 755-26753435 Http: //www.aovt.com

*You can find the full size and information about the certificates on our website www.elmarkholding.eu



CERTIFICATE

№ LVD- 14- 000- (2ea-14-807)- 002ER

Center for Testing and European Certification

"CTEC" Ltd. certifies that

Product — **LIGHTING FIXTURES** model: **PANEL0606,** cat. № **92LEDPANEL006** 230 V; 50 Hz; 36 W; class I
representative sample from lighting fixtures group with cat. №: *92LEDPANEL001; 92LEDPANEL002; 92LEDPANEL003; 92LEDPANEL004; 92LEDPANEL06; 92LEDPANEL007; 92LEDPANEL008; 92LEDPANEL15WH; 92LEDPANEL16WH; 92LEDPANEL38WH; 92LEDPANEL42WH*

Manufacturer — **ELMARK INDUSTRIES SC, Bulgaria** 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the — **EN 55015:2006+A1:2007+A2:2009** Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment **EN 61000-3-2:2006+A1:2009+A2:2009** Electromagnetic compatibility (EMC) Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase) **EN 61000-3-3:2008** Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection **EN 61547:2009** Equipment for general lighting purposes EMC immunity requirements ***EN 61000-4-2:2009*** *Electromagnetic compatibility Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test* ***EN 61000-4-4:2004+A1:2010*** *Electromagnetic compatibility Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test* ***EN 61000-4-5:2006*** *Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test* ***EN 61000-4-8:2010*** *Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test* ***EN 61000-4-11:2004*** *Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

Certificate has been issued on the base of — Test reports: № 2emc-e-14-807/13.01.2014 № 2emc- i-14-807/13.01.2014

First issue: 2014-01-13
Current issue: 2015-01-12
Stara Zagora

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00942

LIGHTING FIXTURES model: **PANEL0606,** cat. № **92LEDPANEL006** 230 V; 50 Hz; 36 W; class I
representative sample from lighting fixtures group with cat. №: *92LEDPANEL001; 92LEDPANEL002; 92LEDPANEL003; 92LEDPANEL004; 92LEDPANEL06; 92LEDPANEL007; 92LEDPANEL008; 92LEDPANEL15WH; 92LEDPANEL16WH; 92LEDPANEL38WH; 92LEDPANEL42WH*

ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with **2006/95/EC Low voltage directive** and standards **EN 60598-1:2008** **EN 60598-1:2008/A11:2009** Luminaires Part 1: General requirements and tests **EN 60598-2-2:1996** **EN 60598-2-2:1996/A1:1997** Luminaires Part 2: Particular requirements - Section 2: Recessed luminaires

Test report: № 2ea-14-807/13.01.2014

is based on the evaluation of the technical file and testing of the above mentioned assessment of the production process.

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00941



CERTIFICATE

№ EMC- 13- 000- (2emc-13-796)- 059ER

Center for Testing and European Certification

"CTEC" Ltd. certifies that

Product — **INDUSTRIAL LIGHTING FIXTURES** type: **Floodlights,** cat. № **98VEGA50** 230 V AC; 50 Hz; 50 W; class I; IP 65

Manufacturer — **ELMARK INDUSTRIES SC, Bulgaria** 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the — **EN 55015:2006+A1:2007+A2:2009** Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment **EN 61000-3-2:2006+A1:2009+A2:2009** Electromagnetic compatibility (EMC) Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase) **EN 61000-3-3:2008** Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection **EN 61547:2009** Equipment for general lighting purposes EMC immunity requirements ***EN 61000-4-2:2009*** *Electromagnetic compatibility Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test* ***EN 61000-4-4:2004+A1:2010*** *Electromagnetic compatibility Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test* ***EN 61000-4-5:2006*** *Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test* ***EN 61000-4-8:2010*** *Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test* ***EN 61000-4-11:2004*** *Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

Certificate has been issued on the base of — Test reports: № 2emc-e-13-796/18.12.2013 № 2emc- i-13-796/18.12.2013

First issue: 2013-12-19
Current issue: 2015-01-12
Stara Zagora

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00972

CERTIFICATE

№ LVD- 13- 000- (2ea-13-796)- 059ER

Center for Testing and European Certification

INDUSTRIAL LIGHTING FIXTURES type: **Floodlights,** cat. № **98VEGA50** 230 V AC; 50 Hz; 50 W; class I; IP 65

ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with **2006/95/EC Low voltage directive** and standards **EN 60598-1:2008** **EN 60598-1:2008/A11:2009** Luminaires Part 1: General requirements and tests **EN 60598-2-5:1998** Luminaires Part 2-5: Particular requirements - Floodlights

Test report: № 2ea-13 -796/18.12.2013

is based on the evaluation of the technical file and testing of the above mentioned assessment of the production process.

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00968



CERTIFICATE

№ EMC- 13- 000- (2emc-13-794)- 058ER

Center for Testing and European Certification

"CTEC" Ltd. certifies that

Product — **INDUSTRIAL LIGHTING FIXTURES** type: **BELL Reflector**, model: **ELECTRA50** cat. № **98ELECTRA50** 230 V AC; 50 Hz; 50 W; class I; IP 65
representative sample from lighting fixtures group with cat. №: *98ELECTRA3045; 98ELECTRA3090; 98ELECTRA30120; 98ELECTRA5045; 98ELECTRA5090; 98ELECTRA50120*

Manufacturer — **ELMARK INDUSTRIES SC, Bulgaria** 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the — **EN 55015:2006+A1:2007+A2:2009** Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment **EN 61000-3-2:2006+A1:2009+A2:2009** Electromagnetic compatibility (EMC) Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase) **EN 61000-3-3:2008** Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection **EN 61547:2009** Equipment for general lighting purposes EMC immunity requirements ***EN 61000-4-2:2009*** *Electromagnetic compatibility Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test* ***EN 61000-4-4:2004+A1:2010*** *Electromagnetic compatibility Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test* ***EN 61000-4-5:2006*** *Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test* ***EN 61000-4-8:2010*** *Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test* ***EN 61000-4-11:2004*** *Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

Certificate has been issued on the base of — Test reports: № 2emc-e-13-794/18.12.2013 № 2emc- i-13-794/18.12.2013

First issue: 2013-12-19
Current issue: 2015-01-12
Stara Zagora

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00966

CERTIFICATE

№ LVD- 13- 000- (2ea-13-794)- 058ER

Center for Testing and European Certification

INDUSTRIAL LIGHTING FIXTURES type: **BELL Reflector,** model: **ELECTRA50** cat. № **98ELECTRA50** 230 V AC; 50 Hz; 50 W; class I; IP 65
representative sample from lighting fixtures group with cat. №: *98ELECTRA3045; 98ELECTRA3090; 98ELECTRA30120; 98ELECTRA5045; 98ELECTRA5090; 98ELECTRA50120*

ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with **2006/95/EC Low voltage directive** and standards **EN 60598-1:2008** **EN 60598-1:2008/A11:2009** Luminaires Part 1: General requirements and tests

Test report: № 2ea-13-794/18.12.2013

is based on the evaluation of the technical file and testing of the above mentioned assessment of the production process.

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00965



CERTIFICATE

№ EMC- 13- 000- (2emc-13-793)- 057ER

Center for Testing and European Certification

"CTEC" Ltd. certifies that

Product — **LUMINARIES - ROAD LIGHTING FIXTURE** model: **SOFIA50,** cat. **№ 98SOFIA50** 230 V AC; 50 Hz; 50 W; class I; IP 65
representative sample from road lighting fixtures group with cat. №: *98SOFIA30; 98SOFIA50*

Manufacturer — **ELMARK INDUSTRIES SC, Bulgaria** 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the — **EN 55015:2006+A1:2007+A2:2009** Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment **EN 61000-3-2:2006+A1:2009+A2:2009** Electromagnetic compatibility (EMC) Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase) **EN 61000-3-3:2008** Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection **EN 61547:2009** Equipment for general lighting purposes EMC immunity requirements ***EN 61000-4-2:2009*** *Electromagnetic compatibility Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test* ***EN 61000-4-4:2004+A1:2010*** *Electromagnetic compatibility Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test* ***EN 61000-4-5:2006*** *Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test* ***EN 61000-4-8:2010*** *Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test* ***EN 61000-4-11:2004*** *Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

Certificate has been issued on the base of — Test reports: № 2emc-e-13-793/18.12.2013 № 2emc- i-13-793/18.12.2013

First issue: 2013-12-19
Current issue: 2015-01-12
Stara Zagora

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00962

CERTIFICATE

№ LVD- 13- 000- (2ea-13-793)- 057ER

Center for Testing and European Certification

"CTEC" Ltd. certifies that

LUMINARIES - ROAD LIGHTING FIXTURE model: **SOFIA50,** cat. **№ 98SOFIA50** 230 V AC; 50 Hz; 50 W; class I; IP 65
representative sample from road lighting fixtures group with cat. №: *98SOFIA30; 98SOFIA50*

ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with **2006/95/EC Low voltage directive** and standards **EN 60598-1:2008** **EN 60598-1:2008/A11:2009** Luminaires Part 1: General requirements and tests **EN 60598-2-3:2003** **EN 60598-2-3:2003/A1:2011** Luminaires Part 2-3: Particular requirements - Luminaires for road and street lighting

Test report: № 2ea-13-793/18.12.2013

is based on the evaluation of the technical file and testing of the above mentioned assessment of the production process.

Manager CTEC Ltd. /dipl. eng. Blagovesta Shineva/

00960

*You can find the full size and information about the certificates on our website www.elmarkholding.eu



Center for Testing and European Certification

CERTIFICATE

№ LVD- 14- 000- (2e-14-904)- 060E

LUMINAIRE
type: BELLA T8, cat. № 9BE236
230 V AC; 50 Hz; 2 x 36 W; Class I; IP 65

ELMARK INDUSTRIES SC, Bulgaria
2, Dobrudja Blvd. Dobrich, Bulgaria
tel.: + 359 58 500 055; fax: +359 58 500 060
e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with
2006/95/EC Low voltage directive
and standards
EN 60598-1:2008
EN 60598-1:2008/A11:2009 Luminaires
Part 1: General requirements and tests
EN 60598-2-1:1989 Luminaires
Part 2: Particular requirements - Section 1: Fixed general purpose luminaires

Test report:
№ 2e-14 -904/20.06.2014

Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/

00926

Center for Testing and European Certification

CERTIFICATE

№ EMC- 14- 000- (2emc-14-904)- 060E

"CTEC" Ltd. certifies that

Product: LUMINAIRE type: BELLA T8, cat. № 9BE236 230 V AC; 50 Hz; 2 x 36 W; Class I; IP 65

Manufacturer: ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the EN 55015:2006+A1:2007+A2:2009 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61000-3-2:2006+A1:2009+A2:2009 Electromagnetic compatibility Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase)
EN 61000-3-3:2008 Electromagnetic compatibility (EMC) -- Part 3-3: Limits Limitation of voltage changes, voltage fluctuations and flicker in public low- voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection
EN 61547:2009 Equipment for general lighting purposes EMC immunity requirements
EN 61000-4-2:2009 Electromagnetic compatibility Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test
EN 61000-4-4:2004+A1:2010 Electromagnetic compatibility Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
EN 61000-4-5:2006 Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test
EN 61000-4-8:2010 Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
EN 61000-4-11:2004 Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests

Certificate has been issued on the base of
Test reports:
№ 2emc-e-14-904/20.06.2014
№ 2emc-i -14-904/20.06.2014

Date of issue: 2014-09-30
Stara Zagora

Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/

00927



Center for Testing and European Certification

CERTIFICATE

№ LVD- 14- 000- (2e-14-905)- 061E

LUMINAIRE
type: GALA, cat. № 9GOME418
230 V AC; 50 Hz; 4 x 18 W; Class I; IP 20

ELMARK INDUSTRIES SC, Bulgaria
2, Dobrudja Blvd. Dobrich, Bulgaria
tel.: + 359 58 500 055; fax: +359 58 500 060
e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with
2006/95/EC Low voltage directive
and standards
EN 60598-1:2008
EN 60598-1:2008/A11:2009 Luminaires
Part 1: General requirements and tests
EN 60598-2-1:1989 Luminaires
Part 2: Particular requirements - Section 1: Fixed general purpose luminaires

Test report:
№ 2e-14 -905/20.06.2014

Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/

00925

Center for Testing and European Certification

CERTIFICATE

№ EMC- 14- 000- (2emc-14-905)- 061E

"CTEC" Ltd. certifies that

Product: LUMINAIRE type: GALA, cat. № 9GOME418 230 V AC; 50 Hz; 4 x 18 W; Class I; IP 20

Manufacturer: ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the EN 55015:2006+A1:2007+A2:2009 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61000-3-2:2006+A1:2009+A2:2009 Electromagnetic compatibility Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase)
EN 61000-3-3:2008 Electromagnetic compatibility (EMC) - Part 3-3: Limits Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection
EN 61547:2009 Equipment for general lighting purposes EMC immunity requirements
EN 61000-4-2:2009 Electromagnetic compatibility Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test
EN 61000-4-4:2004+A1:2010 Electromagnetic compatibility Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
EN 61000-4-5:2006 Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test
EN 61000-4-8:2010 Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
EN 61000-4-11:2004 Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests

Certificate has been issued on the base of
Test reports:
№ 2emc-e-14-905/20.06.2014
№ 2emc-i -14-905/20.06.2014

Date of issue: 2014-09-30
Stara Zagora

Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/

00924



Center for Testing and European Certification

CERTIFICATE

№ LVD- 14- 000- (2e-14-808)- 065E

LED tube
trade mark: ELMARK, cat. № 99LED355
230-240 V AC; 50-60 Hz; 18 W; G 13
representative of LED tubes with cat.№: 99LED351; 99LED352; 99LED353; 99LED354; 99LED355; 99LED356

ELMARK INDUSTRIES SC, Bulgaria
2, Dobrudja Blvd. Dobrich, Bulgaria
tel.: + 359 58 500 055; fax: +359 58 500 060
e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with a standard
FprEN 62776:2013 Safety standard for double-capped LED lamps

issued on the base of
Test report:
№ 2e-14 -808/09.10.2014

Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/

00922

Center for Testing and European Certification

CERTIFICATE

№ EMC- 14- 000- (2emc-14-808)- 065E

"CTEC" Ltd. certifies that

Product: LED tube trade mark: ELMARK, cat. № 99LED355 230-240 V AC; 50-60 Hz; 18 W; G 13 *representative of LED tubes with cat.№:* 99LED351; 99LED352; 99LED353; 99LED354; 99LED355; 99LED356

Manufacturer: ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the EN 55015:2006+A1:2007+A2:2009 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61000-3-2:2006+A1:2009+A2:2009 Electromagnetic compatibility Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase)
EN 61000-3-3:2008 Electromagnetic compatibility (EMC) - Part 3-3: Limits Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection
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EN 61000-4-5:2006 Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test
EN 61000-4-8:2010 Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
EN 61000-4-11:2004 Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests

Certificate has been issued on the base of
Test reports:
№ 2emc-e-14-808/09.10.2014
№ 2emc-i -14-808/09.10.2014

Date of issue: 2014-10-09
Stara Zagora

Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/



Center for Testing and European Certification

CERTIFICATE

№ LVD- 13- 000- (2ea-13-664)- 032ER

INDUSTRIAL LIGHTING FIXTURES
type: Floodlights, cat. № 98AT105110SCH
230 V AC; 50 Hz; 400 W; class I; IP 65
representative sample floodlights group with cat. №:
98AT105109SCH; 98AT105110SCH

ELMARK INDUSTRIES SC, Bulgaria
2, Dobrudja Blvd. Dobrich, Bulgaria
tel.: + 359 58 500 055; fax: +359 58 500 060
e-mail: elmarkfactory@elmark.bg

Essential requirements applicable to the product in compliance with
2006/95/EC Low voltage directive
and standards
EN 60598-1:2008
EN 60598-1:2008/A11:2009 Luminaires
Part 1: General requirements and tests
EN 60598-2-5:1998 Luminaires
Part 2-5: Particular requirements - Floodlights

Test report:
№ 2ea-13 -664/18.06.2013

Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/

00955

Center for Testing and European Certification

CERTIFICATE

№ EMC- 13- 000- (2emc-13-664)- 032ER

"CTEC" Ltd. certifies that

Product: INDUSTRIAL LIGHTING FIXTURES type: Floodlights, cat. № 98AT105110SCH 230 V AC; 50 Hz; 400 W; class I; IP 65 *representative sample from floodlights group with cat. №:* *98AT105109SCH; 98AT105110SCH*

Manufacturer: ELMARK INDUSTRIES SC, Bulgaria 2, Dobrudja Blvd. Dobrich, Bulgaria tel.: + 359 58 500 055; fax: +359 58 500 060 e-mail: elmarkfactory@elmark.bg

Complies with the EN 55015:2006+A1:2007+A2:2009 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61000-3-2:2006+A1:2009+A2:2009 Electromagnetic compatibility (EMC) Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase)
EN 61000-3-3:2008 Electromagnetic compatibility (EMC) - Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection
EN 61547:2009 Equipment for general lighting purposes EMC immunity requirements
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EN 61000-4-4:2004+A1:2010 Electromagnetic compatibility Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
EN 61000-4-5:2006 Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test
EN 61000-4-8:2010 Electromagnetic compatibility (EMC) Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
EN 61000-4-11:2004 Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests

Certificate has been issued on the base of
Test reports
№ 2emc-e-13-664/18.06.2013
№ 2emc- i-13-664/18.06.2013

First issue: 2013-07-15
Current issue: 2015-01-12
Stara Zagora

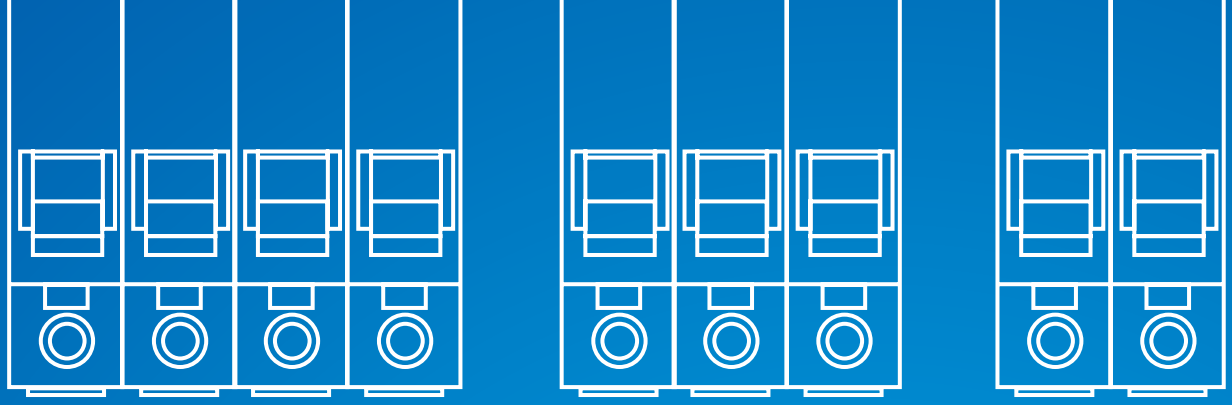
Manager CTEC Ltd.
/dipl. eng. Blagovesta Shineva/

00957

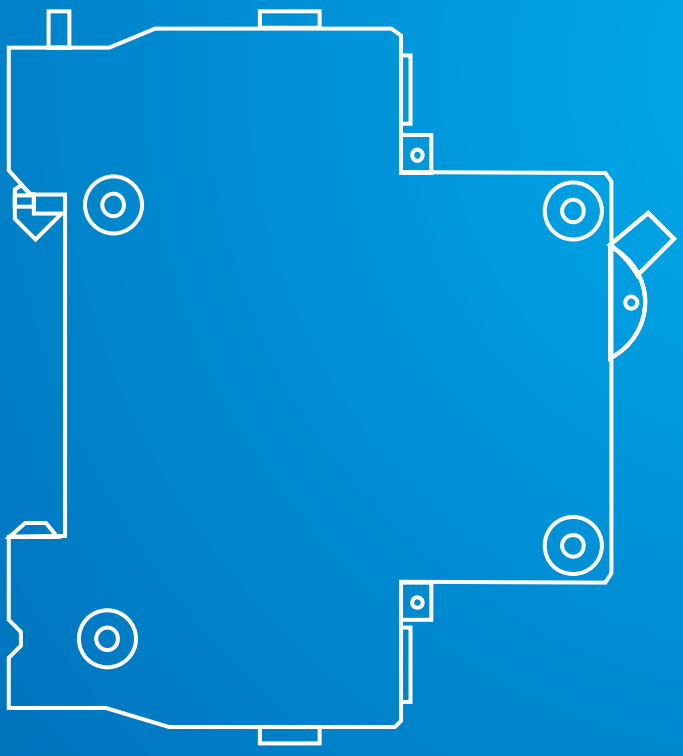
*You can find the full size and information about the certificates on our website www.elmarkholding.eu

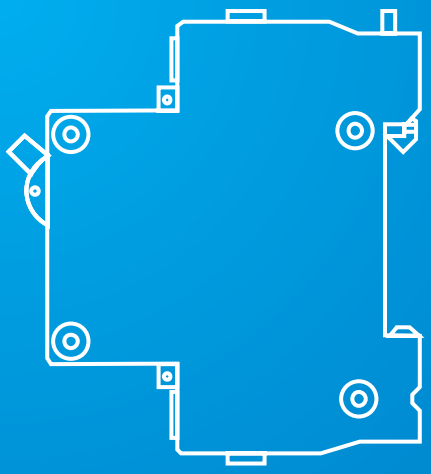
CIRCUIT BREAKERS

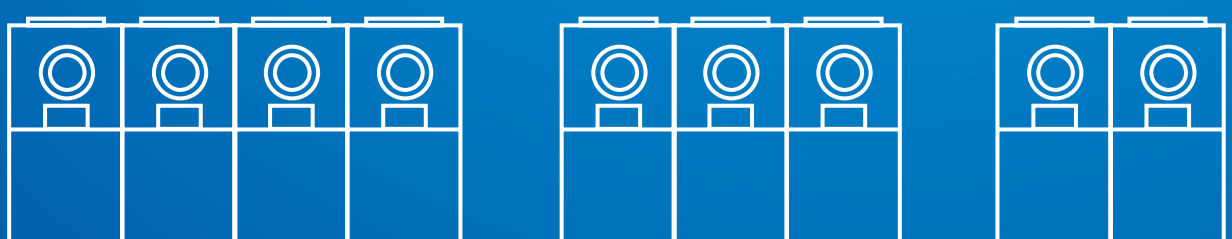
CIRCUIT BREAKERS











ELMARK®

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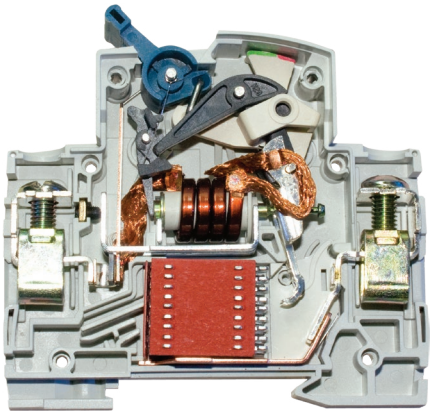


TERMINAL 1

NON-FLAMMABLE COVER 2

JUMP KNUCKLE 3

HANDLE 4

LOCK KNUCKLE 5

MOVABLE CONTACT 6

ARC CHAMBER 7

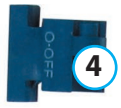
STATIC CONTACT 8

MAXIMUM CURRENT RELEASE 9

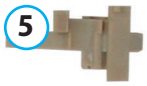
AUXILIARY CONTACT (accessory) 10

UNDER VOLTAGE RELEASE (accessory) 11

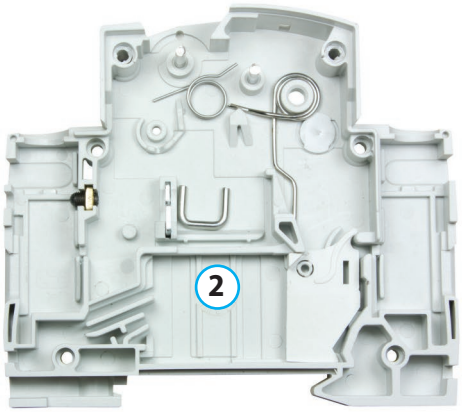
SHUNT RELEASE (accessory) 12

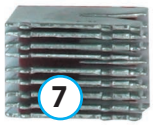


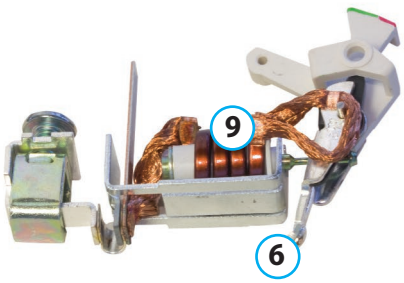


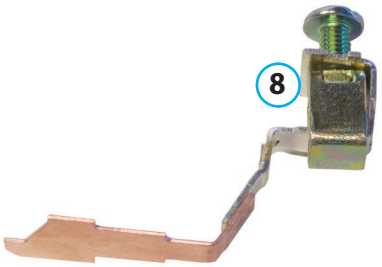














Characteristics

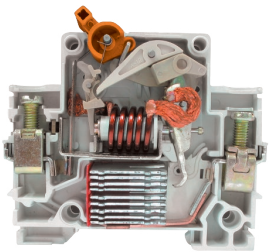
Circuit breakers are automatically-operated electrical switches, designed to protect electrical circuits from damage caused by overload or short circuit. They can also be used as devices for commutation and control of electrical circuits. They differ in the following characteristics:

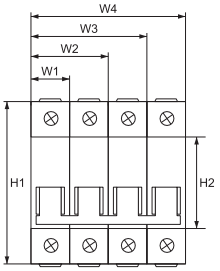
- Operating voltage: 230, 400V
- Number of poles: 1, 2, 3, 4
- Tripping curve:
  - curve B – breaks between 3 and 5 In, used for low voltage short circuit currents (long circuits and generators)
  - curve C – breaks between 5 and 10 In, used for protection of main power supply cables and conventional consumers
  - curve D – breaks between 10 and 20 In, used for protection of industrial consumers with high initial current flow (electric motors)
- Breaking capacity: 4.5, 6, 10kA

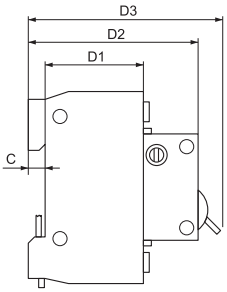
C4xN
- number of poles (1,2,3)
- breaking capacity in (kA)
- tripping curve C

C x
- rated current in (A)
- tripping curve C

Documents corresponding to the product:
Standard EN60898-1
EN60947-2







Dimensions (mm)

C	D1	D2	D3	H1
5	40	65	72	78
H2	W1	W2	W3	W4
45	18	36	54	72

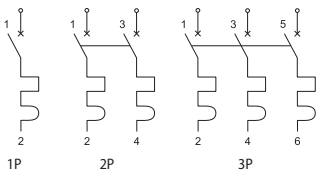
Miniature circuit breakers (MCB) C40N

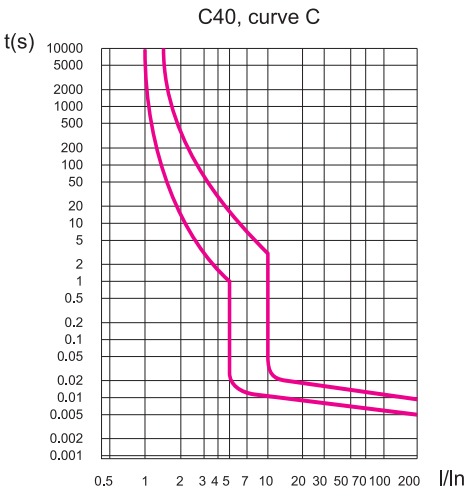
7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- protection of the electrical circuits from overload or short circuits of the outer circuit
- it can be used as a device for commutation and control of electrical circuits
- in combination with auxiliary devices it allows remote control, commutation or indication of the protected circuit
- for mounting in residential and industrial buildings
- for mounting at a distance from the transformer post from 150 to 850 m
- allows protection of consumers generating short circuit currents up to 4500 A

Technical data:
- Rated voltage: 230/400V; 50/60Hz
- Breaking capacity (cycle O-CO) in accordance with standard EN 60 898-1: 4500A
- Rated breaking capacity Ics= 75% Icu
- Isolating voltage:≥2000V
- Electrical wear resistance (number of cycles): 4000
- Mechanical (number of cycles): 20000
- Class of current limiting:3
- IP code: IP>20
- Tripping:
  - C – the maximum current release breaks between 5 and 10 In; used to protect main power supply cables and conventional consumers
- Joining terminal: flat (tunnel) screw terminal with composition 1.5 coldly draw-plated plane Q235– A
- Plastic box – not keeping the burning material nylon PA66, UV rays wear resistance
- Box permitivity strength: >18MV/m
- Abnormal heating wear resistance and fire of the outer parts: 960°C / 3s
- Maximum current release containing:
  - copper coil - composition: pure copper T2 type
  - resistance: from 0.6 to 180m
  - welding effort: <150 000 N/mm
  - bimetal plate – composition: 5J158 to TB180 depending on the current
  - thickness: 0.6mm (up to 40A) and 0.8mm (up to 63A)
  - magnetic core – composition: coldly draw-plated metal wire (1Gr18Ni9)
  - thickness: 1.15 to 2.24µm
  - drawing effort: from 200 to 400N/mm
  - contact head of the movable contact – composition: silver graphite CAg(5)
  - dimension 3x3x0.8 (up to 40A) and 4x4x0.8 (up to 63A)
  - static contact – composition: pure copper T2Y2
  - composition of the contact head: silver graphite CAg(5)
- Power supply (conducting)
  - power supply busbar 1P63, 2P63, 3P63
  - rigid conductors up to 25 mm
  - flexible conductors up to 16 mm
- Tightening moment:1.33Nm

Mounting:
- vertical
- DIN-rail
- for mounting in housing or industrial environment without serious interference
- ambient temperature: -5°C to + 65°C±2° C







Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
C41N / 2A	1P	2	4.5	1.0	12 / 240	**41460C**
C41N / 4A	1P	4	4.5	1.0	12 / 240	**41461C**
C41N / 6A	1P	6	4.5	1.0	12 / 240	**41451C**
C41N / 10A	1P	10	4.5	1.5	12 / 240	**41452C**
C41N / 16A	1P	16	4.5	2.5	12 / 240	**41453C**
C41N / 20A	1P	20	4.5	2.5	12 / 240	**41454C**
C41N / 25A	1P	25	4.5	4.0	12 / 240	**41455C**
C41N / 32A	1P	32	4.5	6.0	12 / 240	**41456C**
C41N / 40A	1P	40	4.5	10.0	12 / 240	**41457C**
C41N / 50A	1P	50	4.5	10.0	12 / 240	**41458C**
C41N / 63A	1P	63	4.5	16.0	12 / 240	**41459C**



Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
C42N / 6A	2P	6	4.5	1.0	6 / 120	**41470C**
C42N / 10A	2P	10	4.5	1.5	6 / 120	**41471C**
C42N / 16A	2P	16	4.5	2.5	6 / 120	**41472C**
C42N / 20A	2P	20	4.5	2.5	6 / 120	**41473C**
C42N / 25A	2P	25	4.5	4.0	6 / 120	**41474C**
C42N / 32A	2P	32	4.5	6.0	6 / 120	**41475C**
C42N / 40A	2P	40	4.5	10.0	6 / 120	**41476C**
C42N / 50A	2P	50	4.5	10.0	6 / 120	**41477C**
C42N / 63A	2P	63	4.5	16.0	6 / 120	**41478C**

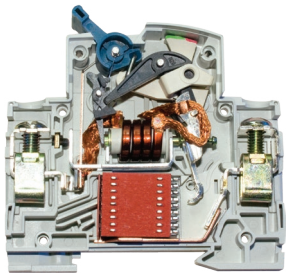


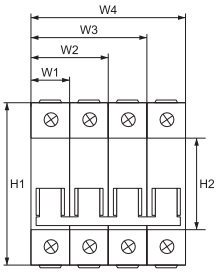
Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
C43N / 6A	3P	6	4.5	1.0	4 / 80	**41541C**
C43N / 10A	3P	10	4.5	1.5	4 / 80	**41542C**
C43N / 16A	3P	16	4.5	2.5	4 / 80	**41543C**
C43N / 20A	3P	20	4.5	2.5	4 / 80	**41544C**
C43N / 25A	3P	25	4.5	4.0	4 / 80	**41545C**
C43N / 32A	3P	32	4.5	6.0	4 / 80	**41546C**
C43N / 40A	3P	40	4.5	10.0	4 / 80	**41547C**
C43N / 50A	3P	50	4.5	10.0	4 / 80	**41548C**
C43N / 63A	3P	63	4.5	16.0	4 / 80	**41549C**

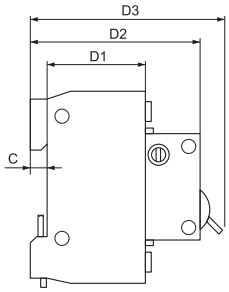
C6xN
- number of poles (1,2,3,4)
- breaking capacity in (kA)
- tripping curve C

C x
- rated current in (A)
- tripping curve C,B

Documents corresponding to the product:
Standard EN60898-1







Dimensions (mm)

C	D1	D2	D3	H1
5	50	65	72	81
H2	W1	W2	W3	W4
45	18	36	54	72

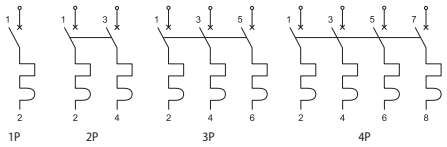
Miniature circuit breakers (MCB) C60N

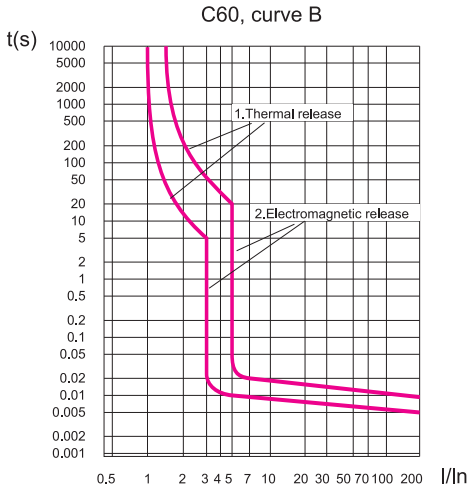
7 YEAR WARRANTY *for industrial usage, 3 years warranty

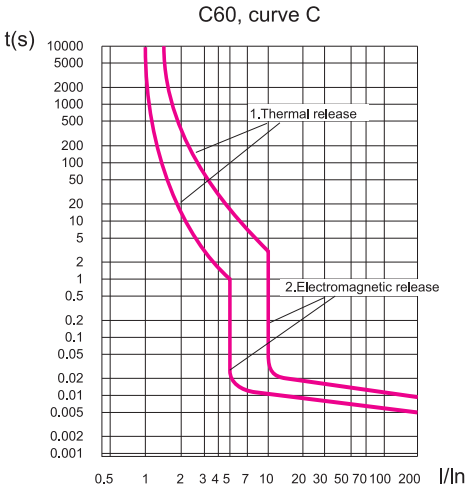
Functions:
- protection of the electrical circuits from overload or short circuits of the outer circuit
- it can be used as a device for commutation and control of electrical circuits
- in combination with auxiliary devices it allows remote control, commutation or indication of the protected circuit
- for mounting in industrial buildings with high contamination level of the electric systems
- for mounting at a distance from the transformer post from 150 to 850 m
- allows protection of consumers generating short circuit currents up to 6000 A

Technical data:
- Rated voltage: 230/400V; 50/60Hz
- Breaking capacity (cycle O-CO) in accordance with standard EN 60 898-1: 6000A
- Rated breaking capacity Ics= 75% Icu
- Isolating voltage:≥2000V
- Electrical wear resistance (number of cycles): 8000
- Mechanical (number of cycles): 50000
- Class of current limiting:3
- IP code: IP>20
- Tripping curve:
  - B – the maximum current release breaks between 3 and 5 In; used to protect long circuits and generators
  - C – the maximum current release breaks between 5 and 10 In; used to protect main power supply cables and conventional consumers
- Joining terminal: Combined screw clamp made of 1.5 cold extruded Q235-A material with additional coating
- Plastic box – not keeping the burning material nylon PA66, UV rays wear resistance
- Status indicator
- Box permitivity strength: >18MV/m
- Abnormal heating wear resistance and fire of the outer parts: 960°C / 3s
- Heat resistance of internal non-electrical components: 850°C / 10 s
- Maximum current release containing:
  - copper coil - composition: pure copper T2 type
  - resistance: from 0.6 to 180m
  - welding effort: <150 000 N/mm
  - bimetal plate – composition: 5J158 to TB180 depending on the current
  - thickness: 0.6mm (up to 40A) and 0.8mm (up to 63A)
  - magnetic core – composition: coldly draw-plated metal wire (1Gr18Ni9)
  - thickness: 1.15 to 2.24µm
  - drawing effort: from 200 to 400N/mm
  - contact head of the movable contact – composition: silver graphite CAg(5)
  - dimension 3x3x0.8 (up to 40A) and 4x4x0.8 (up to 63A)
  - static contact – composition: pure copper T2Y2
  - composition of the contact head: silver graphite CAg(5)
- Power supply (conducting)
  - power supply busbar 1P63, 2P63, 3P63
  - rigid conductors up to 25 mm
  - flexible conductors up to 16 mm
- Tightening moment:1.33Nm

Mounting:
- vertical
- DIN-rail
- for mounting in housing or industrial environment without serious interference
- ambient temperature: -5°C to + 65°C±2° C









Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductors (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve B
C61N / 1A	1P	1	6	1.0	12 / 240	**41100N**	**41501N**
C61N / 2A	1P	2	6	1.0	12 / 240	**41102N**	**41502N**
C61N / 4A	1P	4	6	1.0	12 / 240	**41104N**	**41504N**
C61N / 6A	1P	6	6	1.0	12 / 240	**41106N**	**41506N**
C61N / 10A	1P	10	6	1.5	12 / 240	**41110N**	**41510N**
C61N / 16A	1P	16	6	2.5	12 / 240	**41116N**	**41516N**
C61N / 20A	1P	20	6	2.5	12 / 240	**41120N**	**41520N**
C61N / 25A	1P	25	6	4.0	12 / 240	**41125N**	**41525N**
C61N / 32A	1P	32	6	6.0	12 / 240	**41132N**	**41532N**
C61N / 40A	1P	40	6	10.0	12 / 240	**41140N**	**41540N**
C61N / 50A	1P	50	6	10.0	12 / 240	**41150N**	**41550N**
C61N / 63A	1P	63	6	16.0	12 / 240	**41163N**	**41563N**



Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve B
C62N / 2A	2P	2	6	1.0	6 / 120	**41202N**	**41602N**
C62N / 4A	2P	4	6	1.0	6 / 120	**41204N**	**41604N**
C62N / 6A	2P	6	6	1.0	6 / 120	**41206N**	**41606N**
C62N / 10A	2P	10	6	1.5	6 / 120	**41210N**	**41610N**
C62N / 16A	2P	16	6	2.5	6 / 120	**41216N**	**41616N**
C62N / 20A	2P	20	6	2.5	6 / 120	**41220N**	**41620N**
C62N / 25A	2P	25	6	4.0	6 / 120	**41225N**	**41625N**
C62N / 32A	2P	32	6	6.0	6 / 120	**41232N**	**41632N**
C62N / 40A	2P	40	6	10.0	6 / 120	**41240N**	**41640N**
C62N / 50A	2P	50	6	10.0	6 / 120	**41250N**	**41650N**
C62N / 63A	2P	63	6	16.0	6 / 120	**41263N**	**41663N**



Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve B
C63N/2A	3P	2	6	1.0	4 / 80	**41302N**	**41702N**
C63N/4A	3P	4	6	1.0	4 / 80	**41304N**	**41704N**
C63N / 6A	3P	6	6	1.0	4 / 80	**41306N**	**41706N**
C63N / 10A	3P	10	6	1.5	4 / 80	**41310N**	**41710N**
C63N / 16A	3P	16	6	2.5	4 / 80	**41316N**	**41716N**
C63N / 20A	3P	20	6	2.5	4 / 80	**41320N**	**41720N**
C63N / 25A	3P	25	6	4.0	4 / 80	**41325N**	**41725N**
C63N / 32A	3P	32	6	6.0	4 / 80	**41332N**	**41732N**
C63N / 40A	3P	40	6	10.0	4 / 80	**41340N**	**41740N**
C63N / 50A	3P	50	6	10.0	4 / 80	**41350N**	**41750N**
C63N / 63A	3P	63	6	16.0	4 / 80	**41363N**	**41763N**

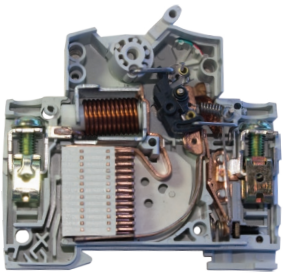


Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve B
C64N / 2A	4P	2	6	1.0	3 / 60	**41402N**	**41802N**
C64N / 4A	4P	4	6	1.0	3 / 60	**41404N**	**41804N**
C64N / 6A	4P	6	6	1.0	3 / 60	**41406N**	**41806N**
C64N / 10A	4P	10	6	1.5	3 / 60	**41410N**	**41810N**
C64N / 16A	4P	16	6	2.5	3 / 60	**41416N**	**41816N**
C64N / 20A	4P	20	6	2.5	3 / 60	**41420N**	**41820N**
C64N / 25A	4P	25	6	4.0	3 / 60	**41425N**	**41825N**
C64N / 32A	4P	32	6	6.0	3 / 60	**41432N**	**41832N**
C64N / 40A	4P	40	6	10.0	3 / 60	**41440N**	**41840N**
C64N / 50A	4P	50	6	10.0	3 / 60	**41450N**	**41850N**
C64N / 63A	4P	63	6	16.0	3 / 60	**41463N**	**41863N**

C10xL
- number of poles (1,2,3)
- breaking capacity in (kA)
- tripping curve C

C x
- rated current in (A)
- tripping curve C

Documents corresponding to the product:
Standard EN60898-1
EN60947-2



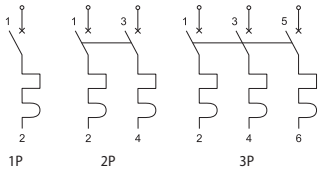
Miniature circuit breakers (MCB) C100L

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- protection of the electrical circuits from overload or short circuits of the outer circuit
- it can be used as a device for commutation and control of electrical circuits
- in combination with auxiliary devices it allows remote control, commutation or indication of the protected circuit

Technical data:
- Rated voltage: 230/400V; 50/60Hz
- Breaking capacity (cycle O-CO) in accordance with standard EN 60 898-1: 10000A
- Rated breaking capacity Ics= 75% Icu
- Isolating volatage:≥2000V, 1 min at impulse wave 1.2/50μs
- Electrical wear resistance (number of cycles):≥4000
- Mechanical wear resistance (number of cycles): ≥20000
- Class of current limiting:3
- IP code: IP>20
- Tripping curve: C

Mounting:
- vertical
- DIN-rail
- possibility for labeling





Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductors (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
C101L/6A	1P	6	10	1.0	12 / 240	**41101**
C101L/10A	1P	10	10	1.5	12 / 240	**41103**
C101L/16A	1P	16	10	2.5	12 / 240	**41105**
C101L/20A	1P	20	10	2.5	12 / 240	**41107**
C101L/25A	1P	25	10	4.0	12 / 240	**41108**
C101L/32A	1P	32	10	6.0	12 / 240	**41109**
C101L/40A	1P	40	10	10.0	12 / 240	**41111**
C101L/50A	1P	50	10	10.0	12 / 240	**41112**
C101L/63A	1P	63	10	16.0	12 / 240	**41113**



Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductors (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
C102L/6A	2P	6	10	1.0	6/120	**41201**
C102L/10A	2P	10	10	1.5	6/120	**41203**
C102L/16A	2P	16	10	2.5	6/120	**41205**
C102L/20A	2P	20	10	2.5	6/120	**41207**
C102L/25A	2P	25	10	4.0	6/120	**41208**
C102L/32A	2P	32	10	6.0	6/120	**41209**
C102L/40A	2P	40	10	10.0	6/120	**41211**
C102L/50A	2P	50	10	10.0	6/120	**41212**
C102L/63A	2P	63	10	16.0	6/120	**41213**

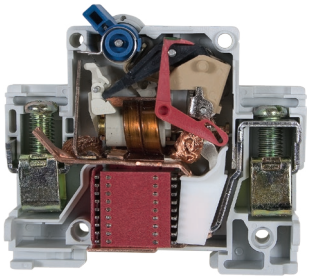


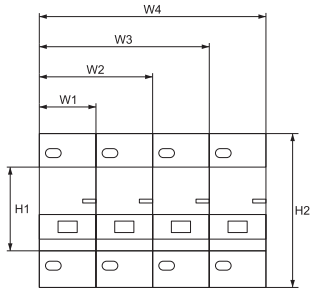
Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductors (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
C103L/6A	3P	6	10	1.0	4 / 80	**41301**
C103L/10A	3P	10	10	1.5	4 / 80	**41303**
C103L/16A	3P	16	10	2.5	4 / 80	**41305**
C103L/20A	3P	20	10	2.5	4 / 80	**41307**
C103L/25A	3P	25	10	4.0	4 / 80	**41308**
C103L/32A	3P	32	10	6.0	4 / 80	**41309**
C103L/40A	3P	40	10	10.0	4 / 80	**41311**
C103L/50A	3P	50	10	10.0	4 / 80	**41312**
C103L/63A	3P	63	10	16.0	4 / 80	**41313**

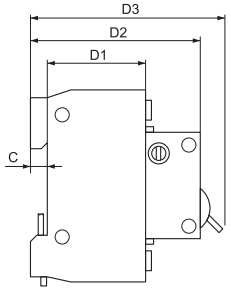
C100M constructive series
number of poles (1;2;3;4)

D x rated current
tripping curve C, D

Documents corresponding to the product:
Standard EN60898-1
EN 60947-2







Dimensions (mm)

C	D1	D2	D3	H1
5	50	65	74	45
H2	W1	W2	W3	W4
81	27	54	81	108

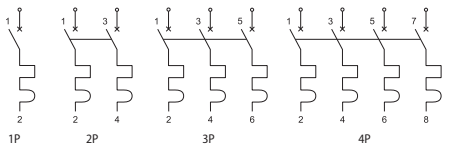
Miniature circuit breakers (MCB) C100M

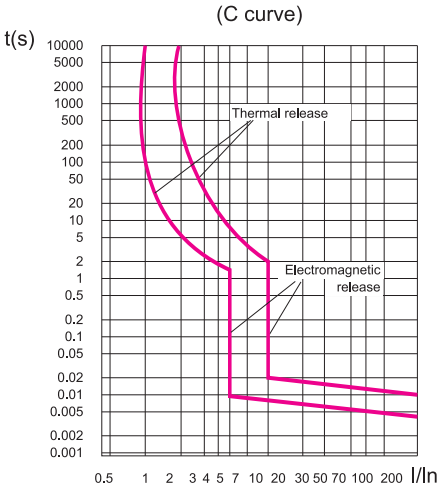
7 YEAR WARRANTY *for industrial usage, 3 years warranty

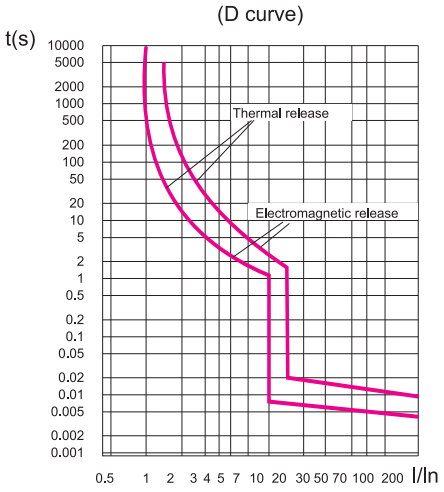
Functions:
- protection of the electrical circuits from overload or short circuits of the outer circuit
- it can be used as a device for commutation and control of electrical circuits
- in combination with auxiliary devices it allows remote control, commutation or indication of the protected circuit

Technical data:
- Rated voltage: 230/400V; 50/60Hz
- Breaking capacity (cycle O-CO) in accordance with standard EN 60 898-1: 10000A
- Rated breaking capacity Ics= 75% Icu
- Isolating volatage:≥2000V
- Electrical wear resistance (number of cycles):≥4000
- Mechanical wear resistance (number of cycles):≥20000
- Class of current limiting:3
- IP code: IP>20
- Tripping curve: C,D
- Joining terminal: flat (tunnel) screw terminal with composition 1.5 coldly draw-plated plane Q235 – A
- Plastic box – not keeping the burning material nylon PA66, UV rays wear resistance
- Box permitivity strength: >18MV/m
- Abnormal heating wear resistance and fire of the outer parts: 960°C / 3s
- Maximum current release containing:
  - copper coil - composition: pure copper T2 type
  - resistance: from 148 to 230m
  - welding effort: <400 N/
  - bimetal plate – composition: TB180/0.5
  - thickness: 0.8mm
  - magnetic core – composition: coldly draw-plated metal wire (1Gr18Ni9)
  - thickness: 1.15 to 2.24μm
  - drawing effort: 20N/mm^2
  - contact head of the movable contact – composition: silver graphite CAg(5)
  - dimension 6x6x1
  - static contact – composition: pure copper T2Y2
  - composition of the contact head: silver graphite CAg(5)
- Power supply (conducting)
  - power supply busbar
  - rigid conductors up to 50
  - flexible conductors up to 35
- Tightening moment:1.33Nm

Mounting:
- vertical
- DIN-rail
- possibility for labeling
- for mounting in industrial environment
- ambient temperature: -5°C to + 65°C±2° C









Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve D
C100M	1P	80	10	9 / 180	**41180**	**41180D**
C100M	1P	100	10	9 / 180	**41190**	**41190D**
C100M	1P	125	10	9 / 180	**41195**	**41195D**



Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve D
C100M	2P	80	10	6 / 120	**41280**	**41281**
C100M	2P	100	10	6 / 120	**41290**	**41291**



Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve D
C100M	3P	80	10	4 / 60	**41380**	**41381**
C100M	3P	100	10	4 / 60	**41390**	**41391**

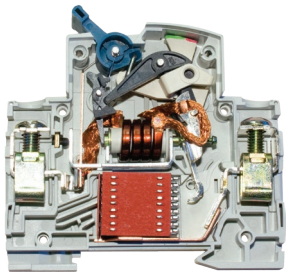


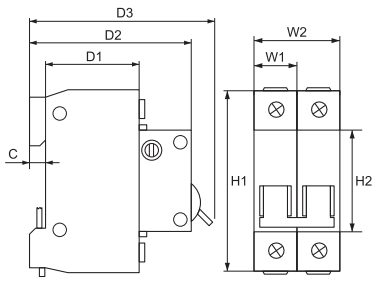
Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Packing/Box (pcs)	Catalogue number Curve C	Catalogue number Curve D
C100M	4P	80	10	3 / 60	**41480**	**41481**
C100M	4P	100	10	3 / 60	**41490**	**41491**

C6xDC
- number of poles (1,2)
- breaking capacity in (kA)
- tripping curve C

C x
- rated current in (A)
- tripping curve C

Documents corresponding to the product:
Standard EN60898-1
EN60898-2





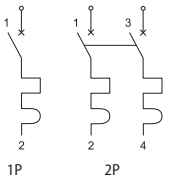
Miniature circuit breakers (MCB) C60DC series

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- for lowering constant current voltaic arc and use of the breaker at constant current consumer protection
- protection of the electrical circuits from overload or short circuit of the outer circuit at alternating current and constant current power supply circuits
- for commutation and control of electrical circuits
- in combination with auxiliary alternating current devices for remote control, commutation or indication of the protected circuit
- for mounting in industrial buildings
- for protection of consumers generating short circuit currents to 6000 A at alternating current power supply

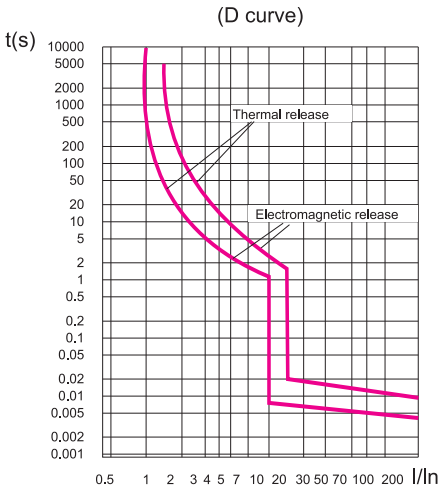
Technical data:
- Rated voltage: 240V; AC/DC
- Breaking capacity (cycle O -CO) in accordance with standard EN 60 898- 1: 6000A
- Rated breaking capacity Ics=75% Icu
- Insulating voltage: ≥2000V
- Electrical wear resistance (number of cycles): ≥4000
- Mechanical wear resistance (number of cycles): ≥20000
- Class of current limiting: 3
- IP code: IP>20
- Tripping curve: C – the maximum current release breaks between 5 and 10 In; used to protect power supply cables and conventional consumers
- Joining terminal: flat (tunnel) screw terminal with composition 1.5 coldly draw-plated plane Q235– A
- Plastic box – not keeping the burning material nylon PA66, UV rays wear resistance
- Box permitivity strength: >18MV/m
- Abnormal heating wear resistance and fire of the outer parts: 960°C / 3s
- Maximum current release containing:
  - copper coil - composition: pure copper T2 type
  - resistance: from 0.6 to 180m
  - welding effort: <150 000 N/mm
  - bimetal plate – composition: 5J158 to TB180 according to the current
  - thickness: 0.6mm (up to 40A) and 0.8mm (up to 63A)
  - magnetic core – composition: coldly draw-plated metal wire (1Gr18Ni9)
  - thickness: 1.15 to 2.24μm
  - drawing effort: from 200 to 400N/mm
  - contact head of the movable contact – composition: silver graphite CAg(5)
  - dimension 3x3x0.8 (up to 40A) and 4x4x0.8 (up to 63A)
  - static contact – composition: pure copper T2Y2
  - composition of the contact head: silver graphite CAg(5)
  - metal magnetic plate for lowering the constant current arc
- Conducting:
  - power supply busbar 1P63, 2P63
  - rigid conductors up to 25 mm
  - flexible conductors up to 16 mm
- Tightening moment: 1.33Nm

Mounting
- vertical
- DIN-rail
- for mounting in housing or industrial environment without serious current interference
- Ambient temperature: -5°C to + 65°C±2° C



Dimensions (mm)

C	D1	D2	D3
5	49	65	72
H1	H2	W1	W2
78	45	18	36





Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
61DC / 1A	1P	1	6	1.0	12 / 240	**41164**
61DC / 2A	1P	2	6	1.0	12 / 240	**41165**
61DC / 4A	1P	4	6	1.0	12 / 240	**41166**
61DC / 6A	1P	6	6	1.0	12 / 240	**41167**
61DC / 10A	1P	10	6	1.5	12 / 240	**41168**
61DC / 16A	1P	16	6	2.5	12 / 240	**41169**
61DC / 20A	1P	20	6	2.5	12 / 240	**41170**
61DC / 25A	1P	25	6	4.0	12 / 240	**41171**
61DC / 32A	1P	32	6	6.0	12 / 240	**41172**
61DC / 40A	1P	40	6	10.0	12 / 240	**41173**
61DC / 50A	1P	50	6	10.0	12 / 240	**41174**
61DC / 63A	1P	63	6	16.0	12 / 240	**41175**



Type	Number of poles	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
62DC / 2A	2P	2	6	1.0	6 / 120	**41176**
62DC / 4A	2P	4	6	1.0	6 / 120	**41177**
62DC / 6A	2P	6	6	1.0	6 / 120	**41178**
62DC / 10A	2P	10	6	1.5	6 / 120	**41179**
62DC / 16A	2P	16	6	2.5	6 / 120	**41181**
62DC / 20A	2P	20	6	2.5	6 / 120	**41182**
62DC / 25A	2P	25	6	4.0	6 / 120	**41183**



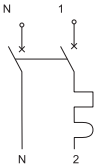
Miniature circuit breakers (MCB) DP1N (1P + E)

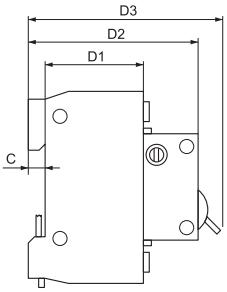
7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- protection of the electrical circuits from overload or short circuit of the outer circuit
- it can be used as a device for commutation and control of electrical circuits
- it breaks simultaneously the lead and the neutral conductor as the heat protection is only at the lead conductor

Technical data:
- Rated voltage: 230V; 50/60Hz
- Breaking capacity (cycle O-CO) in accordance with standard EN 60 898-1: 4500 A
- Rated breaking capacity Ics = 50% Icu
- Insulating voltage: ≥2000V
- IP code: IP>20
- Tripping curve: C – the maximum current release breaks between 5 and 10 In; used to protect main power supply
- cables and conventional consumers

Connecting:
- Joining terminal: flat (tunnel) screw terminal
- Power supply (conducting):
  - power supply busbar DP1N
  - flexible or rigid conductor
- Mounting: on DIN-rail





Dimensions (mm)

C	D1	D2	D3
5	40	65	72

Circuit breakers DP1N (1P+N) - SIGMA design

Type	Rated current In (A)	Breaking capacity (kA)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number Curve C
DP1N / 6	6	4.5	1.0	12 / 240	**41006**
DP1N / 10	10	4.5	1.5	12 / 240	**41010**
DP1N / 16	16	4.5	2.5	12 / 240	**41016**
DP1N / 20	20	4.5	2.5	12 / 240	**41020**
DP1N / 25	25	4.5	4.0	12 / 240	**41025**
DP1N / 32	32	4.5	6.0	12 / 240	**41032**

Padlock adaptor for MCB

3 YEAR WARRANTY

An adaptor makes it possible to block the operating lever whether switched ON or OF



Type	Catalogue number
Padlock adaptor for MCB	**41904**

Combined voltage circuit-breaker MN2

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Type designation:
MN - constructive series
number of poles - 1
Documents corresponding to the product:
Standard EN60898-1



Functions:
- when the voltage is reduced below 170V operation is initiated and the automatic switch is turned off
- when the voltage is increased above 280V operation is initiated and the automatic switch is turned off
- allows manual turning on of the switch after powering is restored
- indication of the position of the device

Technical characteristics:
- Rated voltage: 230V; 50/60Hz
- Insulation voltage: ≥2000V
- IP code: IP>20

Connection method:
- Double connector: flat (tunnel) screw connector
- Feeding (conducting):
  - flexible conductors up to 1.5mm^2
- Tightening moment of the screw: 1.33Nm

Mounting:
- vertical, by means of two pins attached to the rivets of the circuit-breaker, while the operating mechanism is connected to the switching off mechanism of the circuit breaker after the sealing lid is demounted

Type	Rated voltage	Type breaker	Packing/Box (pcs)	Catalogue number
ELMARK MN 2 60	230V	C60	12 / 240	**41909**

Shunt release MX (independent release)

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Type designation:
MX - constructive series
number of poles - 1
Documents corresponding to the product:
Standard EN60898-1



Functions:
- remote circuit breaker switching off at voltage feed
- allows manual switching on of the breaker at voltage recovery
- indication of the device's location

Technical data:
- Rated voltage: 230V; 50/60Hz
- Isolating voltage: ≥2000V
- IP code: IP>20

Connecting:
- Joining terminal: flat (tunnel) screw terminal
- Power supply (conducting):
  - flexible conductors up to 1.5mm^2
- Tightening moment: 1.33Nm
- The power supply of the release is accomplished at the outlet of the breaker

Mounting:
- vertical, clamps with two pins to the breaker's rivets and the executive mechanism is joined up to the switching mechanism of the breaker after dismounting the seal cover

Type	Rated voltage	Type breaker	Packing/Box (pcs)	Catalogue number
ELMARK MX 60	230V	C60	12 / 240	**41902**

Auxiliary contact OF

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Type designation:
OF - constructive series
number of poles - 1
Documents corresponding to the product:
Standard EN60898-1



Functions:
- at circuit breaker switching off it sends a signal to the control or signalization system
- indication of the location of the auxiliary contact and the breaker

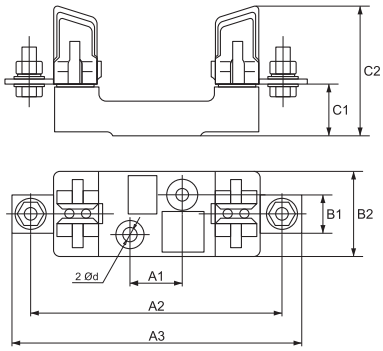
Technical data:
- Rated voltage: 230V
- Isolating voltage: ≥2000V
- IP code: IP>20

Connecting:
- Joining terminal: flat (tunnel) screw terminal
- Power supply (conducting): - flexible conductors up to 1.5mm

Mounting:
- vertical, clamps with two pins to breaker's rivets, and the executive mechanism is joined up to the switching mechanism of the breaker after dismounting the seal cover

Type	Rated voltage	Type breaker	Packing/Box (pcs)	Catalogue number
ELMARK OF 60	230V	C60	12 / 240	**41901**
ELMARK SD100	230V	C60	12 / 240	**41905**

Documents corresponding to the product:
Standard EN 60269-1



Bases for high power safety devices

3 YEAR WARRANTY

The series bases for high power safety device is manufactured of permitivity alloy with mounted contact jaws of electrolytic copper supplied with special springs for contact compression and easy fuse links taking out. All current leading parts are connected to inlet outlet terminals with bolts; the terminals also end with bolts, to which the power supply conductors are connected. The bases are offered in five type sizes corresponding to the five types of fuse links.

Base type	Overall dimensions (mm)							
	A1	A2	A3	B1	B2	C1	C2	Ød
SIST00	25	100	120	-	30	25	60	7.5
SIST 0	25	150	170	-	30	37	72	7.5
SIST1	25	175	200	30	58	38	84	10.5
SIST2	25	200	225	30	60	38	100	10.5
SIST3	25	210	250	30	60	40	105	10.5



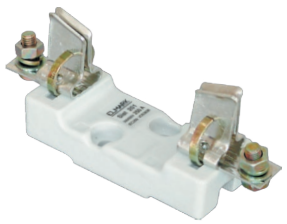
Base type	Fuse link type	Rated current (A)	Rated voltage Un (V)	Weight (gr)	Packing / Box (pcs)	Catalogue number
SIST00	NT 00	up to 160	600	193	5 / 120	**12001**
SISP00	NT 00	up to 160	600	215	5 / 120	**12001P**

Remark : Fuse bases SISP are made of porcelain



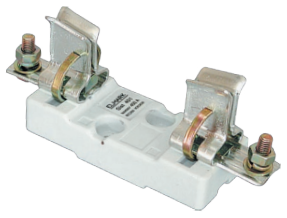
Base type	Fuse link type	Rated current (A)	Rated voltage Un (V)	Weight (gr)	Packing / Box (pcs)	Catalogue number
SIST0	NT 0	up to 160	600	295	3 / 54	**12010**
SISP0	NT 0	up to 160	600	319	3 / 54	**12010P**

Remark : Fuse bases SISP are made of porcelain



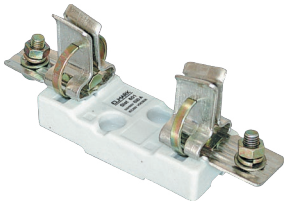
Base type	Fuse link type	Rated current (A)	Rated voltage Un (V)	Weight (gr)	Packing / Box (pcs)	Catalogue number
SIST1	NT 1	up to 250	600	550	3 / 36	**12100**
SISP1	NT 1	up to 250	600	550	3 / 36	**12100P**

Remark : Fuse bases SISP are made of porcelain



Base type	Fuse link type	Rated current (A)	Rated voltage Un (V)	Weight (gr)	Packing / Box (pcs)	Catalogue number
SIST2	NT 2	up to 400	600	770	1 / 20	**12200**
SISP2	NT 2	up to 400	600	810	1 / 20	**12200P**

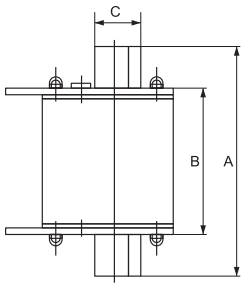
Remark : Fuse bases SISP are made of porcelain

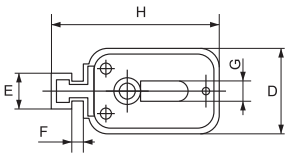


Base type	Fuse link type	Rated current (A)	Rated voltage Un (V)	Weight (gr)	Packing / Box (pcs)	Catalogue number
SIST3	NT 3	up to 630	600	965	1 / 15	**12300**
SISP3	NT 3	up to 630	600	987	1 / 20	**12300P**

Remark : Fuse bases SISP are made of porcelain

Documents corresponding to the product:
Standard EN 60269-1
EN 60269-2





Fuse links for high power safety device

3 YEAR WARRANTY

The series fuse links for high power safety devices is designed for short circuit protection. They are distinguished with high speed of operation and high reliability. The element is a ceramic (porcelain) body filled with fine quartz sand for voltaic arc lowering. In the ceramic body is mounted a fusible, specially profiled wafer connecting the current leading terminals. These terminals are manufactured of copper alloy with special nickel coating and have the form of knives to provide more contact surface. The fuse links correspond to "gL – gG" class which means that they are with common function and normal response time.
NH Fuses

Two operating classes of NH Fuses are available:
- Operating class gL/gG – general purpose, line protection, slow acting

Technical data:
- Rated voltage: 500V
- Rated short circuit current: 120 kAeff
- IP code: IP 00
- Ambient temperature: -5 to +65°C
- Altitude: up to 2000m

Base type	Overall dimensions (mm)				
	A	B	C	D	H
NT00	78	40	15	29	56.5
NT 0	125	68	15	29	56.5
NT1	135	68	21	48	62
NT 2	150	68	27	58	72
NT 3	150	68	33	67	84.5
NT00C	78	40	15	21	56,5
NT1C	135	68	21	29	62
NT2C	150	68	33	48	84,5



Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT00	16	500,600	3 / 120	**10001**
NT00	25	500,600	3 / 120	**10002**
NT00	32	500,600	3 / 120	**10003**
NT00	40	500,600	3 / 120	**10004**
NT00	50	500,600	3 / 120	**10005**
NT00	63	500,600	3 / 120	**10006**
NT00	80	500,600	3 / 120	**10008**
NT00	100	500,600	3 / 120	**10009**
NT00	125	500,600	3 / 120	**10012**
NT00	160	500,600	3 / 120	**10016**



Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT0	16	500,600	3 / 90	**10015**
NT0	25	500,600	3 / 90	**10025**
NT0	32	500,600	3 / 90	**10032**
NT0	40	500,600	3 / 90	**10040**
NT0	50	500,600	3 / 90	**10050**
NT0	63	500,600	3 / 90	**10063**
NT0	80	500,600	3 / 90	**10080**
NT0	100	500,600	3 / 90	**10090**
NT0	125	500,600	3 / 90	**10092**
NT0	160	500,600	3 / 90	**10096**



Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT1	80	500,600	3 / 54	**10108**
NT1	100	500,600	3 / 54	**10110**
NT1	125	500,600	3 / 54	**10112**
NT1	160	500,600	3 / 54	**10116**
NT1	200	500,600	3 / 54	**10120**
NT1	225	500,600	3 / 54	**10122**
NT1	250	500,600	3 / 54	**10125**



Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT2	160	500,600	1 / 30	**10216**
NT2	200	500,600	1 / 30	**10220**
NT2	250	500,600	1 / 30	**10225**
NT2	315	500,600	1 / 30	**10231**
NT2	400	500,600	1 / 30	**10240**



Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT3	500	500,600	1 / 24	**10350**
NT3	630	500,600	1 / 24	**10363**



Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT00C	16	500,600	3/120	**10001C**
NT00C	25	500,600	3/120	**10002C**
NT00C	32	500,600	3/120	**10003C**
NT00C	40	500,600	3/120	**10004C**
NT00C	50	500,600	3/120	**10005C**
NT00C	63	500,600	3/120	**10006C**
NT00C	80	500,600	3/120	**10008C**
NT00C	100	500,600	3/120	**10009C**



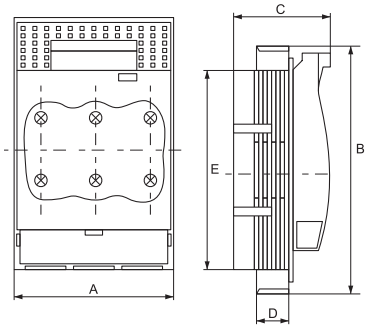
Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT1C	80	500,600	3/54	**10108C**
NT1C	100	500,600	3/54	**10110C**
NT1C	125	500,600	3/54	**10112C**
NT1C	160	500,600	3/54	**10116C**



Type	In (A)	Un (V)	Packing / Box (pcs)	Catalogue number
NT2C	160	500,600	1/30	**10216C**
NT2C	200	500,600	1/30	**10220C**
NT2C	250	500,600	1/30	**10225C**

Documents corresponding to the product:
Standard EN 60947-1;
EN 60947-3





Isolating switches

3 YEAR WARRANTY

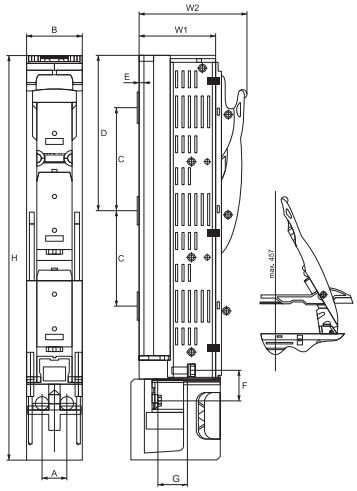
Designed in two types – horizontal and vertical. They represent a combination of low voltage isolating switch and high power safety devices mounted in a common plastic corpus. They are used for low voltage distribution boards and complete transformer substations (CTS) where visible circuit distribution is necessary. They provide safety and convenience at fuse links change. The plastic corpus increases the IP code and the plastic lid provides simultaneous circuits switching on/off. The lid allows easy removing which is additional measure at repairs. The vertical isolating switches are mounted directly to the power supply rails which enables the exploitation and improves the safety of the staff.

Technical data:
- Rated voltage: 500V
- Rated short circuit current: according to the mounted fuse links
- Number of poles: 3
- Impulse voltage wear resistance: 8kV
- Mechanical wear resistance: 3000 cycles
- IP code: IP 40
- Plastic: UV rays wear resistance
- Ambient temperature: -5 to +65°C
- Altitude: up to 2000m

Base type	Overall dimensions (mm)				
	A	B	C	D	E
THB -160	105	160	85	45	100
THB - 250	185	220	111	66	180
THB - 400	210	260	130	88	205
THB - 630	256	270	140	94.5	245

Type	In (A)	Un (V)	Fuse link size	Packing / Box (pcs)	Catalogue number
THB	160	500, 660	NT00	1 / 18	**44801**
THB	250	500, 660	NT1	1 / 6	**44802**
THB	400	500, 660	NT2	1 /4	**44803**
THB	630	500, 660	NT3	1/4	**44804**





Overall dimensions (mm)

A	B	C	D	E	F	G	H	W1	W2
50	99	185	290	2	57	58	746	146	195

Type	In (A)	Un (V)	Fuse link size	Packing / Box (pcs)	Catalogue number
HG2B	160	500, 660	NT00	1 /4	**44805**
HG2B	250	500, 660	NT1	1 /4	**44806**
HG2B	400	500, 660	NT2	1 /4	**44807**
HG2B	630	500, 660	NT3	1 /4	**44808**

Documents corresponding to the product:
Standard EN 60269-2; IEC269-2

Switch disconnectors

3 YEAR WARRANTY

The series of switch disconnectors are developed for short-circuit protection. They have a high speed of start and high reliability. They have a plastic body of non-flammable plastics adapted for mounting on a DIN rail, where a porcelain round plug, which is filled with fine quartz sand for extinguishing the electric arc. LED indicator is mounted on the front panel to show fuse link condition. In this ceramic body is mounted melting, specifically profiled plate, which connects the input power terminals. These terminals are produced from copper alloy with especially laid nickel layer and contact with the projecting bolts from the plastic body. There are offered two types of insertions according to the degree of quick operation: normally quickly operating ones – class "gG". Suitable for DC system.

Technical data:

- Rated voltage: 500V
- Insulation voltage: >2500V
- Rated current on short-circuit: 100 кA
- Direct mounting to the load
- Two insulated points to the load
- IP code: IP 44
- Cross-section of the supply conductors: up to 35mm^2
- Environmental temperature: -5° to +65°C
- Utization category: AC - 20B; DC - 20B
- Altitude: up to 2000m



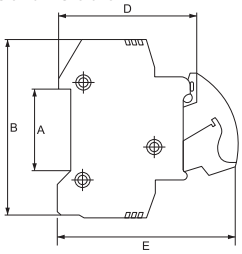


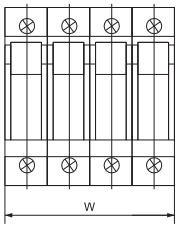






Overall dimensions





Base type	Number of poles	Rated current (A)	Type of the fuse	Base dimensions (mm) A	B	W	D	E	Packing / Box (pcs)	Catalogue number
1PRT18 - 32x	1P	32	xxG1038	37	82	18	60	78	12 / 240	**10RT1831**
1NRT18 - 32x	1P+N	32	xxG1038	37	82	36	60	78	12 / 240	**10RT18311**
2PRT18 - 32x	2P	32	xxG1038	37	82	36	60	78	12 / 240	**10RT1832**
3PRT18 - 32x	3P	32	xxG1038	37	82	54	60	78	12 / 240	**10RT1833**
3NRT18 - 32x	3P+N	32	xxG1038	37	82	72	60	78	12 / 240	**10RT18331**
1PRT18 - 63x	1P	63	xxG1451	37	105	27	80	110	6 / 108	**10RT1861**
1NRT18 - 63x	1P+N	63	xxG1451	37	105	54	80	110	6 / 108	**10RT18611**
2PRT18 - 63x	2P	63	xxG1451	37	105	54	80	110	6 / 108	**10RT1862**
3PRT18 - 63x	3P	63	xxG1451	37	105	81	80	110	6 / 108	**10RT1863**
3NRT18 - 63x	3P+N	63	xxG1451	37	105	108	80	110	6 / 108	**10RT18631**

Type of the fuse class gG	Voltage (V)	Rated current (A)	Size of the fuse A x ØB x C	Packing / Box (pcs)	Catalogue number
01G1038	500	1	38xØ10.3x10mm	10 / 2000	**10G10381**
02G1038	500	2	38xØ10.3x10mm	10 / 2000	**10G10382**
04G1038	500	4	38xØ10.3x10mm	10 / 2000	**10G10384**
06G1038	500	6	38xØ10.3x10mm	10 / 2000	**10G10386**
10G1038	500	10	38xØ10.3x10mm	10 / 2000	**10G103810**
16G1038	500	16	38xØ10.3x10mm	10 / 2000	**10G103816**
20G1038	500	20	38xØ10.3x10mm	10 / 2000	**10G103820**
25G1038	500	25	38xØ10.3x10mm	10 / 2000	**10G103825**
32G1038	500	32	38xØ10.3x10mm	10 / 2000	**10G103832**
40G1451	500	40	51xØ14.3x12mm	10 / 1000	**10G145140**
50G1451	500	50	51xØ14.3x12mm	10 / 1000	**10G145150**
63G1451	500	63	51xØ14.3x12mm	10 / 1000	**10G145163**

Documents corresponding to the product:
Standard EN 60947-3 and IEC947-3

Switch disconnectors ISS 20...100A series

5 YEAR WARRANTY *for industrial usage, 3 years warranty

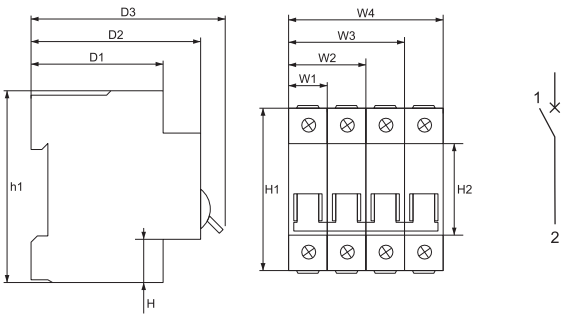


Functions:
- switching on/off heavy loaded electrical circuits
- breaking of electrical circuits
- can be used as a main breaker
- it has no protective function

Technical data:
- Rated voltage: 230/400V; 50/60Hz
- Joining terminal: flat (tunnel) screw terminal
- Connecting: power supply busbar, rigid or flexible conductors
- Tightening moment: 1.33Nm
- Isolating voltage: ≥500V
- Electrical wear resistance (number of cycles): ≥10000
- Mechanical wear resistance (number of cycles): ≥20000
- IP code: IP>20
- Mounting: DIN-rail
- Plastic material of UV rays
- Ambient temperature: -20°C + 65°C

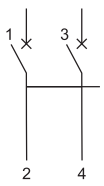
Dimensions (mm)

H1	H2	D1	D2	D3
81	45	50	65	76
W1	W2	W3	W3	
17,5	35	52,5	70	



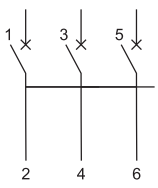
Type	Number of poles	Rated current In (A)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number
ISS	1P	40	10	12 / 240	**41914**
ISS	1P	63	16	12 / 240	**41911**
ISS	1P	80	25	12 / 240	**41912**
ISS	1P	100	35	12 / 240	**41913**





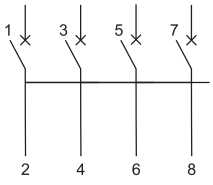
Type	Number of poles	Rated current In (A)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number
ISS	2P	40	10	6 / 120	**41924**
ISS	2P	63	16	6 / 120	**41921**
ISS	2P	80	25	6 / 120	**41922**
ISS	2P	100	35	6 / 120	**41923**





Type	Number of poles	Rated current In (A)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number
ISS	3P	20	2.5	4/80	**41935**
ISS	3P	32	6.0	4/80	**41936**
ISS	3P	40	10	4 / 80	**41934**
ISS	3P	63	16	4 / 80	**41931**
ISS	3P	80	25	4 / 80	**41932**
ISS	3P	100	35	4 / 80	**41933**





Type	Number of poles	Rated current In (A)	Recommended sections of the conductor (g/mm²)	Packing/Box (pcs)	Catalogue number
ISS	4P	40	10	3 / 60	**41944**
ISS	4P	63	16	3 / 60	**41941**
ISS	4P	80	25	3 / 60	**41942**
ISS	4P	100	35	3 / 60	**41943**

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-3 and IEC 60947-6



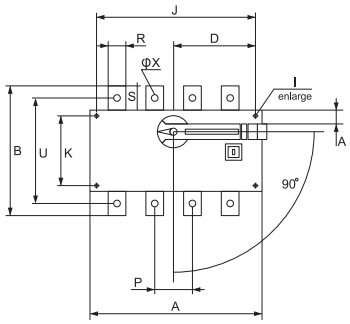
Switch disconnectors ISS2 125...800A

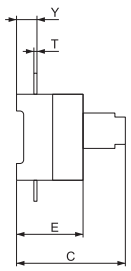
5 YEAR WARRANTY *for industrial usage, 3 years warranty

The series three- and four-pole load switch disconnectors ISS2 xxx are produced for mounting in main electrical boards for disconnection of the circuits, switching on of generators because of the fact they are not affected by the frequency variations. High mechanical strength and resistance to circulation. Simple and secure management. There is a possibility for the products to be produced with an window for visible disconnection.

Functions:
- switching on and off of electrical circuits under load
- disconnection of electrical circuits
- used as main circuit-breaker
- resistant to high voltages, to short circuits in the protected circuit
- it has no protective function

Technical features:
- Rated voltage: not higher than 660V; 50/60Hz
- Double connector: screw connection
- Connection: solid or flexible conductors
- Insulation voltage: ≥1000V
- Resistance to impulse voltage: 8000V
- Electrical endurance (number of cycles): ≥5 000
- Mechanical endurance (number of cycles): ≥10 000
- IP code: IP>20
- Mounting method: to a surface by means of bolts
- Plastic resistant to UV raysPlastic resistant to UV rays
- Ambient temperature: -20°÷65°C





Type	Dimensions (mm)											
	A	B	C	D	E	J	J1	K	R	S	T	Y
ISS2-125/3	140	135	125	27	73	120	120	65	20	25	3.5	25
ISS2-125/4	170	135	125	27	73	150	150	65	20	25	3.5	25
ISS2-160/3	140	135	125	27	73	120	120	65	20	25	3.5	25
ISS2-160/4	170	135	125	27	73	150	150	65	20	25	3.5	25
ISS2-250/3	180	170	138	35	86	160	160	90	25	30	3.5	25
ISS2-250/4	230	170	138	35	86	210	210	90	25	30	3.5	25
ISS2-400/3	230	240	165	50	110	210	210	140	32	40	5	37
ISS2-400/4	295	240	165	50	110	275	275	140	32	40	5	37
ISS2-630/3	230	260	165	50	110	210	210	140	40	50	6	37
ISS2-630/4	295	260	165	50	110	275	275	140	40	50	6	37
ISS2-800/3	378	312	240	50	140	353	353	175	60	56	8	48
ISS2-800/4	498	312	240	50	140	473	473	175	60	56	8	48

Type	Rated current In (A)	Maximum breaking capacity Icu (A)	Tightening moment (Nm)	Packing/Box (pcs)	Catalogue number three-pole	Catalogue number four-pole
ISS2-125in	125	1250	6.5	1 / 12	**41951**	**41961**
ISS2-125out	125	1250	6.5	1 / 12	**41952**	**41962**
ISS2-160in	160	1250	6.5	1 / 12	**41953**	**41963**
ISS2-160out	160	1250	6.5	1 / 12	**41954**	**41964**
ISS2-250in	250	2000	10	1 / 6	**41955**	**41965**
ISS2-250out	250	2000	10	1 / 6	**41956**	**41966**
ISS2-400in	400	3200	14.5	1 / 2	**41957**	**41967**
ISS2-630in	630	4000	14.5	1 / 2	**41958**	**41968**
ISS2-800in	800	1000	27	1 / 2	**41959**	**41969**

Note: ISS2-xxx in – load circuit-breaker for mounting in the interior of a board
ISS2 -xxx out – load circuit-breaker with an extended lever for mounting on the front panel of the board

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-3 and IEC 60947-6



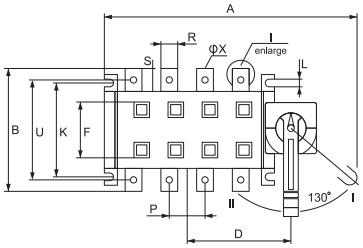
Manual switching to reserve series EQ 2M from 160...800A

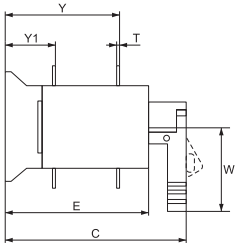
5 YEAR WARRANTY *for industrial usage, 3 years warranty

The series three- and four-pole load isolating switch EQ 2 M xxx are produced for mounting in main electrical boards for disconnection of the circuits, manual switching between two power supplies or switching ON of generators because of the fact they are not affected by the frequency variations. High mechanical strength and resistance to circulation. Simple and secure management. There is a possibility for the products to be produced with an window for visible disconnection.

Functions:
- switching on and off of low voltage electrical circuits under load
- disconnection of the electrical circuit from one of the power supplies, while providing immediately switching to the other
- used as main switch
- resistant to high voltages, to short circuits in the protected circuit
- it has no protective function

Technical characteristics:
- Rated voltage: not higher than 690V; 50/60Hz
- Double connector: screw connection
- Connection: hard or flexible conductors
- Insulation voltage: ≥1000V
- Resistance to impulse voltage: 8000V
- Electrical endurance (number of cycles): ≥5 000
- Mechanical endurance (number of cycles): ≥10 000
- IP code: IP>20
- Mounting method: to a surface by means of bolts
- Plastic resistant to UV rays
- Ambient temperature: -20°÷65°C
- Option for moving the handle on the front panel of the board
- Small size
- Indication which of the two supplies is operating



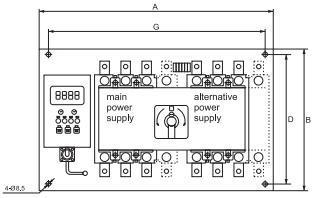


Type	Dimensions (mm)												
	A	B	C	D	E	J	J1	K	R	S	T	Y	Y1
EQ2M-160/3	270	135	212	89	150	120	65	95	20	25	3.5	55	25
EQ2M-160/4	300	135	212	104	150	150	65	95	20	25	3.5	55	25
EQ2M-250/3	307	170	260	110	180	160	65	115	25	30	3.5	70	25
EQ2M-250/4	357	170	260	135	180	210	65	115	25	30	3.5	70	25
EQ2M-400/3	372	240	297	150	236	210	77	180	32	40	5	83	37
EQ2M-400/4	432	240	297	180	236	275	77	180	32	40	5	83	37
EQ2M-630/3	372	240	297	150	236	210	77	180	40	50	6	83	37
EQ2M-630/4	432	240	297	180	236	275	77	180	40	50	6	83	37
EQ2M-8003	372	240	297	150	236	210	77	180	60	56	8	83	48
EQ2M-800/4	432	240	297	180	236	275	77	180	60	56	8	83	48

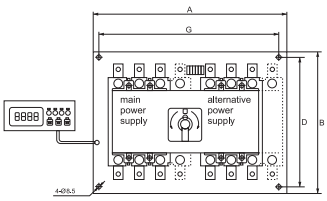
Type	Rated current In (A)	Maximum breaking capacity Icu (A)	Tightening moment (Nm)	Packing/Box (pcs)	Catalogue number three-pole	Catalogue number four-pole
EQ2M-160	160	1250	6.5	1 / 4	**44641**	**44641P**
EQ2M-250	250	2000	10	1 / 2	**44642**	**44642P**
EQ2M-400	400	3200	14.5	1 / 2	**44643**	**44643P**
EQ2M-630	630	4000	14.5	1 / 2	**44644**	**44644P**
EQ2M-800	800	1000	27	1 / 2	**44645**	**44645P**

Documents corresponding to the product:
EN 60947-1
EN 60947-2; EN 60947-6-1









Dual power change-over switch EQ1 series (ATS)

5 YEAR WARRANTY *for industrial usage, 3 years warranty

The system for dual power change-over switch EQ1 is designed to provide continuous power supply and two electrical sources automatic switch in case of failure or deviation from the set parameters. It switches only when the three phases of the second power supply source are available. The system for dual power change-over switch consists of two molded case circuit breakers mounted on a metal frame connected with common operating mechanism and controlled by a command device that controls the system parameters' correspondence.

Functions:

- Switching on/off heavy loaded electrical circuits at main power supply discrepancy
- Switching to dual power change-over at power supply phase lack
- with option to connect to fire alarm controller. In case of fire, the ATS switches off both power supply sources
- Breaking of electrical circuits and control of powerful consumers
- Used as a main breaker in housing or industrial distributing installations supplied with a generator or a second power supply source (hospitals, post offices, military sites, control rooms)
- Remarkable with high reliability of current characteristics
- Control: motor
- Controls the following circuit parameters:
  - presence of the three phases
  - the phase voltage to be in the set limits
  - overload
  - short circuit at the outlet

Technical data:

- Rated operating voltage: 690V; 50/60Hz
- Surge voltage wear resistance: ≥6000V
- Joining terminal: bolt connection with 4 bolts to the power supply rail
- Connecting:
  - copper rails
  - flexible or rigid conductors
- Electrical wear resistance (number of cycles): ≥2000
- Mechanical wear resistance (number of cycles): ≥6000
- IP code: IP21
- Mounting:
  - clamping with bolts
  - mounting position: vertical gradient – maximum 5°
- Plastic material of the breakers of UV rays and non-flammable
- Ambient temperature: -10°C + 65°C
- Installation altitude: up to 2000m

Basic functions of the control device:

- Overload protection
- Instantaneous short circuit protection
- Under phase protection
- Undervoltage protection
- Possibility for setting the change-over time between the two sources – min 3s
- Possibility for automatic switch-over to the main power supply source after restoring its parameters

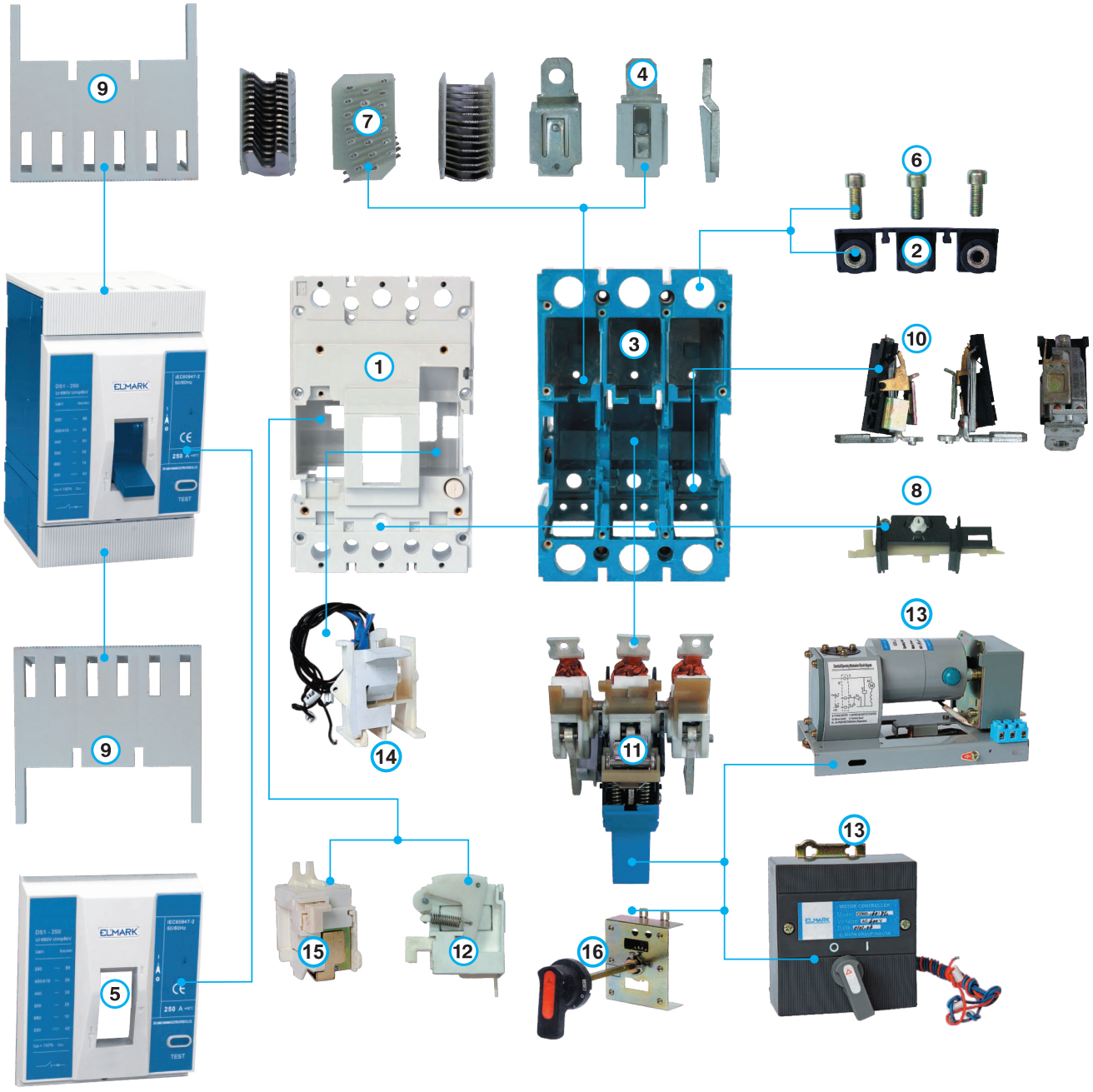
The system for dual power change-over switch is offered in two types:

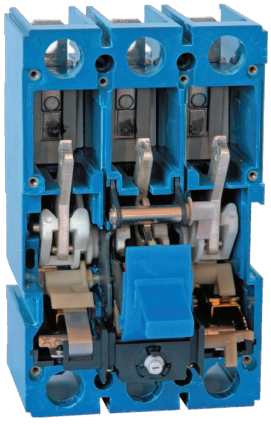
- with display (control device) mounted on the mounting plate (integrated type)
- with separated control display

Type of the breaker	Type	Overall dimensions (mm)				
		A	B	C	D	H
EQ1 - 100	inner type	480	240	450	210	140
EQ1 - 225	inner type	480	240	450	210	140
EQ1 - 400	inner type	620	300	590	270	235
EQ1 - 630	inner type	660	300	630	270	240
EQ1 - 800	inner type					
EQ1 - 100*	moved type	420	230	390	200	145
EQ1 - 225*	moved type	420	230	390	200	145
EQ1 - 400*	moved type	570	300	540	270	235
EQ1 - 630*	moved type	610	300	580	270	240
EQ1 - 800*	moved type					

Type	Rated current In (A)	Max. breaking capacity (kA) Icu	Operating breaking capacity (кA) Ics	Section of the power supply conductor (mm^2)	Electrical wear resistance (number of cycles)	Mechanical wear resistance (number of cycles)	Packing / Box (pcs)	Catalogue number
EQ1 - 100	100	50	35	35	2000	6000	1 / 1	**44100**
EQ1 - 225	225	50	35	70	2000	6000	1 / 1	**44225**
EQ1 - 400	400	100	65	180	2000	6000	1 / 1	**44403**
EQ1 - 630	630	100	65	240	1000	3000	1 / 1	**44633**
EQ1 - 800	800	100	65	240	1000	3000	1 / 1	**44833**
EQ1 - 100*	100	50	35	35	2000	6000	1 / 1	**44101**
EQ1 - 225*	225	50	35	70	2000	6000	1 / 1	**44226**
EQ1 - 400*	400	100	65	180	2000	6000	1 / 1	**44404**
EQ1 - 630*	630	100	65	240	1000	3000	1 / 1	**44634**
EQ1 - 800*	800	100	65	240	1000	3000	1 / 1	**44834**

Note: *Dual power change-over switch with separated control display

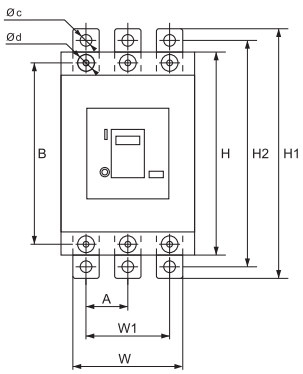


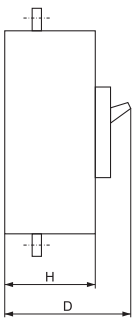


1. COVER
2. TERMINALS
3. NON-FLAMABLE BASE
4. STATIC CONTACTS
5. PART FROM THE COVER
6. SCREWS FOR TERMINALS
7. ARC CHAMBERS
8. ELEMENT FOR ADJUSTMENT
9. TERMINAL PLASTIC PLATE
10. CONTACTS WITH BIMETAL PLATES
11. THERMAL SYSTEM WITH MOVABLE CONTACTS
12. UNDER VOLTAGE RELEASE - UVR (accessory)
13. REMOTE CONTROL – electrical (accessory)
14. AUXILIARY CONTACT (accessory)
15. SHUNT RELEASE (accessory)
16. REMOTE CONTROL – manual (accessory)

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-2







Moulded case circuit breakers (MCCB) DS1 series from 40...1250A

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- switching on/off heavy loaded electrical circuits
- breaking of electrical circuits and control of powerful consumers
- can be used as a main breaker in housing or industrial distributing installations
- endures high currents of short circuit in the protected circuit
- remarkable with high reliability of current characteristics
- control: manual
- possibility for auxiliary devices mounting for automation

Technical data:
- Rated operating voltage: 415/690V; 50/60Hz
- Isolating voltage: 2000V
- Surge voltage wear resistance: ≥8000V
- Joining terminal: flat (tunnel) screw terminal for the breakers up to 160A and a bolt connection for the breakers from 250A to 1600A
- Connecting:
  - rigid or flexible conductors
  - front conductors joining
  - possibility for mounting to lengthening terminal
- Plastic elements
  - not keeping the burning material nylon PA66
  - box permitivity strength: >16MV/m
- Abnormal heating wear resistance and fire of the outer parts: 960°C
- Static contacts – alloy: pure copper T2Y2
  - contact head: silver graphite CAg(5)
  - thickness: depends on the current
- Tightening moment: 1.33Nm
- Electrical wear resistance (number of cycles):≥10000
- Mechanical wear resistance (number of cycles):≥20000
- IP code: IP>20
- Mounting:
  - joining with bolts
  - mounting position: vertical
- Plastic material of UV rays and non-flammable
- Test button
- Ambient temperature: -20°÷65°C

Type	Overall dimensions (mm)					Installation dimensions (mm)					
	W	H	D	H1	D1	A	B	W1	H2	Ø d	Ø e
DS1-125/3P	76.2	120	70		90	25	100	50		4	
DS1-160/3P	90	120	70		93	30	100	60		5	
DS1-250/3P	105	170	104	238	143.5	35	139	70	210	6	8.5
DS1-400/3P	140	257	104	316	144	44	214	87.5	285	6	11
DS1-630/3P	210	275	104	310	172	70	230	140	280	6	11
DS1-800/3P	210	275	104	347	172	70	230	140	307	6	16
DS1-1600/3P	210	410	140	410	210	70	300	140	350	10	12
DS1-125/4P	110	120	70		90	25	100	50		4	
DS1-160/4P	120	120	70		93	30	100	60		5	
DS1-250/4P	140	170	104	238	143.5	35	139	70	210	6	8.5
DS1-400/4P	184	257	104	316	144	44	214	87.5	285	6	11
DS1-630/4P	280	275	104	310	172	70	230	140	280	6	11
DS1-800/4P	280	275	104	347	172	70	230	140	307	6	16
DS1-1600/4P	280	410	140	410	210	70	300	140	350	10	12

Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu		Thermal current adjustment (A)	Section of the conductor (mm2)	Packing/ Box (pcs)	Catalogue number tree-poles	Catalogue number four-poles
			415V	690V					
DS1-125	40	16	35	10	fixed	16	1 / 20	**44040**	**444040**
DS1-125	50	16	35	10	fixed	16	1 / 20	**44050**	**444050**
DS1-125	63	16	35	10	fixed	25	1 / 20	**44063**	**444063**
DS1-125	80	16	35	10	fixed	25	1 / 20	**44080**	**444080**
DS1-125	100	16	35	10	fixed	35	1 / 20	**44090**	**444090**
DS1-125	125	16	35	10	fixed	50	1 / 20	**44125**	**444125**



Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu 415V	690V	Thermal current adjustment (A)	Section of the conductor (mm2)	Packing/ Box (pcs)	Catalogue number tree-poles	Catalogue number four-poles
DS1 - 160	63	22	35	15	44 - 63	25	1 / 16	**44163**	**444163**
DS1 - 160	80	22	35	15	56 - 80	25	1 / 16	**44164**	**444164**
DS1 - 160	100	22	35	15	70 - 100	50	1 / 16	**44165**	**444165**
DS1 - 160	125	22	35	15	88 - 125	50	1 / 16	**44166**	**444166**
DS1 - 160	160	22	35	15	112 - 160	70	1 / 16	**44160**	**444160**
DS1 - 160	160	22	35	15	fixed	70	1/16	**441601**	-



Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu 415V	690V	Thermal current adjustment (A)	Section of the conductor (mm2)	Packing/ Box (pcs)	Catalogue number tree-poles	Catalogue number four-poles
DS1 - 250	200	35	50	15	140 - 200	120	1 / 6	**44200**	**444200**
DS1 - 250	250	35	50	15	175 - 250	120	1 / 6	**44250**	**444250**



Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu 415V	690V	Thermal current adjustment (A)	Section of the conductor (mm2)	Packing/ Box (pcs)	Catalogue number tree-poles	Catalogue number four-poles
DS 1 - 400	315	50	65	25	fixed	240	1 / 3	**44315**	**444315**
DS 1 - 400	400	50	65	25	fixed	240	1 / 3	**44401**	**444401**



Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu 415V	690V	Thermal current adjustment (A)	Section of the conductor (mm2)	Packing/ Box (pcs)	Catalogue number tree-poles	Catalogue number four-poles
DS1 - 630	500	65	75	25	fixed	185	1 / 2	**44500**	**444500**
DS1 - 630	630	65	75	25	fixed	185	1 / 2	**44630**	**444630**
DS1 - 800	800	75	85	30	fixed	240	1 / 2	**44800**	**444800**



Type	Rated current In (A)	Max. breaking capacity (kA) Icu	Operating breaking capacity (kA) Ics	Section of the power supply conductor (mm2)	Protection from overload	Packing/Box (pcs)	Catalogue number
DS1 - 1250	1000	85	65	240	fixed	1 / 1	**44000**
DS1 - 1250	1250	85	65	240	fixed	1 / 1	**44502**



Moulded case circuit breakers (MCCB) DS1 with lock

Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu 415V	690V	Thermal current adjustment (A)	Section of the conductor (mm2)	Packing/ Box (pcs)	Catalogue number tree-poles
DS1 - 125	125	16	35	10	fixed	25	1/20	**44163K**
DS1 - 250	160	35	50	15	125-160	25	1/16	**44160K**
DS1 - 250	250	35	50	15	160-250	50	1/6	**44250K**
DS1 - 400	400	50	65	25	fixed	50	1/3	**44401K**
DS1 - 630	630	65	75	25	fixed	185	1/2	**44630K**
DS1 - 800	800	75	85	30	fixed	240	1/2	**44800K**

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-2

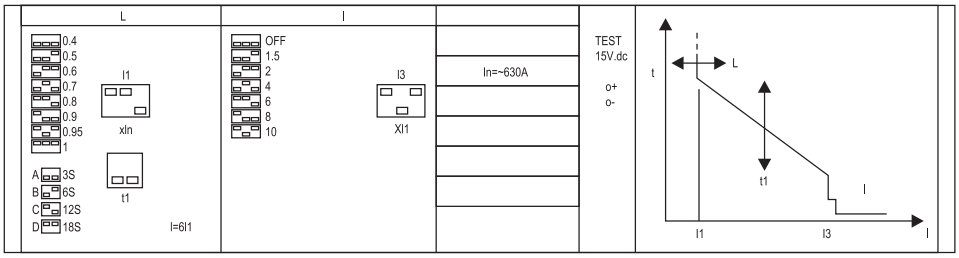


Moulded case circuit breakers (MCCB) DS1 to 1600A-electronic type

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- switching on/off heavy loaded electrical circuits
- breaking of electrical circuits and control of powerful consumers
- can be used as a main breaker in housing or industrial distributing installations
- endures high currents of short circuit in the protected circuit
- remarkable with high reliability of current characteristics
- control: manual
- possibilities for electrical module parameters adjustment through direct modules (combination of keys) thus providing accurate protection from overload and short circuit
- simultaneous protection of the three phases
- possibility for auxiliary devices mounting for automation
- contactor for TT test 15V DC

Technical data:
- Rated operating voltage: 415/690V; 50/60Hz
- Isolating voltage: 2000V
- Surge voltage wear resistance: ≥8000V
- Joining terminal: flat (tunnel) screw terminal
- Connecting:
  - rigid or flexible conductors
  - front conductors joining
  - possibility for mounting to lengthening terminal
- Electrical wear resistance (number of cycles):≥10000
- Mechanical wear resistance (number of cycles):≥20000
- IP code: IP>20
- Abnormal heating wear resistance and fire of the outer parts: 960°C
- Mounting:
  - joining with bolts
  - mounting position: vertical
- Plastic material of UV rays and non-flammable
- Test button
- Ambient temperature: -20°÷65°C

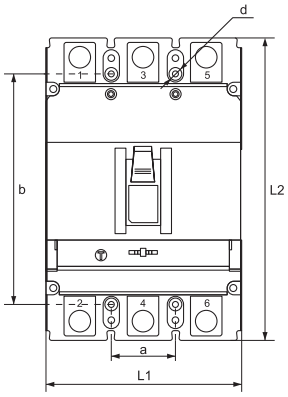


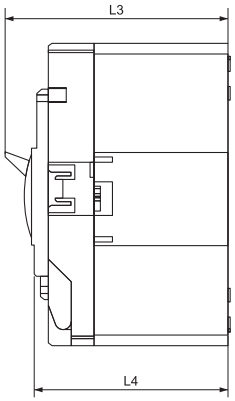
Protecting functions:
Function L – step adjustment for protection against overload. Adjustment of the operating current I1=0.4+1xIn with discreet coefficients as the value can be 0.4; 0.5; 0.6; 0.7; 0.8; 0.9; 0.95 and 1
Time delay adjustment t1 of the protection against overload – step adjustment with four values A-3s; B-6s; C-12s; D-18s when current is I=6I1. The diagram of the current curves is presented on fig.1
Adjustment of the transitory protection current against short circuit I3=X x I1 where X can take discreet value OFF; 1.5; 2; 4; 6; 8; 10

Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (кA) Icu 415V	Maximum breaking capacity (кA) Icu 690V	Thermal current adjustment (A)	Section of the conductor (mm2)	Packing/ Box (pcs)	Catalogue number tree-poles
DS1 - 400E	400	50	65	25	160 - 400	240	1 / 3	**44940**
DS1 - 630E	630	65	75	25	252 - 630	185	1 / 2	**44963**
DS1 - 800E	800	65	75	30	320 - 800	240	1 / 2	**44980**
DS1 - 1250E	1000	85	100	65	400 - 1000	240	1 / 1	**44999**
DS1 - 1250E	1250	85	100	65	500 - 1250	240	1 / 1	**44925**
DS1 - 1600E	1600	85	100	65	640 - 1600	240	1 / 1	**44960**

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-2







High breaking capacity level moulded case circuit breakers (MCCB) DS1 MAX from 63A... 800A

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- high breaking capacity level
- switching on/off heavy loaded electrical circuits
- breaking of electrical circuits and control of powerful consumers
- can be used as a main breaker in housing or industrial distributing installations
- endures high currents of short circuit in the protected circuit
- remarkable with high reliability of current characteristics control: manual
- possibility for auxiliary devices mounting for automation

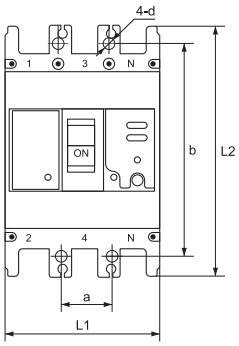
Technical data:
- Rated operating voltage: 415/690V; 50/60Hz
- Isolating voltage: 2000V
- Surge voltage wear resistance: ≥8000V
- Connecting:
  - rigid or flexible conductors
  - front conductors joining
  - possibility for mounting to lengthening terminal
- Plastic elements
  - not keeping the burning material nylon PA66
  - box permitivity strength: >16MV/m
- Abnormal heating wear resistance and fire of the outer parts: 960°C
- Static contacts – alloy: pure copper T2Y2
  - acontact head: silver graphite CAg(5)
  - athickness: depends on the current
- Tightening moment: 1.33Nm
- Electrical wear resistance (number of cycles): ≥10000
- Mechanical wear resistance (number of cycles): ≥20000
- IP code: IP>20
- Mounting:
  - joining with bolts
  - mounting position: vertical
- Plastic material of UV rays and non-flammable
- Test button
- Ambient temperature: -20°/65°C.

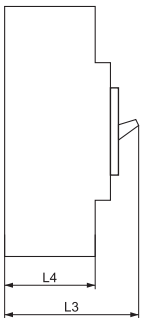
Type	Overall dimensions (mm)						
	L1	L2	L3	L4	a	b	d
DS1 MAX 125/63 3P M	92	150	110	92	30	129	4.5
DS1 MAX 125/80 3PM	92	150	110	92	30	129	4.5
DS1 MAX 125/100 3P M	92	150	110	92	30	129	4.5
DS1 MAX 125/125 3P M	92	150	110	92	30	129	4.5
DS1 MAX 250/160 3P M	92	165	110	90	35	126	4.5
DS1 MAX 250/200 3P M	107	165	110	90	35	126	4.5
DS1 MAX 250/250 3P H	107	165	110	90	35	126	4.5
DS1 MAX 400/400 3P H	150	257	146	106	44	194	7
DS1 MAX 630/630 3P H	182	270	155	116	116	200	7
DS1 MAX 800/800 3P H	210	28	155	116	70	243	7
DS1 MAX 125/63 4P M	122	150	110	92	60	129	4.5
DS1 MAX 125/80 4PM	122	150	110	92	60	129	4.5
DS1 MAX 125/100 4P M	122	150	110	92	60	129	4.5
DS1 MAX 125/125 4P M	122	150	110	92	60	129	4.5
DS1 MAX 250/160 4P M	142	165	110	90	70	126	4.5
DS1 MAX 250/200 4P M	142	165	110	90	70	126	4.5
DS1 MAX 250/250 4P H	142	165	110	90	70	126	4.5
DS1 MAX 400/400 4P H	198	257	146	106	44	194	7
DS1 MAX 630/630 4P H	240	270	155	116	116	200	7
DS1 MAX 800/800 4P H	280	280	155	116	70	243	7

Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu		Thermal current adjusment (A)	Packing/ box	Catalogue number three-poles	Catalogue number four-poles
			415V	690V				
DS1 MAX - 125	63	36	50	20	50,4-63	1/16	**44163MM**	**444163MM**
DS1 MAX - 125	80	36	50	20	64-80	1/16	**44164MM**	**444164MM**
DS1 MAX - 125	100	36	50	20	80-100	1/16	**44165MM**	**444165MM**
DS1 MAX - 125	125	36	50	20	100-125	1/16	**44166MM**	**444166MM**
DS1 MAX - 250	160	36	50	20	128-160	1/6	**44160MM**	**444160MM**
DS1 MAX - 250	200	36	50	20	160-200	1/6	**44200MM**	**444200MM**
DS1 MAX - 250	250	42	65	25	200-250	1/6	**44250MH**	**444250MH**
DS1 MAX - 400	400	50	85	30	320-400	1/3	**44401MH**	**444401MH**
DS1 MAX - 630	630	50	85	30	504-630	1/2	**44630MH**	**444630MH**
DS1 MAX - 800	800	65	100	50	640-800	1/2	**44800MH**	**444800MH**

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-2







High breaking capacity level moulded case circuit breakers (MCCB) DS1 MAX with ELCB

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Earth Leakage Circuit Breaker (ELCB). Combine all functions of a standard circuit breaker, and prevent the consequences caused by short circuit, overload and shock. Widely used product for protection of low voltage circuits from fire.

Technical data:

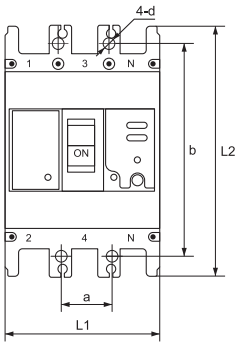
- Rated operating voltage: 415/690V; 50/60Hz
- Rated residual operating current IΔn (mA) - 100mA; 300mA 500mA- adjustable
- Tripping time IΔn- instantaneous; 0.4s; 1s -adjustable
- Max delayed 2 In limit non-actuating time 1s 0.2/0.5
- Isolating voltage: 2000V.
- Surge voltage wear resistance: ≥8000V
- Joining terminal: flat (tunnel) screw terminal.
- Connecting:
  - rigid or flexible conductors
  - front conductors joining
  - possibility for mounting to lengthening terminal.
- Electrical wear resistance (number of cycles):≥ 10000.
- Mechanical wear resistance (number of cycles):≥ 20000.
- IP code: IP>20.
- Abnormal heating wear resistance and fire of the outer parts: 960°C
- Mounting:
  - joining with bolts
  - mounting position: vertical.
- Plastic material of UV rays and non-flammable.
- Residual indicating push button
- Test button.
- Ambient temperature: -20°÷65°C

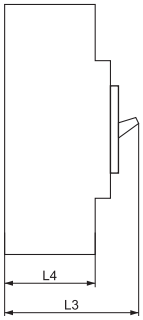
Type	Overall dimensions (mm)						
	L1	L2	L3	L4	a	b	d
DS1 MAX 225/125 3P M	92	150	110	92	30	129	4.5
DS1 MAX 400/250 3P H	150	257	146	106	44	194	7
DS1 MAX 400/400 3P H	150	257	146	106	44	194	7
DS1 MAX 225/125 4P M	122	150	110	92	60	129	4.5
DS1 MAX 400/250 4P H	198	257	146	106	44	194	7
DS1 MAX 400/400 4P H	198	257	146	106	44	194	7

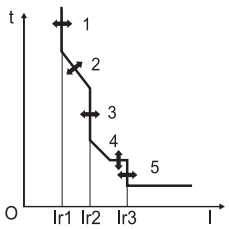
Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu		Rated residual operating current IΔn (mA)	Packing /box	Catalogue number three-poles	Catalogue number four-poles
			415V	690V				
DS1 MAX - 225	125	36	50	20	100/300/500	1/16	**44163MMEL**	**444163MMEL**
DS1 MAX - 400	250	42	65	25	100/300/500	1/6	**44250MHEL**	**444250MHEL**
DS1 MAX - 400	400	50	85	30	100/300/500	1/3	**44401MHEL**	**444401MHEL**

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-2









High breaking capacity level moulded case circuit breakers (MCCB) DS1 MAX to 800A-electronic type

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Functions:
- high breaking capacity level
- switching on/off heavy loaded electrical circuits
- breaking of electrical circuits and control of powerful consumers
- can be used as a main breaker in housing or industrial distributing installations
- endures high currents of short circuit in the protected circuit
- remarkable with high reliability of current characteristics
- control: manual
- possibilities for electrical module parameters adjustment through direct modules (combination of keys) thus providing accurate protection from overload and short circuit
- simultaneous protection of the three phases
- possibility for auxiliary devices mounting for automation
- contactor for TT test 15V DC

Technical data:
- Rated operating voltage: 415/690V; 50/60Hz
- Isolating voltage: 2000V
- Surge voltage wear resistance: ≥8000V
- Joining terminal: flat (tunnel) screw terminal
- Connecting:
  - rigid or flexible conductors
  - front conductors joining
  - possibility for mounting to lengthening terminal
- Electrical wear resistance (number of cycles):≥ 10000
- Mechanical wear resistance (number of cycles):≥ 20000
- IP code: IP>20
- Abnormal heating wear resistance and fire of the outer parts: 960°C
- Mounting:
  - joining with bolts
  - mounting position: vertical
- Plastic material of UV rays and non-flammable
- Test button
- Ambient temperature: -20°÷65°C

Type	Rated current In (A)	Operating breaking capacity (kA) Ics	Maximum breaking capacity (kA) Icu 415V	690V	Thermal current adjusment (A)	Packing/ box	Catalogue number three-poles	Catalogue number four-poles
DS1 MAX - 400E	400	50	85	30	200-400	1/3	**44940MH**	**444940MH**
DS1 MAX - 630E	630	50	85	30	400-630	1/2	**44963MH**	**444963MH**
DS1 MAX - 800E	800	65	100	50	630-800	1/2	**44980MH**	**444980MH**

Tripping characteristic:

Ir1(A) Over-load long time delay tripping current

Ir1 adjustment, according to the different rated current of MCCB.

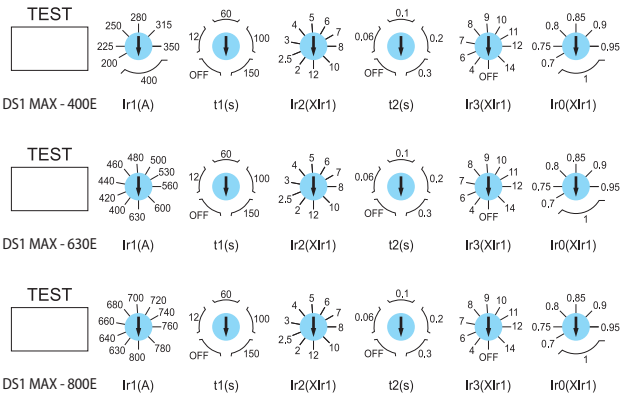
t1(s) Long time delay tripping time t1 adjustment.

Ir2(XIr1) Short circuit short time delay tripping time Ir2 adjustment.

t2(s) Short time delay tripping time t2 adjustment.

Ir3(XIr1) Short circuit instantaneous tripping current Ir3 adjustment.

Ir0(XIr1) Pre-alarm tripping current Ir0 adjustment.



Documents corresponding to the product:
Standard EN 60947-1; EN 60947-2; IEC 947-2



Moulded case circuit breaker(MCCB) DW1 series

5 YEAR WARRANTY *for industrial usage, 3 years warranty

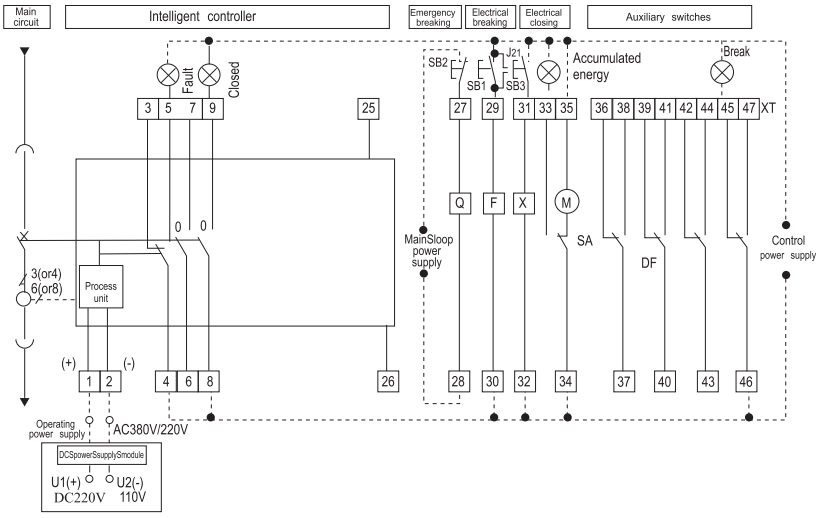
The DW1 series is an intelligent type circuit breaker used to control and protect low voltage electrical distribution network. Possibility to set the parameters of the circuit protection, built in under voltage release, remote control, earth protection and load monitoring.

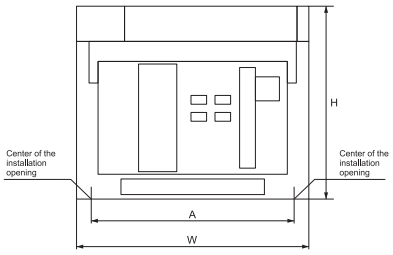
Functions:
- switching on/off heavy loaded electrical circuits
- breaking of electrical circuits and control of powerful consumers
- used as a main breaker in housing or industrial distributing installations
- endures high currents of short circuit in the protected circuit
- remarkable with high reliability of current characteristics
- motor control
- mounted auxiliary devices for automation - under voltage release, earth protection, intelligent controlling block with a possibility for a choice of the protected function

Technical data:
- Rated operating voltage: 690V; 50/60Hz
- Isolating voltage: 690V
- Surge voltage wear resistance: 2kV
- Joining terminal: bolt connection with 4 bolts to the power supply rail
- Connecting:
  - copper rails
  - busway connection – at the back
- Electrical wear resistance (number of cycles): ≥2000
- Mechanical wear resistance (number of cycles): ≥9000
- IP code: IP54
- Mounting:
  - clamping with bolts
  - mounting position: vertical gradient – maximum 5°
- Plastic material of UV rays and non-flammable
- Test button
- Ambient temperature: -10°C + 65°C
- Installation altitude: up to 2000m

Basic protective functions:
- Overload protection with long time delay
- Short circuit protection with short time delay, time inversion limit
- Short circuit protection with short time delay, time fixed limit
- Instantaneous short circuit protection
- Earth protection function
- Full stability function
- "Overload alarm" function
- Test function
- Auto diagnostics function

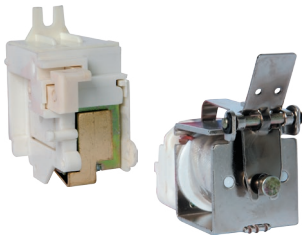
A commutation type of breakers with RS 485 connection for duplex transmission of all function parameters, adjustment and data can also be produced at client's order and delivery terms agreement.





Type	Dimensions		
	A	H	W
DW1-2000 FIXED	362	402	373
DW1-3200 FIXED	422	402	363
DW1-2000 DRAW-OUT	375	432	461
DW1-3200 DRAW-OUT	435	432	494
DW1-4000 DRAW-OUT	550	432	494
DW1-6300 DRAW-OUT	813	452	504

Type	Rated current In (A)	Rated voltage Un (V)	Breaking capacity (кA)		Electrical wear resistance (number of cycles)	Mechanical wear resistance (number of cycles)	Packing/ Box (pcs)	Catalogue number
			400 V	690 V				
DW1-2000 FIXED	1600	AC400V	80	50	2000	9000	1/1	**44208**
DW1-2000 FIXED	2000	AC400V	80	50	2000	9000	1/1	**44209**
DW1-3200 FIXED	2500	AC400V	100	65	2000	9000	1/1	**44255**
DW1-3200 FIXED	3200	AC400V	100	65	2000	9000	1/1	**44329**
DW1-2000 DRAW-OUT	1600	AC400V	80	50	2000	9000	1/1	**44208DO**
DW1-2000 DRAW-OUT	2000	AC400V	80	50	2000	9000	1/1	**44209DO**
DW1-3200 DRAW-OUT	2500	AC400V	100	65	2000	9000	1/1	**44255DO**
DW1-4000 DRAW-OUT	3600	AC400V	100	75	2000	9000	1/1	**44436DO**
DW1-4000 DRAW-OUT	4000	AC400V	100	75	2000	9000	1/1	**44440DO**
DW1-6300 DRAW-OUT	5000	AC400V	120	75	2000	9000	1/1	**44650DO**
DW1-6300 DRAW-OUT	6300	AC400V	120	75	2000	9000	1/1	**44663DO**



Shunt release (MX)

7 YEAR WARRANTY *for industrial usage, 3 years warranty

The device is used for remote control of breakers as at voltage signal it starts operating and switches off the breaker to which it is mounted

Technical data:

- rated operating voltage: 230/400V 50/60Hz
- electromagnetic coil 100VA for breakers up to 400A
- electromagnetic coil 150VA for breakers 630-800A
- available joining conductors

Mounting:
Mounted in a special jack after cover dismounting

Connecting:
Connected with the operative system through the provided conductors

***Note:** The breakers are offered with mounted accessory



DS1-electronic type with mounted MX

Type	Catalogue number	
	400V	230V
DS1 400/3300	**444511**	**44452**
DS1 630/3300	**44455**	**44456**
DS1 800/3300	**44459**	**44460**

DS1 MAX-electronic type with mounted MX

Type	Catalogue number	
	400V	230V
DS1 MAX 400/3300	**444511M**	**44452M**
DS1 MAX 630/3300	**44455M**	**44456M**
DS1 MAX 800/3300	**44459M**	**44460M**

DS1-thermomagnetic type with mounted MX

Type	Catalogue number	
	400V	230V
DS1 125/40	**44317**	**44318**
DS1 125/50	**44321**	**41322**
DS1 125/63	**44326**	**44327**
DS1 125/80	**44331**	**44332**
DS1 125/100	**44336**	**44337**
DS1 125/125	**44340**	**44341**
DS1 160/100	**44463**	**44464**
DS1 160/160	**44333**	**44344**
DS1 250/200	**44347**	**44348**
DS1 250/250	**44351**	**44352**
DS1 400/315	**44467**	**44468**
DS1 400/400	**44355**	**44356**
DS1 630/500	**44359**	**44360**
DS1 630/630	**44363**	**44364**
DS1 800/800	**44367**	**44368**

DS1 MAX-thermomagnetic type with mounted MX

Type	Catalogue number	
	400V	230V
DS1 MAX 125/63	**44326M**	**44327M**
DS1 MAX 125/80	**44331M**	**44332M**
DS1 MAX 125/100	**44336M**	**44337M**
DS1 MAX 125/125	**44340M**	**44341M**
DS1 MAX 250/160	**44333M**	**44344M**
DS1 MAX 250/200	**44347M**	**44348M**
DS1 MAX 250/250	**44351M**	**44352M**
DS1 MAX 400/400	**44355M**	**44356M**
DS1 MAX 630/630	**44363M**	**44364M**
DS1 MAX 800/800	**44367M**	**44368M**

Under voltage release (MN)

7 YEAR WARRANTY *for industrial usage, 3 years warranty



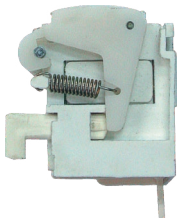
MN for DS1 - 125-160

The device switches off and/or does not allow the switching on of the breaker to which it is mounted at power breakdown or voltage decrease under certain limits

Technical data:
- operating voltage: 230/400V 50Hz
- electromagnetic coil 6VA for breakers up to 400A
- electromagnetic coil 10VA for breakers 630-800A
- available joining conductors
- switches off at voltage decrease under 75% of the operating

Mounting:
Mounted in a special jack after cover dismounting
Note: The breakers are offered with mounted accessory

Connecting:
Connected with the operative system through the provided conductors



MN for DS1 - 250-800



DS1-electronic type with mounted MN

Type	Catalogue number	
	400V	230V
DS1 400/3300	**44483**	**44484**
DS1 630/3300	**44487**	**44488**
DS1 800/3300	**44491**	**44492**

DS1 MAX-electronic type with mounted MN

Type	Catalogue number	
	400V	230V
DS1 MAX 400/3300	**44483M**	**44484M**
DS1 MAX 630/3300	**44487M**	**44488M**
DS1 MAX 800/3300	**44491M**	**44492M**

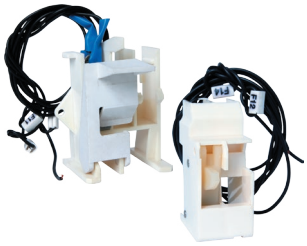
DS1-thermomagnetic type with mounted MN

Type	Catalogue number	
	400V	230V
DS1 125/40	**44383**	**44384**
DS1 125/50	**44387**	**44388**
DS1 125/63	**44391**	**44392**
DS1 125/80	**44395**	**44396**
DS1 125/100	**44399**	**44402**
DS1 125/125	**44407**	**44408**
DS1 160/100	**44475**	**44476**
DS1 160/160	**44411**	**44412**
DS1 250/200	**44415**	**44416**
DS1 250/250	**44419**	**44420**
DS1 400/315	**44479**	**44480**
DS1 400/400	**44423**	**44424**
DS1 630/500	**44427**	**44428**
DS1 630/630	**44431**	**44432**
DS1 800/800	**44435**	**44436**

DS1 MAX-thermomagnetic type with mounted MN

Type	Catalogue number	
	400V	230V
DS1 MAX 125/63	**44391M**	**44392M**
DS1 MAX 125/80	**44395M**	**44396M**
DS1 MAX 125/100	**44399M**	**44402M**
DS1 MAX 125/125	**44407M**	**44408M**
DS1 MAX 250/160	**44411M**	**44412M**
DS1 MAX 250/200	**44415M**	**44416M**
DS1 MAX 250/250	**44419M**	**44420M**
DS1 MAX 400/400	**44423M**	**44424M**
DS1 MAX 630/630	**44431M**	**44432M**
DS1 MAX 800/800	**44435M**	**44436M**

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-2



Auxiliary contact (OF)

7 YEAR WARRANTY *for industrial usage, 3 years warranty

According to the way of mounting the auxiliary devices can be divided into two groups:
- internal devices – accessories for whose mounting it is necessary to dismount the cover of the breakers and fix them in specially designed jacks
- external devices – they are mounted right on the top cover of the breaker

INTERNAL DEVICES

Auxiliary contact (OF)
The device changes its condition conformably to the breaker's condition; it has a NO and a NC contactor.

Technical data:
- for breakers up to 160A operating current through the auxiliary contact: 3A
- for breakers from 250 to 800A operating current through the auxiliary contact: 6A
- available joining conductors
- labeling of the cables

Mounting:
Mounted in a special jack after cover dismounting
Note:
The breakers are offered with mounted accessory
Connecting:
Connected with the operative system through the provided conductors

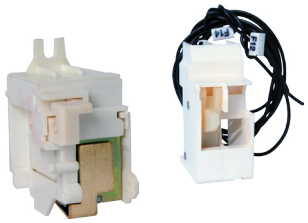


DS1-thermomagnetic type with mounted OF

Type	Catalogue number
DS1 125/40	**44301**
DS1 125/50	**44302**
DS1 125/63	**44303**
DS1 125/80	**44304**
DS1 125/100	**44305**
DS1 125/125	**44306**
DS1 160/160	**44307**
DS1 250/200	**44308**
DS1 250/250	**44309**
DS1 400/400	**44310**
DS1 630/500	**44311**
DS1 630/630	**44312**
DS1 800/800	**44313**

DS1 MAX-thermomagnetic type with mounted OF

Type	Catalogue number
DS1 MAX 125/63	**44303M**
DS1 MAX 125/80	**44304M**
DS1 MAX 125/100	**44305M**
DS1 MAX 125/125	**44306M**
DS1 MAX 250/160	**44307M**
DS1 MAX 250/200	**44308M**
DS1 MAX 250/250	**44309M**
DS1 MAX 400/400	**44310M**
DS1 MAX 630/630	**44312M**
DS1 MAX 800/800	**44313M**







MCCB with auxiliary devices mounted (MX+OF) and (MN+OF)

7 YEARS GUARANTEE *for industrial usage, 3 years warranty

DS1 -electronic type with mounted MX+OF

Type	Catalogue number	
	400V	230V
DS1 400/3300	**44453**	**44454**
DS1 630/3300	**44457**	**44458**
DS1 800/3300	**44461**	**44462**

DS1-thermomagnetic type with mounted MX+OF

Type	Catalogue number	
	400V	230V
DS1 125/40	**44319**	**44320**
DS1 125/50	**44323**	**41324**
DS1 125/63	**44328**	**44330**
DS1 125/80	**44334**	**44335**
DS1 125/100	**44338**	**44339**
DS1 125/125	**44342**	**44343**
DS1 160/100	**44465**	**44466**
DS1 160/160	**44345**	**44346**
DS1 250/200	**44349**	**44350**
DS1 250/250	**44353**	**44354**
DS1 400/315	**44469**	**44470**
DS1 400/400	**44357**	**44358**
DS1 630/500	**44361**	**44362**
DS1 630/630	**44365**	**44366**
DS1 800/800	**44369**	**44370**

DS1 MAX-thermomagnetic type with mounted MN+OF

Type	Catalogue number	
	400V	230V
DS1 MAX 125/63	**44393M**	**44394M**
DS1 MAX 125/80	**44397M**	**44398M**
DS1 MAX 125/100	**44405M**	**44406M**
DS1 MAX 125/125	**44409M**	**44410M**
DS1 MAX 250/160	**44413M**	**44414M**
DS1 MAX 250/200	**44417M**	**44418M**
DS1 MAX 250/250	**44421M**	**44422M**
DS1 MAX 400/400	**44425M**	**44426M**
DS1 MAX 630/630	**44433M**	**44434M**
DS1 MAX 800/800	**44437M**	**44438M**

DS1 MAX-electronic type with mounted MN+OF

Type	Catalogue number	
	400V	230V
DS1 MAX 400/3300	**44485M**	**44486M**
DS1 MAX 630/3300	**44489M**	**44490M**
DS1 MAX 800/3300	**44493M**	**44494M**

DS1 MAX-electronic type with mounted MX+OF

Type	Catalogue number	
	400V	230V
DS1 MAX 400/3300	**44453M**	**44454M**
DS1 MAX 630/3300	**44457M**	**44458M**
DS1 MAX 800/3300	**44461M**	**44462M**

DS1 MAX- thermomagnetic type with mounted MX+OF

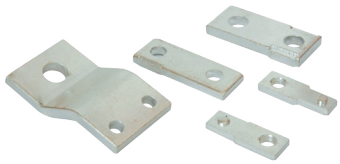
Type	Catalogue number	
	400V	230V
DS1 MAX 125/63	**44328M**	**44330M**
DS1 MAX 125/80	**44334M**	**44335M**
DS1 MAX 125/100	**44338M**	**44339M**
DS1 MAX 125/125	**44342M**	**44343M**
DS1 MAX 250/160	**44345M**	**44346M**
DS1 MAX 250/200	**44349M**	**44350M**
DS1 MAX 250/250	**44353M**	**44354M**
DS1 MAX 400/400	**44357M**	**44358M**
DS1 MAX 630/630	**44365M**	**44366M**
DS1 MAX 800/800	**44369M**	**44370M**

DS1-thermomagnetic type with mounted MN+OF

Type	Catalogue number	
	400V	230V
DS1 125/40	**44385**	**44386**
DS1 125/50	**44389**	**44390**
DS1 125/63	**44393**	**44394**
DS1 125/80	**44397**	**44398**
DS1 125/100	**44405**	**44406**
DS1 125/125	**44409**	**44410**
DS1 160/100	**44477**	**44478**
DS1 160/160	**44413**	**44414**
DS1 250/200	**44417**	**44418**
DS1 250/250	**44421**	**44422**
DS1 400/315	**44481**	**44482**
DS1 400/400	**44425**	**44426**
DS1 630/500	**44429**	**44430**
DS1 630/630	**44433**	**44434**
DS1 800/800	**44437**	**44438**

DS1-electronic type with mounted MN+OF

Type	Catalogue number	
	400V	230V
DS1 400/3300	**44485**	**44486**
DS1 630/3300	**44489**	**44490**
DS1 800/3300	**44493**	**44494**



Terminal plates for MCCB - DS1 and DS1 MAX type

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Straight copper electro-tinned extensions enabling cable connection outside the switch terminals and providing excellent contact with the switch terminal base. Terminal extensions with different cross section are available depending on the switch rated power.

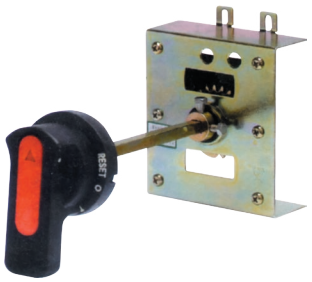
Mounting:
Extensions are directly bolt mounted to the switch terminal base.

Terminal plates for MCCB - DS1

Type	Rated current (A)	Catalogue number 3pcs/set	Catalogue number 4pcs/set
TP 125	125	**31125**	**314125**
TP 160	160	**31160**	**314160**
TP 250	250	**31250**	**314250**
TP 400	400	**31400**	**314400**
TP 630	630	**31630**	**314630**
TP 800	800	**31850**	**314850**
TP 1250	1250	**311250**	-

Terminal plates for MCCB - DS1 MAX

Type	Rated current (A)	Catalogue number 3pcs/set	Catalogue number 4pcs/set
TP 125 MAX	125	**31125M**	-
TP 250 MAX	250	**31250M**	-
TP 400 MAX	400	**31400M**	**314400M**
TP 630 MAX	630	**31630M**	**314630M**
TP 800 MAX	800	**31850M**	**314850M**

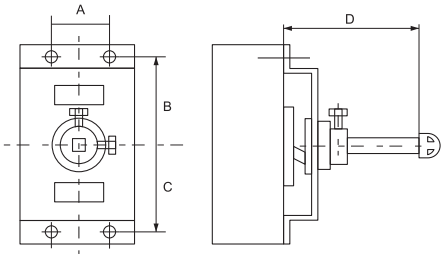


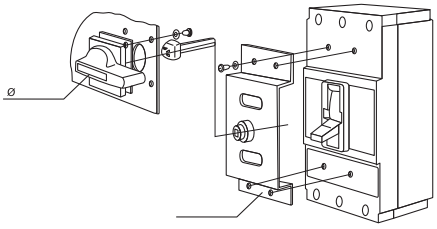
Remote control (manual)

5 YEAR WARRANTY *for industrial usage, 3 years warranty

Description:
The device switches off/on the breaker to which manual operative rotary mechanism is mounted
- two operating positions of the executive mechanism fixed at 90°C

Mounting:
The base is mounted with bolts right on the cover (scheme 1 mounting), and the handle is mounted at the door of the distribution box, using an extension axis it is joined to the base





Remote control for MCCB, DS1

Type of the breaker	Dimensions (mm) A	B	C	Dmin	Dmax	Packing/ Box (pcs)	Catalogue number
DS1 125A	25	50	50	65	115	1	**44967**
DS1 160A	30	50	50	65	115	1	**44968**
DS1 250A	35	70	70	80	130	1	**44969**
DS1 400A	45	107	107	85	105	1	**44970**
DS1 630A	70	119	119	110	110	1	**44971**
DS1 800A	70	119	119	110	110	1	**44972**

Remote control for MCCB, DS1 MAX

Type of the breaker	Dimensions (mm) A	B	C	Dmin	Dmax	Packing/ Box (pcs)	Catalogue number
DS1 MAX 63A	25	50	50	65	115	1	**44966M**
DS1 MAX 125A	25	50	50	65	115	1	**44967M**
DS1 MAX 250A	35	70	70	80	130	1	**44969M**
DS1 MAX 400A	45	107	107	85	105	1	**44970M**
DS1 MAX 630/800A	70	119	119	110	110	1	**44972M**



DS1 - 125-160

Remote control (electrical)

5 YEARS GUARANTEE *for industrial usage, 3 years warranty

Description:
The device switches off/on the breaker to which manual operative rotary mechanism is mounted

- two operating positions of the executive mechanism fixed at 90°C

Mounting:
The base is mounted with bolts right on the cover (scheme 1 mounting), and the handle is mounted at the door of the distribution box, using an extension axis it is joined to the base



DS1 - 250-800

Electrical remote control for MCCB DS1

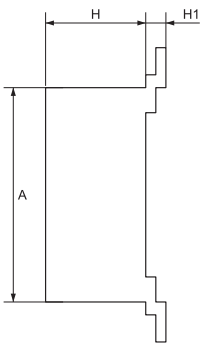
Type of the breaker	Dimensions (mm)					Packing/ Box (pcs)	Catalogue number Operating voltage (V)	
	A	A1	B	B1	H		230V	400V
DS1 125	103.5	110	30	90	92	1	**44912**	**44907**
DS1 160	103.5	110	35	90	92	1	**44913**	**44908**
DS1 250	139	-	132	-	105	1	**44914**	**44909**
DS1 400	226	-	132	-	132	1	**44915**	**44910**
DS1 630	226	-	132	-	132	1	**44916**	**44911**
DS1 800	226	-	132	-	132	1	**44916**	**44911**

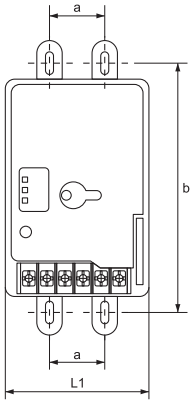


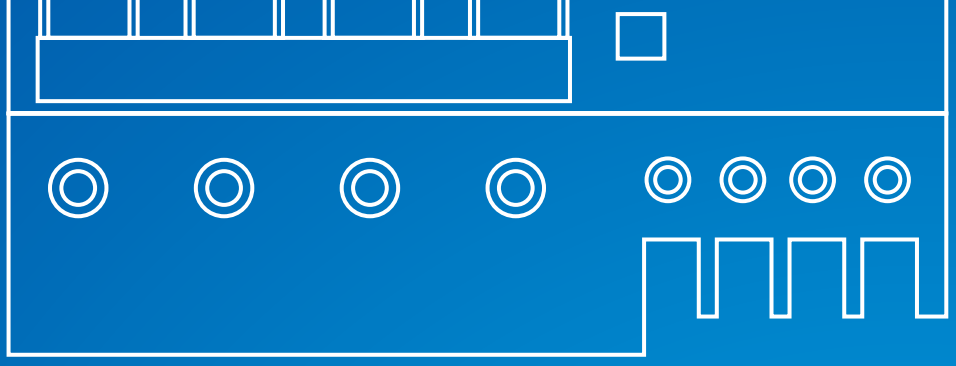
DS1 MAX - 63-250

Electrical remote control for MCCB DS1 MAX

Type of the breaker	Dimensions (mm)					Packing/ Box (pcs)	Catalogue number Operating voltage (V)	
	L1	B	B	H	H1		230V	400V
DS1 MAX 63A	116	90	50	77	12,5	1	**44917M**	**44906M**
DS1 MAX 125A	116	90	50	77	12,5	1	**44912M**	**44907M**
DS1 MAX 250A	116	90	70	77	15	1	**44914M**	**44909M**
DS1 MAX 400A	176	130	107	115	27	1	**44915M**	**44910M**
DS1 MAX 630/800A	176	130	119	115	31	1	**44916M**	**44911M**

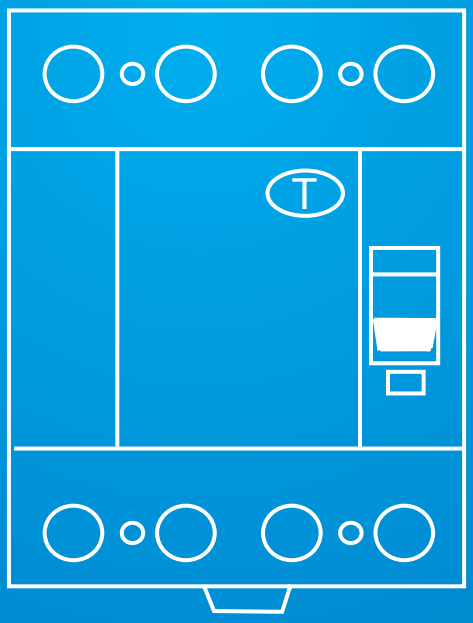






INDIRECT PROTECTION DEVICES

INDIRECT
PROTECTION DEVICES



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COVER 1

TERMINALS 2

NON-FLAMABLE BASE 3

CONTACT 4

TEST BUTTON 5

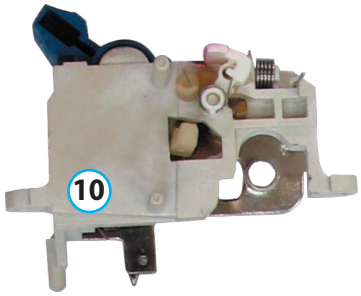
SECONDARY WINDING OF TT 6

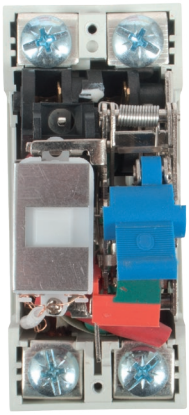
PRIMARY WINDING 7

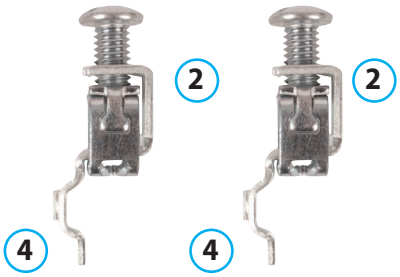
SUMMING CURRENT TRANSFORMER (TT) WITH TOROID 8

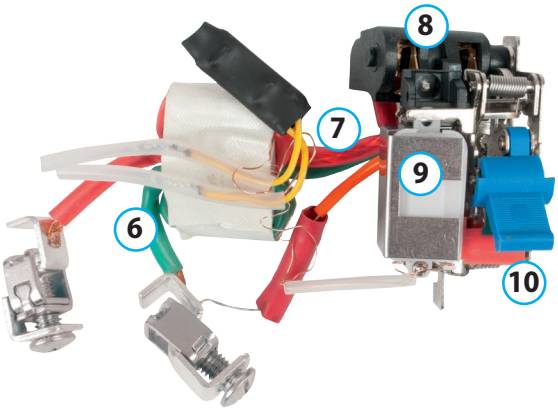
ELECTROMAGNETIC RELAY 9

BREAKING (RELEASE) UNIT 10

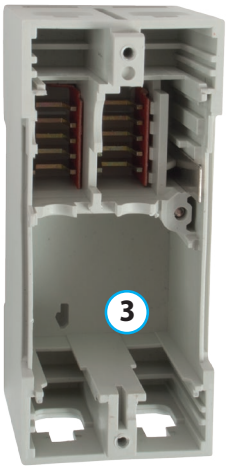














Documents corresponding to the product:
EN 61008-1
EN 61008-2; EN 60947-1



Type AC for AC current

Residual current devices JEL1

7 YEAR WARRANTY *for industrial usage, 3 years warranty

The residual current device works with no extra power supply to the operating mechanism. It compares the magnitude of the currents through the neutral and phase conductors. The conductors are coiled on toroid and together with the secondary winding form a measurement transformer. The power conductors are coiled in such a way that the magnetic fields generated at electrical current flow through them are mutually neutralized. At failure in the insulation of some of the conductors or at presence of a person under voltage, the system is misbalanced and the magnetic fields can not be neutralized. This residual field generates in the secondary current winding, called current leakage. The device breaks when the value of this current exceeds the limit value of the residual current breaker.

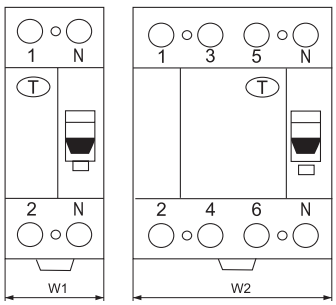
Functions:
- switching off heavy-loaded electrical circuits at insulation damage of the conductors to the consumers
- switching off heavy-loaded electrical circuits at presence of a person under voltage
- used to protect not only particular consumers/ circuits, but also the whole panel
- remarkable with high reliability of current characteristics
- control: manual switching on and automatic switching off at exit failure

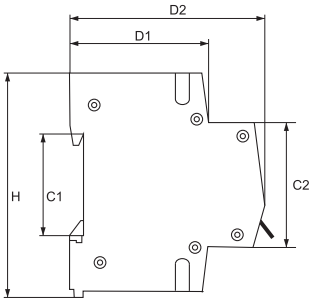
Technical data:
- Rated operating voltage: 230/400V; 50/60 Hz
- Rated current: according to the table
- Responsiveness: 30; 100; 300; 500mA
- Time delay until break: <0.1s at I Δ n and <0.04s at 2I Δ n
- Surge voltage wear resistance: ≥2000V
- Short circuit current wear resistance: 4500A, 6000A
- Joining terminal: flat (tunnel) screw terminal made of 1.5 coldly draw-plated plane Q235A
- Type of the plastic:
  - material: self-extinguishing nylon PA66
  - permitivity strength: >18MV/m
- Contact head: silver graphite CAg(5)
- Static contact: pure copper T2Y2 type
- Electrical wear resistance (number of cycles):≥5000
- Mechanical wear resistance (number of cycles):≥10000
- IP code: IP>20
- Indication for operating (switched on) position
- Plastic material of the breakers of UV rays and non-flammable
- Ambient temperature: -10°C + 65°C
- Installation altitude: up to 2000m

Connecting:
- power supply busbar (only for bipolar)
- flexible or rigid conductors with corresponding section

Mounting:
- on DIN-rail
- mounting position: vertical

The residual current device is mounted in the distribution box, and after the device the neutral conductor and the earthing conductor must not be connected together. In order to work accurately, the device must have three- or five-conductor grid with separate protective conductor (PE) (e.g. earthing system TN-S or TT with three or five conductors). The corpus of the consumer depending on the grid type must be connected either to the protective conductor or be earthed. (Fig.1)





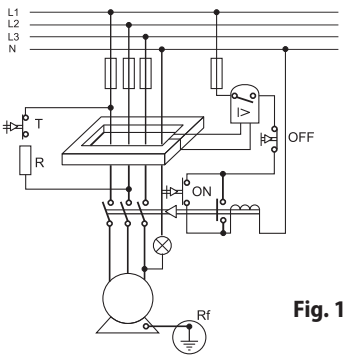
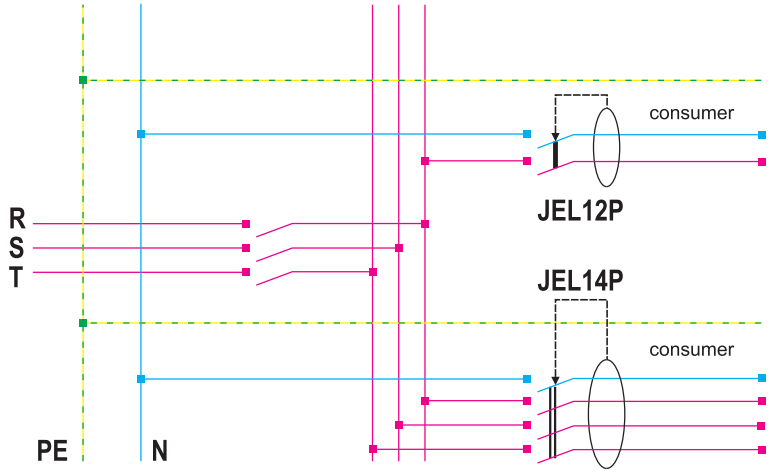


Fig. 1

Dimensions (mm)

W1	W2	H	H1	H2	D1	D2
35	70	81	35	45	50	72

Connecting scheme





Type AC for AC current

Residual current devices JEL1

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Residual current devices JEL 1, 6kA - Type AC - alternating fault currents sensible. Impulse withstand voltage 2000VAC

Type	Number of poles	Breaking capacity (kA)	Rated current In (A)	Packing/Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 1	2P	6	10.0	1 / 60	**40210**	**40212**	**40213**	**40214**
JEL 1	2P	6	16.0	1 / 60	**40216**	**40217**	**40218**	**40219**
JEL 1	2P	6	20.0	1 / 60	**40292**	**40293**	**40294**	**40295**
JEL 1	2P	6	25.0	1 / 60	**40221**	**40222**	**40223**	**40224**
JEL 1	2P	6	32.0	1 / 60	**40231**	**40232**	**40233**	**40234**
JEL 1	2P	6	40.0	1 / 60	**40241**	**40242**	**40243**	**40244**
JEL 1	2P	6	63.0	1 / 60	**40261**	**40262**	**40263**	**40264**
JEL 1	2P	6	80.0	1 / 60	**40281**	**40282**	**40283**	**40284**
JEL 1	2P	6	100.0	1 / 60	**40291**	**40296**	**40297**	**40298**



Type	Number of poles	Breaking capacity (kA)	Rated current In (A)	Packing/Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 1	4P	6	10.0	1 / 30	**40410**	**40412**	**40413**	**40414**
JEL 1	4P	6	16.0	1 / 30	**40416**	**40417**	**40418**	**40419**
JEL 1	4P	6	20.0	1 / 30	**40492**	**40493**	**40494**	**40495**
JEL 1	4P	6	25.0	1 / 30	**40421**	**40422**	**40423**	**40424**
JEL 1	4P	6	32.0	1 / 30	**40431**	**40432**	**40433**	**40434**
JEL 1	4P	6	40.0	1 / 30	**40441**	**40442**	**40443**	**40444**
JEL 1	4P	6	63.0	1 / 30	**40461**	**40462**	**40463**	**40464**
JEL 1	4P	6	80.0	1 / 30	**40481**	**40482**	**40483**	**40484**
JEL 1	4P	6	100.0	1 / 30	**40491**	**40496**	**40497**	**40498**

Documents corresponding to the product:
EN 61008-1
EN 61008-2; EN 60947-1



Type A for AC/DC current

Residual current protection type A - JEL 1A

7 YEAR WARRANTY *for industrial usage, 3 years warranty

These are Residual Current Devices (RCDs) JEL 1A with enhanced sensibility and fast - operating protection devices applicable in circuits with harmonic or direct pulsating current component presence.

Functions:
- switching off electrical circuits on load at conductor insulation breaking to the consumer
- switching off electrical circuits on load at direct and indirect contact
- switching off electrical circuits on load at alternating earth fault currents during consequent light impact
- switching off consumers at harmonic presence due to luminescent lights
- switching off consumers in DC circuits at fault currents presence
- mechanical indicator for ON position

Technical data:
- Rated operating voltage: 230/400V; 50 Hz
- Rated current: according to the table
- Responsiveness: 30; 100; 300; 500mA
- Time delay until break: <0.1s at I Δ n and <0.04s at 2I Δ n
- Short circuit current wear resistance: 6000A
- Electrical wear resistance (number of cycles):≥5000
- Mechanical wear resistance (number of cycles):≥10000
- IP code: IP>20

Connecting:
- power supply busbar (only for bipolar)
- flexible or rigid conductors with corresponding section

Mounting:
- on DIN-rail
- mounting position: vertical



Residual current devices JEL 1A, 6kA - Type A - alternating and pulsating direct fault currents sensible Impulse withstand voltage 2000VAC/ 400VDC

Type	Number of poles	Breaking capacity (kA)	Rated current In (A)	Packing/Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 1A	2P	6	10.0	1 / 60	**40510**	**40512**	**40513**	**40514**
JEL 1A	2P	6	16.0	1 / 60	**40516**	**40517**	**40518**	**40519**
JEL 1A	2P	6	20.0	1 / 60	**40592**	**40593**	**40594**	**40595**
JEL 1A	2P	6	25.0	1 / 60	**40521**	**40522**	**40523**	**40524**
JEL 1A	2P	6	32.0	1 / 60	**40531**	**40532**	**40533**	**40534**
JEL 1A	2P	6	40.0	1 / 60	**40541**	**40542**	**40543**	**40544**
JEL 1A	2P	6	63.0	1 / 60	**40561**	**40562**	**40563**	**40564**
JEL 1A	2P	6	80.0	1 / 60	**40581**	**40582**	**40583**	**40584**
JEL 1A	2P	6	100.0	1 / 60	**40591**	**40596**	**40597**	**40598**

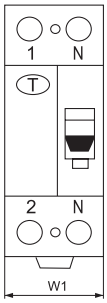


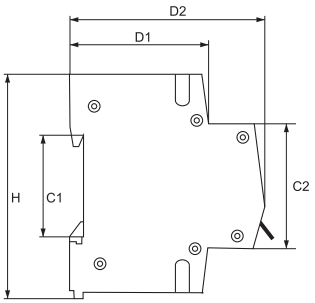
Type	Number of poles	Breaking capacity (kA)	Rated current In (A)	Packing/Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 1A	4P	6	10.0	1 / 30	**40610**	**40612**	**40613**	**40614**
JEL 1A	4P	6	16.0	1 / 30	**40616**	**40617**	**40618**	**40619**
JEL 1A	4P	6	20.0	1 / 30	**40692**	**40693**	**40694**	**40695**
JEL 1A	4P	6	25.0	1 / 30	**40621**	**40622**	**40623**	**40624**
JEL 1A	4P	6	32.0	1 / 30	**40631**	**40632**	**40633**	**40634**
JEL 1A	4P	6	40.0	1 / 30	**40641**	**40642**	**40643**	**40644**
JEL 1A	4P	6	63.0	1 / 30	**40661**	**40662**	**40663**	**40664**
JEL 1A	4P	6	80.0	1 / 30	**40681**	**40682**	**40683**	**40684**
JEL 1A	4P	6	100.0	1 / 30	**40691**	**40696**	**40697**	**40698**

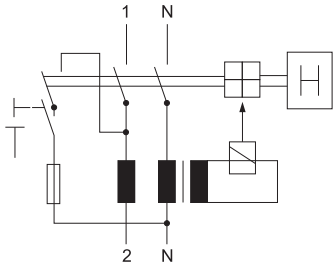
Documents corresponding to the product:
EN 61 009-1; EN 61009-2;



Type AC for AC current







Combined circuit breakers with residual current devices(RCD)-JEL5

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Description of the operating system:
It is a combination of automatic circuit breaker and residual current electromagnetic device. It combines the properties of the two elements. The circuit breaker reacts at short circuit or overload in the protected circuit, and the electromagnetic residual current device - at failure in the conductors' insulation. It compares the magnitude of the currents through the neutral and phase conductors. The conductors are coiled on toroid and together with the secondary winding form a measurement transformer. The power conductors are coiled in such a way that the magnetic fields generated at electrical current flow through them are mutually neutralized. At failure in the insulation of some of the conductors or at presence of a person under voltage, the system is misbalanced and the magnetic fields can not be neutralized. This residual magnetic field generates in the secondary current winding, called current leakage. When the value of this current exceeds the limit value of the residual current breaker the device breaks and the residual current device switches off from the power supply grid. The device operates without any extra power supply to the electromagnetic residual current and is not influenced by voltage varying or decreasing.

Functions:
- switching off heavy-loaded electrical circuits at short circuit or overload
- switching off heavy-loaded electrical circuits at insulation damage of the conductors to the consumers
- switching off heavy-loaded electrical circuits at presence of a person and animals under voltage
- used to protect not only particular consumers/ circuits, but also the whole panel
- remarkable with high reliability of current characteristics
- control: manual switching on and automatic switching off at failure in the insulation after the breaker

Dimensions (mm)

W1	H	C1	C2	D1	D2
35	81	35	45	50	72

Technical data:
- Rated operating voltage: 230V 50 Hz
- Circuit breaker rated current: according to the table
- Residual current responsiveness: 30; 100; 300; 500mA
- Time delay until break:
  - of the residual current device: <0.1s at I Δ n and <0.04s at 2I Δ n
  - of the circuit breaker: <0.1s
- Circuit breaker tripping curve: C
- Surge voltage wear resistance:≥2000V
- Breaking capacity: 10000
- Joining terminal: flat (tunnel) screw terminal made of 1.5 coldly draw-plated plane Q235A
- Type of the plastic:
  - material: self-extinguishing nylon PA66
  - dielectrical strength: >18MV/m
- Contact head: silver graphite CAg(5)
- Static contact: pure copper T2Y2 type
- Electrical wear resistance (number of cycles):≥5000
- Mechanical wear resistance (number of cycles):≥10000
- IP code: IP>20
- Indication for operating (switched on) position
- Breakers plastic material of UV rays and non-flammable
- Ambient temperature: -10°C + 65°C
- Installation altitude: up to 2000m

Connecting:
- flexible or rigid conductors with corresponding section

Mounting:
- on DIN-rail
- mounting position: vertical

The residual current device is mounted in the distribution box, and after the device the neutral conductor and the earthing conductor must not be connected together. In order to work accurately, the device must have three- or five-conductor grid with separate operating neutral conductor (N) and separate protecting conductor (PE) (e.g. earthing system TN-S or TT with three or five conductors).



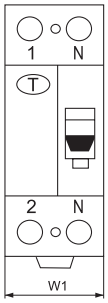
Combined electromagnetic residual current device and circuit breaker 2P 6kA

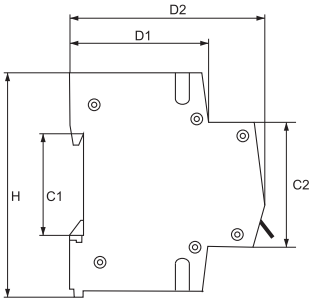
Type designation	Number of poles	Breaking capacity (kA)	Rated current (A)	Packing / Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL5	2	6	10	7 / 140	**40010**	**40011**	**40013**	**40015**
JEL5	2	6	16	7 / 140	**40016**	**40017**	**40018**	**40019**
JEL5	2	6	25	7 / 140	**40025**	**40021**	**40023**	**40026**
JEL5	2	6	32	7 / 140	**40032**	**40031**	**40033**	**40035**
JEL5	2	6	40	7 / 140	**40040**	**40041**	**40043**	**40045**

Documents corresponding to the product:
EN 61 009-1; EN 61009-2;



Type AC for AC current









Combined circuit breakers with electronic residual current devices

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Description of the operating system:
It is a combination of automatic circuit breaker and residual current electromagnetic device. It combines part of the properties of the two elements. The circuit breaker reacts at short circuit in the protected circuit, and the electromagnetic residual current device - at failure in the conductors' insulation. It compares the rate of the currents through the conductors in an electronic comparator. The residual current device operates normally at voltage feed. The voltage is needed for the comparator's energizing – a semi-conductor element with constantly set leakage current rate. This rate is compared with the actual rate. When the margin of the comparison is neutral, the residual current device does not operate, but at failure in the protected circuit insulation when it exceeds the set margin it operates and switches off the protection. For the normal operation of the residual current device, the power supplying circuit voltage must be over 170V and there must be no time variation.

Functions:
- switching off heavy-loaded electrical circuits at short circuit or overload
- switching off heavy-loaded electrical circuits at insulation damage of the conductors to the consumers
- switching off heavy-loaded electrical circuits at presence of a person under voltage
- used to protect not only particular consumers/ circuits, but also the whole panel
- remarkable with high reliability of current characteristics
- control: manual switching on and automatic switching off at exit failure

Dimensions (mm)

W1	H	C1	C2	D1	D2
35	81	35	45	50	72

Technical data:
- Rated operating voltage: 230/400V 50 Hz
- Circuit breaker rated current: according to the table
- Residual current responsiveness: 30; 100; 300; 500mA
- Time delay until break:
  - of the residual current device: <0.1s at I Δ n and <0.04s at 2I Δ n
  - of the circuit breaker: <0.1s
- Circuit breaker tripping curve: C
- Surge voltage wear resistance:≥2000V
- Breaking capacity: 4500A; 6000A
- Joining terminal: flat (tunnel) screw terminal
- Electrical wear resistance (number of cycles):≥≥500
- Mechanical wear resistance (number of cycles):≥≥2000
- IP code: IP>20
- Indication for operating (switched on) position

Connecting:
- power supply busbar (for two- or three polar)
- flexible or rigid conductors with corresponding section

Mounting:
- on DIN-rail
- mounting position: vertical
- Breakers plastic material of UV rays and non-flammable
- Ambient temperature: -10°C + 65°C
- Installation altitude: up to 2000m

The residual current device is mounted in the distribution box, and after the device the neutral conductor and the earthing conductor must not be connected together. In order to work accurately, the device must have separate conductors for operational neutral conductor (N) and protective conductor (e.g. earthing system TN-S or TT with three or five conductors).

Combined electronic residual current device with circuit breaker 2P, 10кA

Type designation	Number of poles	Breaking capacity (kA)	Rated current (A)	"Packing/Box (pcs)"	Leakage current I Δ n (mA)	Catalogue number
JEL 3 C6	2P	10	6	5/100	30	**40906**
JEL 3 C10	2P	10	10	5/100	30	**40910**
JEL 3 C16	2P	10	16	5/100	30	**40916**
JEL 3 C20	2P	10	20	5/100	30	**40920**
JEL 3 C25	2P	10	25	5/100	30	**40925**
JEL 3 C32	2P	10	32	5/100	30	**40932**
JEL 3 C40	2P	10	40	5/100	30	**40940**

Combined electronic residual current device with circuit breaker 2P, 6кA

Type designation	Number of poles	Breaking capacity (kA)	Rated current (A)	Packing / Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 4 C10	2	6	10	5 / 100	**40211E**	**40207E**	**40208E**	**40209E**
JEL 4 C16	2	6	16	5 / 100	**40215E**	**40245E**	**40235E**	**40237E**
JEL 4 C20	2	6	20	5 / 100	**40225E**	**40229E**	**40230E**	**40238E**
JEL 4 C25	2	6	25	5 / 100	**40240E**	**40204E**	**40246E**	**40268E**
JEL 4 C32	2	6	32	5 / 100	**40265E**	**40260E**	**40236E**	**40269E**
JEL 4 C40	2	6	40	5 / 100	**40274E**	**40270E**	**40273E**	**40275E**

Combined circuit breakers with electronic residual current devices-JEL6

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Combined electronic residual current device 1P + N
Compares the leakage current between the phase and neutral conductors.



Type AC for AC current

Type designation	Number of poles	Breaking capacity (kA)	Rated current (A)	Packing / Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 6 C10	1P+N	6	10	12 / 240	**40110**	**40111**	**40113**	**40114**
JEL 6 C16	1P+N	6	16	12 / 240	**40116**	**40117**	**40118**	**40119**
JEL 6 C25	1P+N	6	25	12 / 240	**40125**	**40121**	**40123**	**40126**
JEL 6 C40	1P+N	6	40	12 / 240	**40140**	**40141**	**40133**	**40145**
JEL 6 C50	1P+N	6	50	12 / 240	**40163**	**40161**	**40136**	**40165**

Combined electronic residual current device 2P
Compares the leakage current between the phase and neutral conductors or between two phases.



Type designation	Number of poles	Breaking capacity (kA)	Rated current (A)	Packing / Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 6 C10	2P	6	10	6 / 120	**40211**	**40207**	**40208**	**40209**
JEL 6 C16	2P	6	16	6 / 120	**40215**	**40245**	**40235**	**40237**
JEL 6 C25	2P	6	25	6 / 120	**40225**	**40229**	**40230**	**40238**
JEL 6 C40	2P	6	40	6 / 120	**40240**	**40204**	**40246**	**40268**
JEL 6 C50	2P	6	50	6 / 120	**40265**	**40260**	**40236**	**40269**

Combined electronic residual current device 3P
Compares the leakage current between the phases.



Type designation	Number of poles	Breaking capacity (kA)	Rated current (A)	Packing / Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 6 C10	3P	6	10	3 / 60	**40310**	**40311**	**40313**	**40314**
JEL 6 C16	3P	6	16	3 / 60	**40316**	**40317**	**40318**	**40319**
JEL 6 C25	3P	6	25	3 / 60	**40325**	**40321**	**40323**	**40324**
JEL 6 C40	3P	6	40	3 / 60	**40340**	**40341**	**40343**	**40344**
JEL 6 C50	3P	6	50	3 / 60	**40363**	**40361**	**40336**	**40365**

Combined electronic residual current device 3P+N
Compares the leakage current between the three phases and neutral conductors.



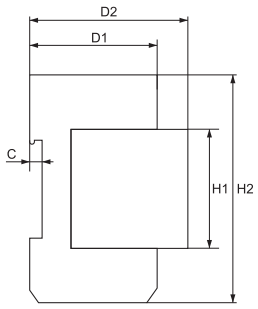
Type designation	Number of poles	Breaking capacity (kA)	Rated current (A)	Packing / Box (pcs)	Catalogue number Leakage current I Δ n (mA) 30	100	300	500
JEL 6 C10	3P+N	6	10	2 / 40	**40411**	**40407**	**40408**	**40409**
JEL 6 C16	3P+N	6	16	2 / 40	**40415**	**40445**	**40439**	**40438**
JEL 6 C25	3P+N	6	25	2 / 40	**40425**	**40420**	**40428**	**40429**
JEL 6 C40	3P+N	6	40	2 / 40	**40440**	**40404**	**40447**	**40446**
JEL 6 C50	3P+N	6	50	2 / 40	**40465**	**40401**	**40436**	**40469**

Documents corresponding to the product:
Standard EN61 643-1

The breakers are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC.



Type AC for AC current



Dimensions (mm)

C	H1	H2	D1	D2
5	90	45	43,5	58

Surge arresters SPD type

7 YEAR WARRANTY *for industrial usage, 3 years warranty

The surge arrester consists of a semi-conductor valve element that opens at certain conditions. At normal conditions of the system, the surge arrester has infinitely high resistance between the protected conductors and earthing circuit. At voltage increase due to atmospheric nature or system failure, the valve element opens and leads the excessive voltage to the grounded circuit.
After reversion of the normal voltage the valve element closes. The arrester can endure high momentary overloading.

Functions:
- protection of heavy-loaded electrical circuits from overload
- used to protect not only particular consumers/ circuits, but also the whole panel
- remarkable with high reliability of current characteristics
- control: automatic switching off at exit failure and recovery after eliminating the danger

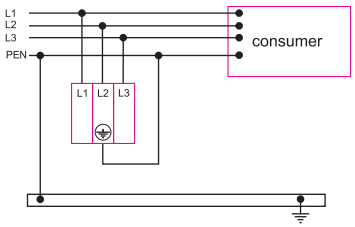
Technical data:
- Rated operating voltage Uc: - the operating voltage of the surge arrester 275/440V; 50Hz
- Surge voltage Up: the voltage created in surge arrester terminals at rated discharge current running: according to the tables
- Rated discharge current In – the rated value of discharge current with a sinusoid 8/20μs, which can be repeatedly led to the ground: according to the tables
- Full discharge current Imax – the peak value of the discharge current with a sinusoid 8/20μs, which the surge arrester can bear once: according to the table
- Constant operating current: up to 800μA for 1P, 2P and 3P; up to 600μA for 1P + N, 3P + N
- Indication for damaged surge arrester
- Offered in types: 1P; 1P + N; 3P; 3P + N

Connecting:
- flexible or rigid conductors with corresponding section

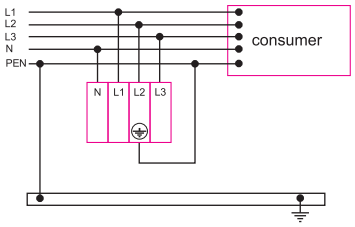
Mounting:
- on DIN-rail
- mounting position: vertical
- mounting in the distribution box on the front or right before the breaker according to the attached schemes
- Breakers plastic material of UV rays and non-flammable
- Ambient temperature: -10°C + 65°C
- Installation altitude: up to 2000m

COLOUR CODE for all types 5κA - yellow; white – 10κA; green – 20 κA and red 40κA

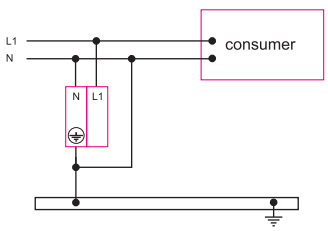
Three phase protection TN-C system



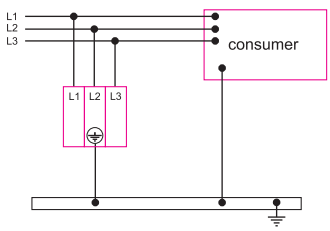
Three phase protection TN-C system



Monophase protection TT system



Three phase protection IT system



The surge arrester selection is made according to the overload risk level or atmosphere activity, named B, C or D (from high to low risk level).

The company offers the following models of arresters:
Model SPD – Bxxxx – for systems with exceptionally high risk level. Mounted mainly in the beginning of the installation or in the main panel.
Model SPD – Cxxxx – for systems with high or average risk level. Mounted in the beginning of the installation or before the breaker.
Model SPD – Dxxxx – for systems with low risk level. Suitable for secondary protection of consumers in combination with SPD – Bxxxx/SPD – Cxxxx



Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-D5/1p	5	10	275	1.2	17 / 170	**64101**
SPD-C10/1p	10	20	275	1.2	17 / 170	**64102**
SPD-C20/1p	20	40	275	1.8	17 / 170	**64103**
SPD-B40/1p	40	60	275	2	17 / 170	**64104**



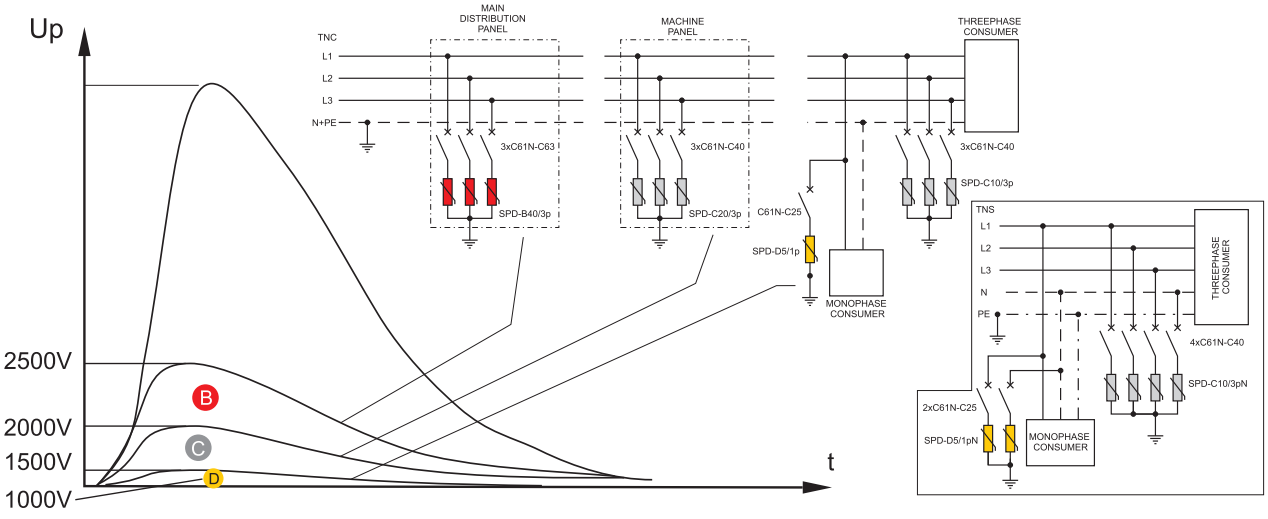
Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-D5/1pN	5	10	275	1.2	8 / 80	**64201**
SPD-C10/1pN	10	20	275	1.2	8 / 80	**64202**
SPD-C20/1pN	20	40	275	1.8	8 / 80	**64203**
SPD-B40/1pN	40	60	275	2	8 / 80	**64204**



Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-D5/3p	5	10	440	1.2	5 / 50	**64301**
SPD-C10/3p	10	20	440	1.2	5 / 50	**64302**
SPD-C20/3p	20	40	440	1.8	5 / 50	**64303**
SPD-B40/3p	40	60	440	2	5 / 50	**64304**



Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-D5/3pN	5	10	440	1.2	4 / 40	**64401**
SPD-C10/3pN	10	20	440	1.2	4 / 40	**64402**
SPD-C20/3pN	20	40	440	1.8	4 / 40	**64403**
SPD-B40/3pN	40	60	440	2	4 / 40	**64404**



Combined surge arresters AC – DC

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Specially designed surge arresters providing protection of solar and photo - voltaic systems; designed to protect system against overvoltages resulting from indirect light impact. They could be installed in earthed and non - earthed systems. They break photo - voltaic generator electric circuit when voltage reaches or over passes limit threshold value, providing photo - voltaic protection against destroying.

COLOUR CODE for all types 5кА - yellow; white – 10кА; green – 20 кА and red 30кА



Type AC for AC/DC current

Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-DC-D5/1p	5	10	275 AC/440 DC	≤ 1.2	17 / 170	**64105**
SPD-DC-C10/1p	10	20	275 AC/440 DC	≤ 1.5	17 / 170	**64106**
SPD-DC-C20/1p	20	40	275 AC/440 DC	≤ 1.8	17 / 170	**64107**
SPD-DC-B40/1p	30	60	275 AC/440 DC	≤ 2.2	17 / 170	**64108**



Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-DC-D5/1pN	5	10	275 AC/440 DC	≤ 1.2	8 / 80	**64205**
SPD-DC-C10/1pN	10	20	275 AC/440 DC	≤ 1.5	8 / 80	**64206**
SPD-DC-C20/1pN	20	40	275 AC/440 DC	≤ 1.8	8 / 80	**64207**
SPD-DC-B40/1pN	30	60	275 AC/440 DC	≤ 2.2	8 / 80	**64208**



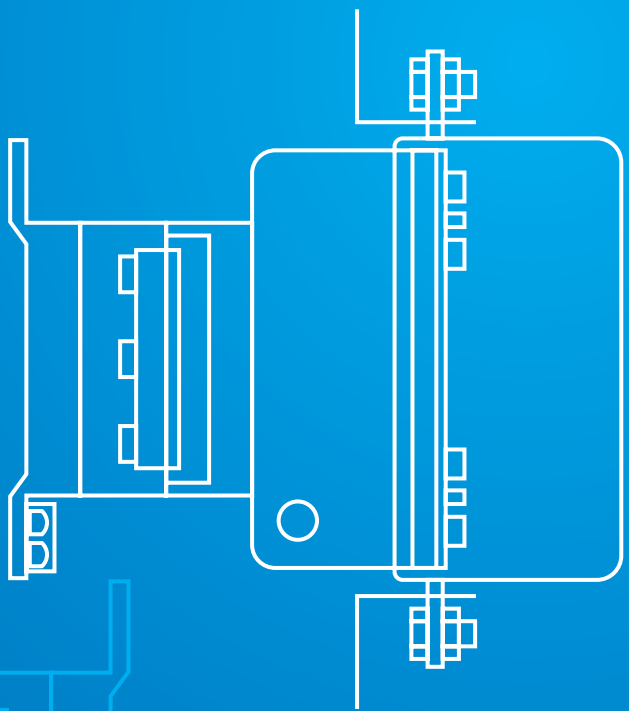
Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-DC-D5/3p	5	10	385 AC/500 DC	≤ 1.2	5 / 50	**64305**
SPD-DC-C10/3p	10	20	385 AC/500 DC	≤ 1.5	5 / 50	**64306**
SPD-DC-C20/3p	20	40	385 AC/500 DC	≤ 1.8	5 / 50	**64307**
SPD-DC-B40/3p	30	60	385 AC/500 DC	≤ 2.2	5 / 50	**64308**



Type of the arrester	In (kA)	Imax (kA)	Uc (V)	Up (kV)	Packing/Box (pcs)	Catalogue number
SPD-DC-D5/3pN	5	10	385 AC/500 DC	≤ 1.2	4 / 40	**64405**
SPD-DC-C10/3pN	10	20	385 AC/500 DC	≤ 1.5	4 / 40	**64406**
SPD-DC-C20/3pN	20	40	385 AC/500 DC	≤ 1.8	4 / 40	**64407**
SPD-DC-B40/3pN	30	60	385 AC/500 DC	≤ 2.2	4 / 40	**64408**

CONTACTORS

CONTACTORS



ELMARK®

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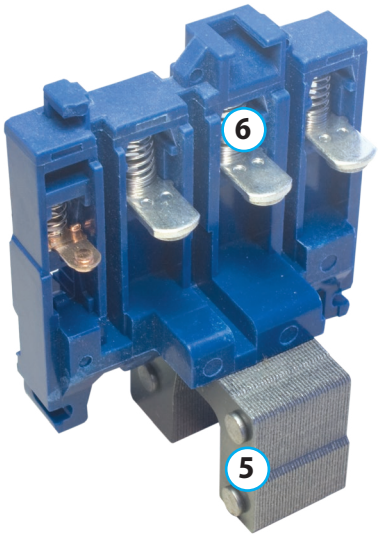
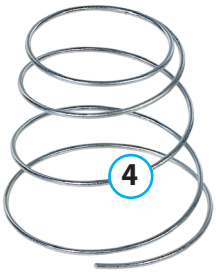
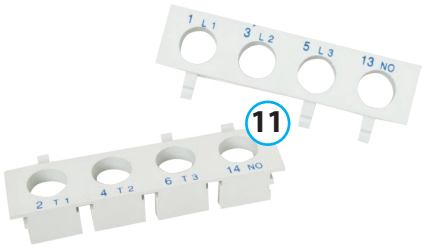
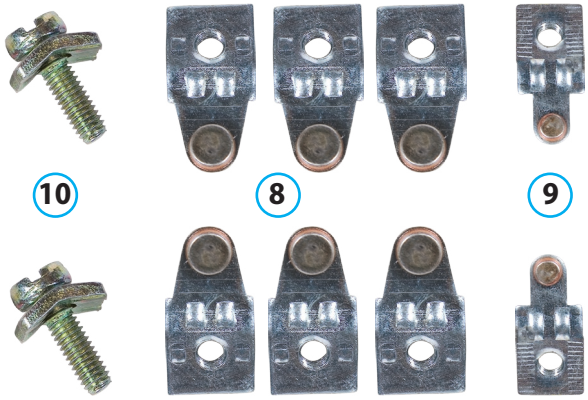


- BASE 1
- STATIC MAGNETIC CORE 2
- COIL 3
- REVERSE SPRING 4
- MOVABLE MAGNETIC CORE 5
- MOVABLE CONTACTS 6
- LID 7
- STATIC CONTACTS 8
- AUXILIARY CONTACT 9
- SCREWS 10
- TERMINAL PROTECTION CAPS 11

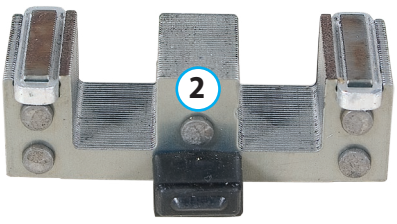












Documents corresponding to the product:
Standard EN 60947-1; EN 60 947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".



Documents corresponding to the product:
Standard EN 60947-1; EN 60 947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 73/23 EEC" and "Electromagnetic Compatibility Directives (EMC) no. 89/336 EEC".



Low voltage contactors LT1-D/K

5 YEAR WARRANTY *for industrial usage, 3 years warranty

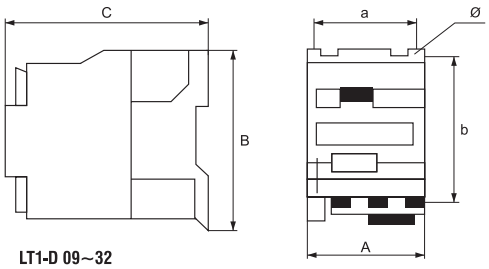
LT 1 D contactors are alternating current contactors for control of circuits and consumers operating in class AC3. It is suitable for consumers with rated current up to 95A. The contactors are offered in a type with 1 NO contact for operating circuit making and the models over 40A also have 1NC operating contactor.

Functions:
- switching on/off heavy-loaded electrical circuits at controlling signal to the coil
- making of control systems
- used as an operating element in process control panels
- remarkable with high reliability of current characteristics
- reliable separation of power contactors
- secured cover of the movable part of the contactor

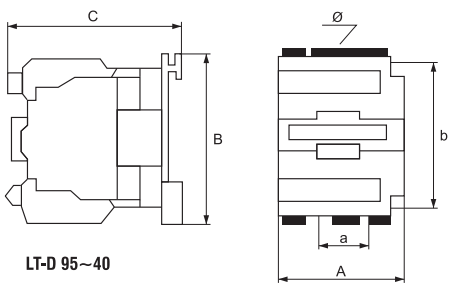
Technical data:
- Operation class: utilization category AC-3
- Rated operating voltage of power contactors: up to 690V; 50/60Hz
- Composition of the power contact surfaces: unalloyed copper with coating 80% AgSnO
- Surge voltage wear resistance: >8000V
- Rated voltage of the coil: from 12 to 400V AC
- Coil material: pure copper type QA-1
- Magnetic core material: alloy steel type 360
- Moveable part material: Bakelite
- Limits of the controlling coil voltage: operating range of coil
- Joining terminal: screw terminal
- Connecting:
  - flexible conductors with or without cable terminal
  - rigid conductors
- Electrical wear resistance (number of cycles):≥1000000
- Mechanical wear resistance (number of cycles):≥10000000
- Number of cycles per hour: 1200 UP TO 32A; 600 for 40-95A
- Pole leaking power: up to 13W

Mounting:
- on DIN-rail
- with bolts to the surface
- mounting position: vertical gradient – maximum ± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

Type	Overall dimensions (mm)					
	a	b	Ø	A	B	C
LT1-HK 06~12/LT-1K	34/35	45	4.5	45	50	50
LT-D 09~12	34/35	50/60	4.5	47	70	82
LT1 D18	34/35	50/60	4.5	47	70	87
LT1 D25	40	48	4.5	57	80	95
LT1 D32	40	48	4.5	57	80	100
LT-D 40~65	40	100/110	6.5	77	126	116
LT-D 80~95	40	100/110	6.5	87	126	127



LT1-D 09~32
LT1 - K

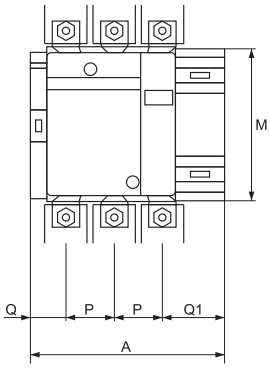


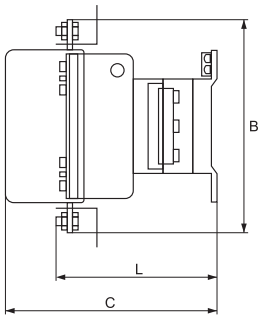
LT-D 95~40

Type number	Rated capacity (kW)					Power consumption of coil (VA)		Rated current in AC-3 440V to up	Tight-ening moment (N.m)	Section of the power supply conductor	Packing/ Box (pcs)	Catalogue number according to the coil voltage (V)						
	220V 230V	380V 400V	415V	440V	660V 690V	closed inrush	open hold					230V	400V	12V	24V	36V	48V	110V
LT 1 - K 0610 1NO	1.5	2.2	2.2	2.2	3	7	60	6A	1.7	0.75-2.5	1 / 100	**23061E**	**23062E**	**23063E**	**23064E**	**23065E**	**23066E**	**23067E**
LT 1 - K 0910 1NO	2.2	3.7	3.7	3.7	4	7	60	9A	1.7	0.75-2.5	1 / 100	**23091E**	**23092E**	**23093E**	**23094E**	**23095E**	**23096E**	**23097E**
LT 1 - K 1210 1NO	3	4	4	4	5	7	60	12A	1.7	0.75-2.5	1 / 100	**23121E**	**23122E**	**23123E**	**23124E**	**23125E**	**23126E**	**23127E**
LT1 - D0910 1NO	2.2	4	4	4	5.5	7	60	9A	1.7	1-4	1 / 50	**23091**	**23092**	**23093**	**23094**	**23095**	**23096**	**23097**
LT1 - D0901 1NC	2.2	4	4	4	5.5	7	60	9A	1.7	1-4	1 / 50	**23273**	**23270**	**23271**	**23272**	**23277**	**23278**	**23279**
LT1 - D1210 1NO	3	5.5	5.5	5.5	7.5	7	60	12A	1.7	1-4	1 / 50	**23121**	**23122**	**23123**	**23124**	**23125**	**23126**	**23127**
LT1 - D1201 1NC	3	5.5	5.5	5.5	7.5	7	60	12A	1.7	1-4	1 / 50	**23274**	**23280**	**23281**	**23282**	**23283**	**23284**	**23285**
LT1 - D1810 1NO	4	7.5	9	9	10	7	60	18A	1.7	1-4	1 / 50	**23181**	**23182**	**23183**	**23184**	**23185**	**23186**	**23187**
LT1 - D1801 1NC	4	7.5	9	9	10	7	60	18A	1.7	1-4	1 / 50	**23275**	**23286**	**23287**	**23288**	**23289**	**23290**	**23291**
LT1 - D2510 1NO	5.5	11	11	11	15	7.5	90	25A	2.5	2.5-10	1 / 50	**23251**	**23252**	**23253**	**23254**	**23255**	**23256**	**23257**
LT1 - D2501 1NC	5.5	11	11	11	15	7.5	90	25A	2.5	2.5-10	1 / 50	**23276**	**23292**	**23293**	**23294**	**23295**	**23296**	**23297**
LT1 - D3210 1NO	7.5	15	15	15	18.5	7.5	90	32A	2.5	2.5-10	1 / 50	**23321**	**23322**	**23323**	**23324**	**23325**	**23326**	**23327**
LT1 - D4011 1NO+1NC	11	18.5	22	22	30	20	200	40A	5	2.5-16	1 / 20	**23401**	**23402**	**23403**	**23404**	**23405**	**23406**	**23407**
LT1 - D5011 1NO+1NC	15	22	25	25	33	20	200	50A	5	6-25	1 / 20	**23501**	**23502**	**23503**	**23504**	**23505**	**23506**	**23507**
LT1 - D6511 1NO+1NC	18.5	30	37	37	37	20	200	65A	5	6-25	1 / 20	**23651**	**23652**	**23653**	**23654**	**23655**	**23656**	**23657**
LT1 - D8011 1NO+1NC	22	37	45	45	45	20	200	80A	9	10-50	1 / 15	**23801**	**23802**	**23803**	**23804**	**23805**	**23806**	**23807**
LT1 - D9511 1NO+1NC	25	45	45	45	45	20	200	95A	9	10-50	1 / 15	**23951**	**23952**	**23953**	**23954**	**23955**	**23956**	**23957**

Documents corresponding to the product:
Standard EN 60947-1; EN 60 947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".







Low voltage contactors LT1-F

5 YEAR WARRANTY *for industrial usage, 3 years warranty

The contactors LT 1- F are alternating current contactors used to control circuits and consumers operating in normal working conditions with switching on / off the consumer and dirty working environment. They are suitable for consumers with electrical power consumption from 115A to 800A.

Functions:
- frequently switching on/off heavy-loaded electrical circuits at controlling signal to the coil
- making of systems for consumers' control
- used as an operating element in process control panels
- remarkable with high reliability of current characteristics
- reliable separation of power contactors
- secured cover of the movable part of the contactor

Technical data:
- Operation class: utilization category AC-3
- Rated operating voltage of power contactors: up to 1000V; 50/60Hz
- Composition of the power contact surfaces: unalloyed copper with coating 80% AgSnO
- Surge voltage wear resistance: >8000V
- Coil composition: pure coil copper QA-1 type
- Magnetic core composition: steel alloy 360
- Movable part composition: bakelite
- Limits of the controlling coil voltage: operating range of coil
- Joining terminal: screw terminal
- Connecting:
  - flexible conductors with or without cable terminal
  - rigid conductors
  - rail
- Electrical wear resistance (number of cycles):≥10000000
- Mechanical wear resistance (number of cycles):≥10000000
- Number of cycles (switching on) per hour: 200
- Pole leaking power: from 16 to 80W
- Mounting:
  - with bolts to the surface
  - mounting position: vertical gradient – maximum± 10°C
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

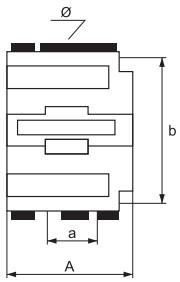
Type	Overall dimensions (mm)							
	A	B	C	L	M	Q	Q1	P
LT 1 F150	163.5	170	171	107	150	26	57.5	40
LT 1 F225	168.5	197	181	113.5	172	21	51.5	48
LT 1 F265	201.5	203	181	141	178	39	66.5	48
LT 1 F400	213	206	219	145	182	43	74	48
LT 1 F630	309	304	255	155	264	60	89	80
LT 1 F800	309	304	255	155	264	60	89	80

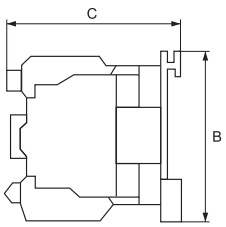
Type number	Motor rated capacity (kW)						Power consumption of coil (VA)			Rated current in AC-3 440V to up	Tightening moment (N.m)	Packing/ Box (pcs)	Catalogue number according to the coil voltage (V)						
	220V 230V	380V 400V	415V	440V	500V	660V 690V	1000V	closed	open				230V	400V	12V	24V	36V	48V	110V
LT1 - F115	30	55	59	59	59	80	60	45	550	115 A	18	1 / 4	**23111**	**23112**	**23113**	**23114**	**23115**	**23116**	**23117**
LT1 - F150	40	75	80	80	90	100	65	45	550	150 A	25	1 / 4	**23151**	**23152**	**23153**	**23154**	**23155**	**23156**	**23157**
LT1 - F225	63	110	110	110	129	129	100	55	805	225 A	35	1 / 2	**23861**	**23862**	**23863**	**23864**	**23865**	**23866**	**23867**
LT1 - F265	75	132	140	140	160	160	147	10	700	265 A	35	1 / 2	**23261**	**23262**	**23263**	**23264**	**23265**	**23266**	**23267**
LT1 - F400	110	200	220	250	257	280	185	18	1000	400 A	50	1 / 1	**23751**	**23752**					
LT1 - F630	200	335	375	400	400	450	450	25	1500	630 A	50	1 / 1	**23771**	**23772**					
LT1 - F800	250	450	450	450	450	475	450	15	1300	800 A	50	1 / 1	**23881**	**23882**					

Note: At mounting the containers from the series in control schemes a distance must be provided at the side of the contactor in case of eventual coil change.

Documents corresponding to the product:
Standard EN60947-1; EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC"







LP1-D 09~95

Low voltage contactors with direct current coil LP-1D

5 YEAR WARRANTY *for industrial usage, 3 years warranty

The contactors LP1 D are alternating current contactors with DC operating of coil for control. The power plugs of the contactor are designed for control of alternating current circuits and consumers operating in normal operating class AC-3 with frequently switching on/off the consumer and dirty working environment. The contactors are suitable for consumers with electrical power consumption from 9A to 225A.

Functions:
- switching on/off alternating current consumers in direct current controlling schemes at controlling signal to the coil
- making of systems for consumers' control
- used as an operating element in process control panels
- remarkable with high reliability of current characteristics
- reliable separation of power contacts
- secured cover of the movable part of the contactor

Technical data:
- Rated operating voltage of the coil: from 12V DC to 220V DC
- Rated operating voltage of the power circuit: up to 690V DC
- insulation voltage: 690V
- Surge voltage wear resistance: >8000V
- Limits of the controlling coil voltage: operating range of coil
- Joining terminal: screw terminal
- Connecting:
  - flexible conductors with or without cable terminal
  - rigid conductors
- Electrical wear resistance (number of cycles):≥10000000
- Mechanical wear resistance (number of cycles):≥10000000
- Number of cycles per hour: 1200 up to 32A; 600 for 40-95A
- Pole leaking power: up to 13W

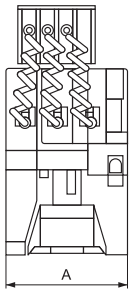
Mounting:
- on DIN-rail
- with bolts to the surface
- mounting position: vertical gradient – maximum± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

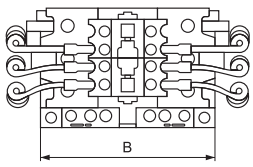
Type	Overall dimensions (mm)				
	A	B	C	a	b
LP 1 D0910	47	76	95	34/35	50/60
LP 1 D1210	47	76	95	34/35	50/60
LP 1 D1810	47	76	95	34/35	50
LP 1 D2510	57	86	101	40	50
LP 1 D3210	57	86	101	40	50
LP 1 D4011	77	129	176	40	100
LP 1 D5011	77	129	176	40	100
LP 1 D6511	77	129	176	40	100
LP 1 D9511	87	129	182	40	100
LP 1 F115	163.5	170	171	40	150
LP 1 F150	163.5	170	171	40	150
LP 1 F225	168.5	197	181	48	172

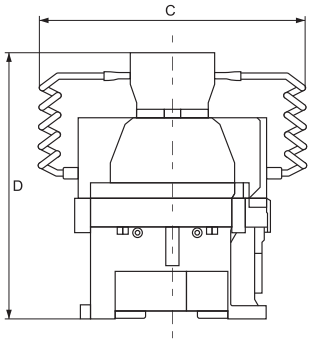
Type	Rated current (A)	Auxiliary contact (pcs.)	Rated capacity of the consumer (kW)					Packing/Box (pcs)	Catalogue number according to the coil voltage (V DC)					
			230V	400V	415V	440V	690V		12V	24V	36V	48V	110V	230V
LP 1 D0910	9	1NO	2.20	4.00	4.00	4.00	5.50	1/40	**23962**	**23098**	**23130**	**23971**	**23980**	**23139**
LP 1 D1210	12	1NO	3.00	5.50	5.50	5.50	7.50	1/40	**23963**	**23128**	**23131**	**23972**	**23981**	**23140**
LP 1 D1810	18	1NO	4.00	7.50	7.50	7.50	10.0	1/40	**23964**	**23188**	**23132**	**23973**	**23982**	**23141**
LP 1 D2510	25	1NO	5.50	11.0	11.0	11.0	15.0	1/30	**23925**	**23258**	**23133**	**23974**	**23983**	**23142**
LP 1 D3210	32	1NO	7.50	15.0	15.0	15.0	18.5	1/30	**23966**	**23328**	**23134**	**23975**	**23984**	**23143**
LP 1 D4011	40	1NO+1NC	11.0	18.5	18.5	18.5	30.0	1/10	**23967**	**23408**	**23135**	**23976**	**23985**	**23144**
LP 1 D5011	50	1NO+1NC	15.0	22.0	22.0	22.0	33.0	1/10	**23968**	**23508**	**23136**	**23977**	**23986**	**23145**
LP 1 D6511	65	1NO+1NC	18.5	30.0	30.0	30.0	37.0	1/10	**23969**	**23658**	**23137**	**23978**	**23987**	**23146**
LP 1 D9511	95	1NO+1NC	25.0	45.0	45.0	45.0	45.0	1/10	**23970**	**23958**	**23138**	**23979**	**23988**	**23147**
LP 1 F115	115	1NO	30.0	55.0	59.0	59.0	80.0	1/4	**23911**	**23118**	**23914**	**23917**	**23989**	**23148**
LP 1 F150	150	1NO	40.0	75.0	80.0	80.0	100	1/4	**23912**	**23158**	**23915**	**23918**	**23990**	**23149**
LP 1 F225	225	1NO	63.0	110	110	110	129	1/2	**23913**	**23228**	**23916**	**23919**	**23994**	**23201**

Documents corresponding to the product:
Standard EN60947-1; EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC"









Low voltage contactors for switching on of capacitor banks CJ19-43

5 YEAR WARRANTY *for industrial usage, 3 years warranty

The AC contactors CJ19-43 are specially designed electrical devices for commutation of three phase capacitors used for power correction. They are alternating current contactor LT1 Dxx with mounted a group for peak current lowering from the transitional process of the capacitor's switching on/off. This group is a combination of current limiting resistors, switched on in the beginning of the transitional process (switching on/off of the capacitor group).
The contactors are suitable for capacitors with rate up to 50 kVAr.

Functions:
- switching on/off of capacitor banks for reactive power compensation
- making of systems for compensation of the energy reactive component
- lowering of the peak transitional currents at switching on/off of the capacitor
- remarkable with high reliability of current characteristics
- reliable separation of power contacts
- secured part of the contactor against consumer contact
- do not allow manual operation

Technical data:
- Operation class: utilization category AC6b
- Rated operating voltage of the controlling coil: 230V AC; 50/60Hz
- Rated operating voltage of the power circuit: up to 690V AC
- insulation voltage: 690V
- Surge voltage wear resistance: >8000V
- Limits of the controlling coil voltage: from 0.8 to 1.15 Uc
- Number of the contacts: 3 NO power contacts +1NO operative
- Joining terminal: screw terminal
- Connecting:
  - flexible conductors with or without cable terminal
  - rigid conductors
- Electrical wear resistance (number of cycles):≥300000
- Mechanical wear resistance (number of cycles):≥1000000
- Number of cycles (switching on) per hour: up to 600
- Pole leaking power: up to 13W

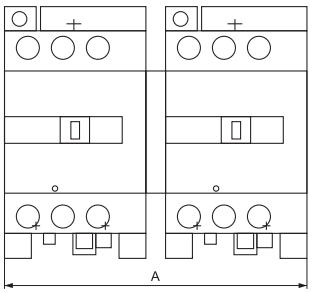
Mounting:
- on DIN-rail or
- with bolts to the surface
- mounting position: vertical gradient – maximum± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

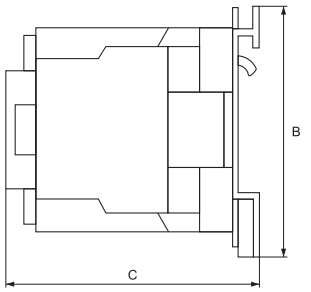
Type	Overall dimensions (mm)			
	A	B	C	D
CJ19-32 DPK	56	74	130	150
CJ19-40 DPK	75	127	180	150
CJ19-65 DPK	85	127	200	157
CJ19-95 DPK	85	127	200	157
CJ19-115DPK	122	165	230	157
CJ19-150DPK	122	165	230	157
CJ19-170DPK	122	165	230	157

Type	Rated current (A)	Rated capacity of the consumer (kVAr)		Coil voltage (V)	Packing/Box (pcs)	Catalogue number
		400/440V	690V			
CJ19-32 DPK	32	8	12.5	230	1/20	**23932**
CJ19-32 DPK	32	8	12.5	400	1/20	**23910**
CJ19-40 DPK	40	12.5	15	230	1/16	**23900**
CJ19-40 DPK	40	12.5	15	400	1/16	**23940**
CJ19-65 DPK	65	25	30	230	1/16	**23961**
CJ19-65 DPK	65	25	30	400	1/16	**23965**
CJ19-95 DPK	95	30	36	230	1/16	**23909**
CJ19-95 DPK	95	30	36	400	1/16	**23995**
CJ19-115 DPK	115	35	40	230	1/4	**23991**
CJ19-150 DPK	150	40	50	230	1/4	**23992**
CJ19-170 DPK	170	50	60	230	1/4	**23993**

Documents corresponding to the product:
Standard EN60947-1; EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC"







Reverse contactors LT4-Dxx

5 YEAR WARRANTY *for industrial usage, 3 years warranty

LT 4-Dxx series contactors is suitable for across- the line starting and reversing of-3 phase squirrel cage and slip ring motors. It consist of two magnetic contactors LT1D. The contactor is provided whit a built-in interlock safety mechanism. The contactor is used for reverse control of induction motors with shortly rotor. The contactors from the series are offered for consumers up to 95A.

Functions:
- switching on of electrical motors in one direction of rotation and reversing of the rotation direction at outside command
- making of control systems
- remarkable with high reliability of current characteristics
- reliable switching on or separation of power contacts
- secured part of the contactors against consumer contact
- secured cover of the movable part of the contactor
- impossibility for simultaneous switching on of the two contactors from the group due to mechanical locking

Technical data:
- Operation class: AC 3
- Rated operating voltage of the controlling coil: 230V AC; 50/60 Hz
- Rated operating voltage of the power circuit: up to 690V AC
- insulation voltage: 690V
- Surge voltage wear resistance: >8000V
- Limits of the controlling coil voltage: from 0.8 to 1.15 Uc
- Number of plugs: 3 NO power contacts +1NO operative (for contactors over 40A there is also additional 1NC contact)
- Joining terminal: screw terminal
- Connecting:
  - flexible conductors with or without cable terminal
  - rigid conductors

Note: The contactors are offered without factory cabling
- Electrical wear resistance (number of cycles):≥1 000 000
- Mechanical wear resistance (number of cycles):≥10 000 000
- Number of cycles (switching on) per hour: up to 600
- Pole leaking power: up to 13W

Mounting:
- on DIN-rail or
- with bolts to the surface
- mounting position: vertical gradient – maximum± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

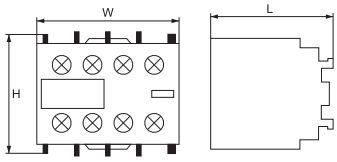
Type	Overall dimensions (mm)		
	A	B	C
LT 4 - D1810	100	70	83
LT 4 - D2510	130	80	98
LT 4 - D3210	130	80	105
LT 4 - D4011	167	126	116
LT 4 - D6511	167	126	116
LT 4 - D9511	182	127	127

Type	Rated current (A)	Rated capacity of the consumer (kW)					Packing/ Box (pcs)	Catalogue number
		230V	400V	415V	440V	690V		
LT 4 D1810	18	4	7.5	7.5	7.5	10	1 / 20	**23301**
LT 4 D2510	25	5.5	11	11	11	15	1 / 20	**23302**
LT 4 D3210	32	7.5	15	15	15	18.5	1 / 20	**23303**
LT 4 D4011	40	11	18.5	18.5	18.5	30	1 / 8	**23304**
LT 4 D6511	65	18.5	30	30	30	37	1 / 8	**23305**
LT 4 D9511	95	25	45	45	45	45	1 / 6	**23306**

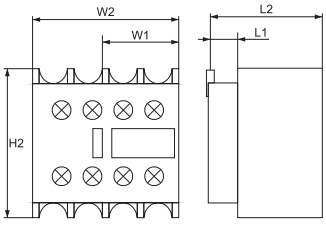
Documents corresponding to the product:
Standard EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC"



LT01-KNxx



LT01-DNxx



Dimensions (mm)

H	W	L	W1	W2
32	40	35	26	45
H2	L1	L2		
48	6,5	37		

Auxiliary contacts

5 YEAR WARRANTY *for industrial usage, 3 years warranty

Auxiliary contacts
At necessity the element provide auxiliary number of contacts. They are specially designed for mounting on the movable part of the magnetic core of the contactors LT 1K/D series.

Functions:
- extending the number of the operative contactors up to 4 in different
- Combinations
  - switches on simultaneously with the other contact system of the contactor
- Operation class: AC 3
- insulation voltage: 690V

- Joining terminal: screw terminal
- Connecting:
  - flexible conductors with or without cable terminal
  - rigid conductors

Mounting:
- on the movable cover of the contactor through pinching
- mounting position: vertical gradient – maximum± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)

Type	Number of contacts	Rated current	Section of the conductor (mm2)	Catalogue number
LT01-DN02	2NC	6A	0,5-1	**23002**
LT01-DN11	NO+NC	6A	0,5-1	**23011**
LT01-DN20	2NO	6A	0,5-1	**23020**
LT01-DN22	2NO+2NC	6A	0,5-1	**23022**
LT01-DN40	4NO	6A	0,5-1	**23040**
LT01-DN04	4NC	6A	0,5-1	**23004**
LT01-KN11	NO+NC	6A	0,5-1	**23001**
LT01-KN22	2NO+2NC	6A	0,5-1	**23003**



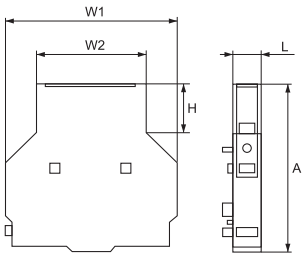
Auxiliary contacts LT03-DN11

5 YEAR WARRANTY *for industrial usage, 3 years warranty

Providing on necessity additional number of plug points and are mounted sideward to the movable part of the magnetic cores of contactors of the series LT1 D. Variants with two additional plug points NO and NC are offered.

Functions:
- expanding the number of the operational plug points
- switching on simultaneously with the rest of the contact system
- of the contactor

Technical characteristics:
- Environment operational regime: AC 3
- Insulation voltage: 690V
- Double connector: screw connector
- Connection:
  - flexible conductors with or without cable end
  - solid conductors
- Mounting method:
  - mounting position – sideward to the contactor
- Plastic: resistant to UV and non-burning (self-extinguishing material)



Type	Rated current	Section of the conductor (mm2)	Catalogue number
LT03-DN11	6A	0,5-1	**23311**

Dimensions (mm)

W1	W2	H	L	A
73	48	22	12,5	72

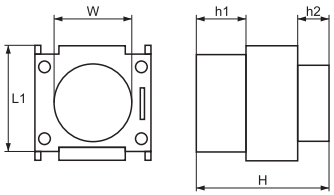


Time delay contact block LT02-Dxx

5 YEAR WARRANTY *for industrial usage, 3 years warranty

LT02-Dxx is designed to set time intervals from 0.1 to 180s in different control schemes. It is used most frequently in combination with contactors from LT1-Dxx series to form "star/delta" starters for electrical motor control, as it provides the necessary time for motor winding.

Type	Number of contacts	Time delay	Catalogue number
LT02-DT0	NO+NC	0.1~3s	**23901**
LT02-DT2	NO+NC	0.1~30s	**23902**
LT02-DT4	NO+NC	10~180s	**23903**

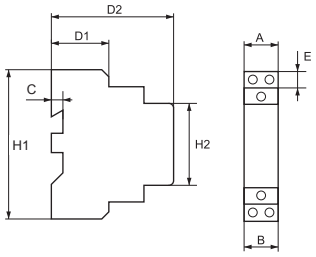


Dimensions (mm)

W	L1	h1	h2	H
33	48	22	14	59
W2				
45				

Documents corresponding to the product:
Standard EN 61095
The products are in accordance with the directives of EC "Low voltage directives (LVD) no. 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC"

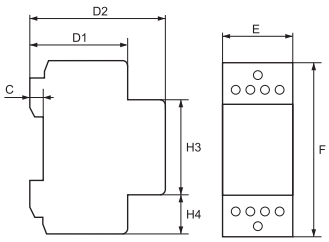




Dimensions (mm)

H1	C	D1	D2	A	E
81	5	31	66	18	9





Dimensions (mm)

C	D1	D2	H3	H4
5	66	48	45	20

E	F
35	85

Module contactors K series

5 YEAR WARRANTY *for industrial usage, 3 years warranty

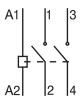
Modular contactors K series are used for commutation of mono-phase and three-phase low power electrical consumers. They provide connection between the consumers in small overall dimensions, silent work, mounting only at DIN-rails.

Functions:
- switching on of consumers
- making of control systems
- remarkable with high reliability of current characteristics
- reliable switching on or separation of power contacts

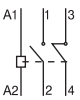
Technical data:
- Operation class: AC 7a
- Rated operating voltage of the controlling coil: 230V AC; 50/60 Hz
- Rated operating voltage of the power circuit: up to 690V AC
- insulation voltage: 690V
- Surge voltage wear resistance: >8000V
- Joining terminal: screw terminal
- Connecting:
  - flexible conductors with or without cable terminal
  - rigid conductors

Mounting:
- on DIN-rail or
- mounting position: vertical gradient – maximum± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

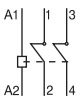
Type	In	Coil voltage (V)	Contacts	Packing/Box (pcs)	Catalogue number
K20	20A	230V	2NO	1/12/120	**23008**
K20	20A	230V	NO+NC	1/12/120	**23007**
K20	20A	230V	2NC	1/12/120	**23009**
K20	25A	230V	NO+NC	1/12/100	**23012**
K20	25A	230V	2NO	1/12/100	**23013**
K20	25A	230V	2NC	1/10/100	**23014**
K20	40A	230V	NO+NC	1/6/60	**23015**
K20	40A	230V	2NO	1/6/60	**23016**
K20	40A	230V	2NC	1/6/60	**23017**
K40	25A	230V	2NO+2NC	1/6/60	**23410**
K40	25A	230V	3NO+1NC	1/6/60	**23411**
K40	25A	230V	4NO	1/6/60	**23412**
K40	25A	230V	4NC	1/6/60	**23413**
K40	40A	230V	2NO+2NC	1/4/40	**23422**
K40	40A	230V	3NO+1NC	1/4/40	**23423**
K40	40A	230V	4NO	1/4/40	**23409**
K40	40A	230V	4NC	1/4/40	**23424**
K40	63A	230V	2NO+2NC	1/4/40	**23425**
K40	63A	230V	3NO+1NC	1/4/40	**23426**
K40	63A	230V	4NO	1/4/40	**23427**
K40	63A	230V	4NC	1/4/40	**23428**



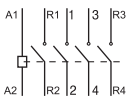
2NO



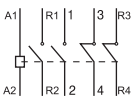
NO+NC



2NC



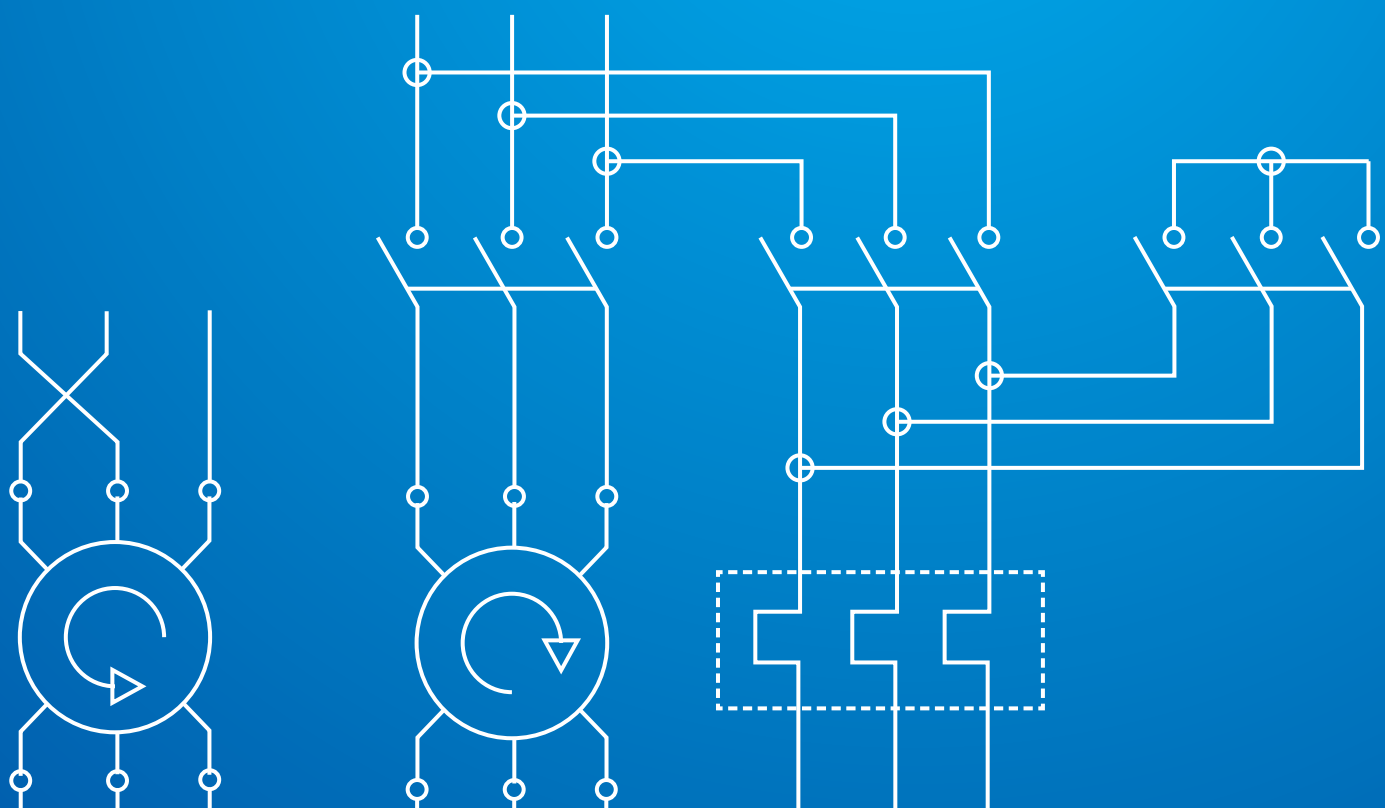
4NO



2NO+2NC

DEVICES FOR CONTROLAND PROTECTION OF ELECTRICAL MOTORS

DEVICES
FOR CONTROLAND PROTECTION
OF ELECTRICAL MOTORS



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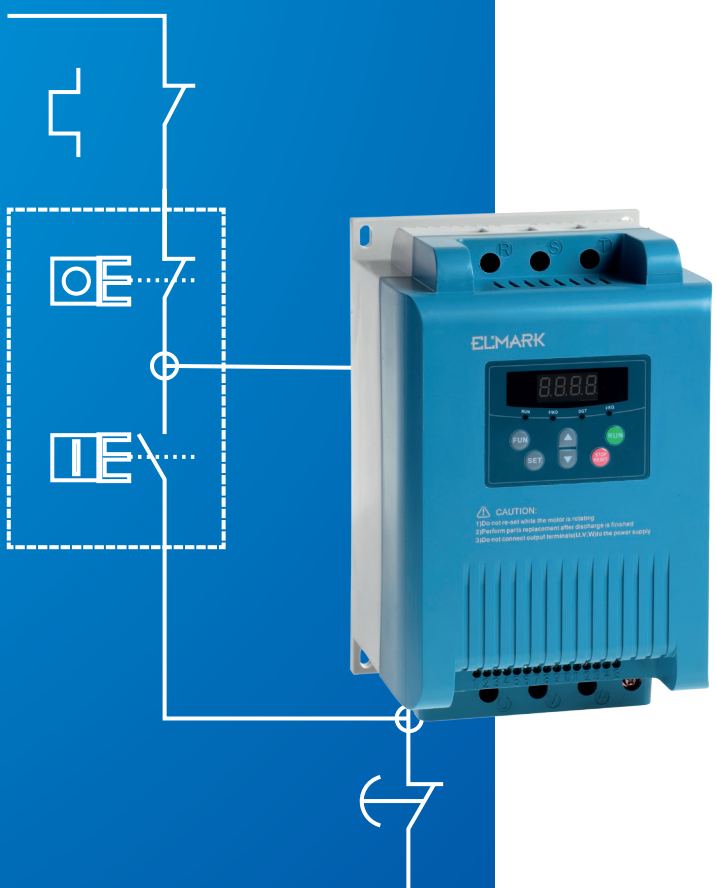
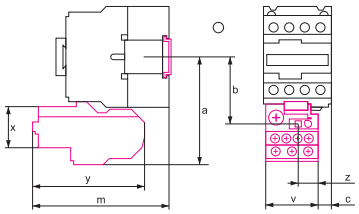
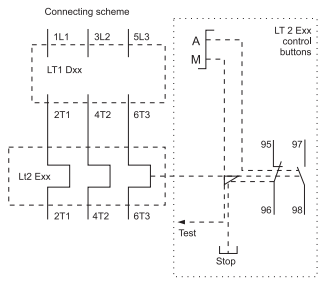
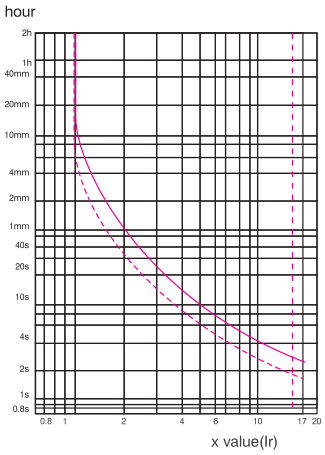




Documents corresponding to the product:
Standard EN 60947-1
EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".







Thermal overload relays

5 YEAR WARRANTY *for industrial usage, 3 years warranty

The thermal relays LT 2- K/Exx series are three pole relays designed for protection of induction motors from overload or overheat. They are mounted to contactors LT 1 K/Dxx series and an operating circuit for motor control is passed through their NC contacts. They have bimetallic releases /1 per phase/ through them the motors current flows and indirectly mated. The bimetallic releases bend subject to the influence of mating and this results in tripping of the relay. The contacts change switch position. The choice of a suitable protection prevents motor's operation at unusual temperature conditions and guarantees maximum constant operation, increases the effectiveness and prolongs the term of exploitation.

Functions:
- switching off alternating current consumers at current overload
- making of control systems for consumers
- used as a protective operating element in control panels of induction motors
- remarkable with high reliability of current characteristics

Technical data:
- Rated operating voltage: up to 690V AC; 50/60 Hz
- Rated operating current range: up to 690V AC
- insulation voltage: >690V
- Surge voltage wear resistance:≥6000V
- Joining terminal: screw terminal
- temperature compensation: -25 +55
- tripping category: class 10A
- Connecting:
  - flexible or rigid conductors with or without cable terminal for joining to the consumer
  - to the contactor through the relay terminals
  - the connecting terminals with the consumer can be adjusted according to the type of the contactor
- Electrical wear resistance (number of cycles):≥1000000
- Mechanical wear resistance (number of cycles):≥10000000
- Indication for protection activating
- Possibility for choice of the protection restoring (through the blue button)
- Possibility for range adjustment of the protection activating
- Possibility for operation at higher frequency

Mounting:
- mounting to the contactor: to the terminals of the contactor as it is additionally clamped to its frame through a pin
- mounting position: vertical gradient – maximum ± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Installation altitude: up to 2000m

Note: To protect the consumer from short circuit, before the combination contactor- thermal relay, a suitably measured breaker or safety device should be mounted.

Type	Dimensions (mm)							
	a	b	c	m	x	y	v	z
LT 2 - Kxx	81	50	0	98	47	92	44	17
LT 2 - E13xx	86	55	10.7	108	47	92	44	17
LT 2 - E23xx	86	55	9	109	47	92	44	17
LT 2 - E33xx	115	76	9.5	124	54	109	70	30



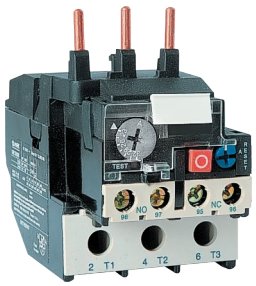
For contactor LT1-K06 type	Motor capacity (kW) 220V 230V	380V 400V	660V 690V	Rated current (A)	Protection adjustment range	Packing/Box (pcs)	Catalogue number
LT2-K0303	-	-	-	0.30	0.25 - 0.30	1 / 100	**13403**
LT2-K0306	-	0.37	1.10	1.20	0.80 - 1.20	1 / 100	**13406**
LT2-K0307	0.37	0.75	1.50	1.80	1.20 - 1.80	1 / 100	**13407**
LT2-K0308	0.75	1.10	2.20	2.60	1.80 - 2.60	1 / 100	**13408**
LT2-K0310	1.10	1.50	3.00	3.70	2.60 - 3.70	1 / 100	**13410**
LT2-K0312	1.10	2.20	4.00	5.50	3.70 - 5.50	1 / 100	**13411**
LT2-K0314	2.20	4.00	5.50	8.00	5.50 - 8.00	1 / 100	**13412**
LT2-K0316	3.00	5.00	7.50	11.5	8.00 - 11.5	1 / 100	**13413**



For contactor LT1-D9 to LT1-D25 type	Motor capacity (kW) 220V 230V	380V 400V	660V 690V	Rated current (A)	Protection adjustment range	Packing/ Box (pcs)	Catalogue number
LT2-E1301	-	-	-	0.16	0.10 - 0.16	1 / 100	**13001**
LT2-E1302	-	-	-	0.25	0.16 - 0.25	1 / 100	**13002**
LT2-E1303	-	-	-	0.40	0.25 - 0.40	1 / 100	**13003**
LT2-E1304	-	-	0.37	0.63	0.40 - 0.63	1 / 100	**13004**
LT2-E1305	-	-	0.55	1.00	0.63 - 1.00	1 / 100	**13005**
LT2-E1306	-	0.37	1.10	1.60	1.0 - 1.60	1 / 100	**13006**
LT2-E1307	0.37	0.75	1.50	2.50	1.6 - 2.50	1 / 100	**13007**
LT2-E1308	0.75	1.50	3.00	4.00	2.5 - 4.00	1 / 100	**13008**
LT2-E1310	1.10	2.20	4.00	6.00	4.0 - 6.00	1 / 100	**13010**
LT2-E1312	2.00	3.70	5.50	8.00	5.5 - 8.00	1 / 100	**13012**
LT2-E1314	2.20	4.00	7.50	10.0	7.0 - 10.0	1 / 100	**13014**
LT2-E1316	3.70	5.50	11.0	13.0	9.0 - 13.0	1 / 100	**13016**
LT2-E1321	4.00	7.50	15.0	18.0	12.0 - 18.0	1 / 100	**13021**
LT2-E1322	5.50	9.00	18.5	25.0	17.0 - 25.0	1 / 100	**13022**
LT2-E1353	9.00	11.0	18.5	33.0	23.0 - 32.0	1 / 100	**13053**



For contactor LT1-D32 type	Motor capacity (kW) 220V 230V	380V 400V	660V 690V	Rated current (A)	Protection adjustment range	Packing/ Box (pcs)	Catalogue number
LT2-E2353	11	11	18.5	32	23.0 - 32.0	1 / 100	**13253**
LT2-E2355	15	15	22.0	36	28.0 - 36.0	1 / 100	**13255**



For contactor LT1-D40 to LT1-D95 type	Motor capacity (kW) 220V 230V	380V 400V	660V 690V	Rated current (A)	Protection adjustment range	Packing/ Box (pcs)	Catalogue number
LT2-E3355	18.5	18.5	30	40	30.0 - 40.0	1 / 50	**13355**
LT2-E3357	22	22	30	50	37.0 - 50.0	1 / 50	**13357**
LT2-E3359	30	30	37	65	48.0 - 65.0	1 / 50	**13359**
LT2-E3363	45	45	55	80	63.0 - 80.0	1 / 50	**13363**
LT2-E3365	55	55	75	93	80.0 - 93.0	1 / 50	**13365**

For contactor LT1-F115 to LT1-F150	Motor capacity (kW) 220V 230V	380V 400V	660V 690V	Rated current (A)	Protection adjustment range	Packing/ Box (pcs)	Catalogue number
LT2-F4367	40	75	100	150	90-150	1/30	**13367**

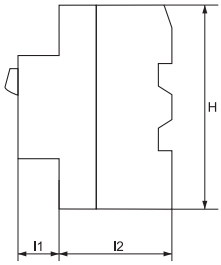


For contactor LT1-F225 to LT1-F400	Motor capacity (kW) 220V 230V	380V 400V	660V 690V	Rated current (A)	Protection adjustment range	Packing/ Box (pcs)	Catalogue number
LT2-F4368	63	110	129	220	132-220	1/30	**13368**
LT2-F4369	100	160	220	330	200-330	1/18	**13369**
LT2-F4370	147	250	335	500	300-500	1/18	**13370**

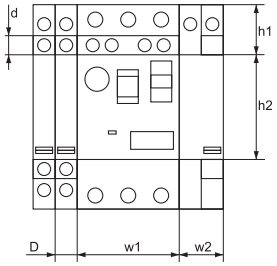
For contactor LT1-F630	Motor capacity (kW) 220V 230V	380V 400V	660V 690V	Rated current (A)	Protection adjustment range	Packing/ Box (pcs)	Catalogue number
LT2-F4371	200	335	450	630	380-630	1/18	**13371**



Dimensions



Auxiliary contact UVR



Dimensions (mm)

H	l1	l2	d	D
89	16	50	10	9,2
w1	w2	h1	h2	
44,5	18	22	45	

Thermomagnetic automatic breaker TM2/TM3

5 YEAR WARRANTY *for industrial usage, 3 years warranty

The thermomagnetic automatic breakers TM 2-Exx series are devices designed for control and protection of induction motors from overload, overheat or short circuit. The overload motor protection is carried out by the built in the breaker thermal elements, and the short circuit protection is carried out by the magnetic elements. These magnetic elements allow the adjustment of the current leakage which is 13 times the maximum current of the thermal protection. The overload protection elements include automatic compensation for the ambient temperature changes. In combination with under voltage release the thermomagnetic breaker TM 2-Exx also provides protection of the motors from fall out of a phase from the power supply. The choice of a suitable protection prevents motor's operation at unusual temperature conditions and guarantees maximum constant operation, increases the effectiveness and prolongs the term of exploitation.

Functions:

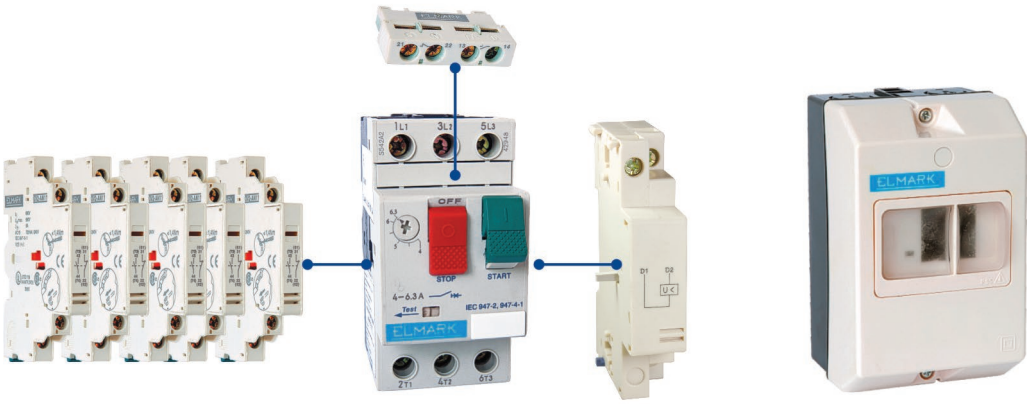
- switching off alternating current consumers at current overload
- switching off the electrical circuit to the consumer at inlet short circuit
- protects the motor at lack/lowering of the phase voltage (if there is under voltage release)
- used as a protective operating element in control panels of induction motors
- remarkable with high reliability of current characteristics
- possibility for change/choice of the protection current (according to the operating current of the motor)
- automatic compensation of the ambient temperature

Technical data:

- Rated operating voltage: up to 690V AC; 50/60 Hz
- Rated operating current range: from 0.1 to 80A according to the type in table 1
- insulation voltage: 690V
- Surge voltage wear resistance:≥6000V
- Joining terminal: screw terminal
- Connecting:
  - flexible or rigid conductors with or without cable terminal for joining to the consumer
  - to the contactor through the relay terminals
  - the connecting terminals with the consumer can be adjusted according to the type of the contactor
- Electrical wear resistance (number of cycles):≥1000000
- Mechanical wear resistance (number of cycles):≥10000000
- Indication for protection activating
- Switching on of the breaker manually with button "I" and switching off with button "O" manually or automatically at failure or after activating of the protection
- Possibility for range adjustment of the protection activating
- Possibility for operation at higher frequency
- Possibility for independent operation or as an element of an automation system
- tripping category: class 10A

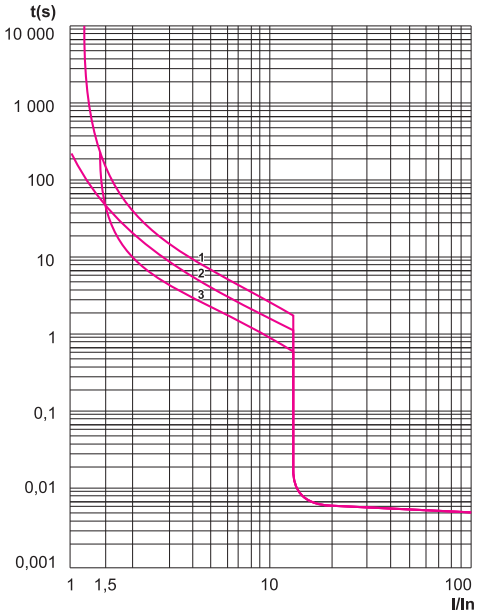
Mounting:

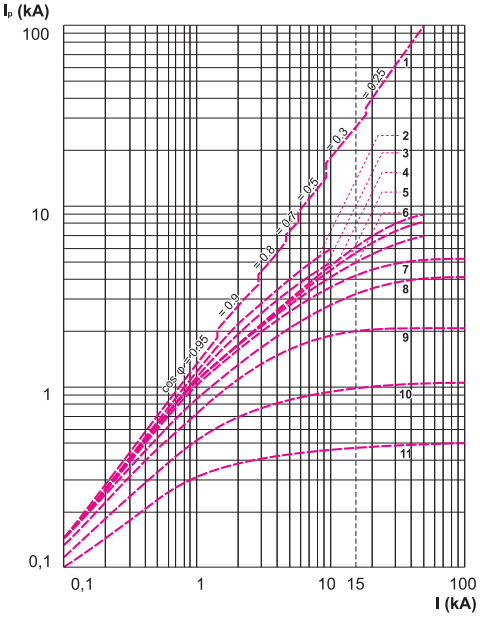
- mounting to DIN-rail
- mounting position: vertical gradient – maximum± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m



ELMARK

Thermomagnetic automatic breaker





Type	Rated capacity of three-phase motor in AC-3 category					instan-taneous short-circuit release (A)	Current setting range (A)	Thermal current Ithe TM2-E (A)	Packing/Box (pcs)	Catalogue number
	220V 230V	400V 410V	440V	500V	690V					
TM2-E01	-	-	-	-	-	1.5	0.1 - 0.16	0.16	1 / 50	**48001**
TM2-E02	-	0.06	0.06	-	-	2.4	0.16 - 0.25	0.25	1 / 50	**48002**
TM2-E03	0.06	0.09	0.09	-	-	5.0	0.25 - 0.40	0.40	1 / 50	**48003**
TM2-E04	-	0.12	0.18	-	0.37	8.0	0.40 - 0.63	0.63	1 / 50	**48004**
TM2-E05	0.09	0.25	0.25	0.37	0.55	13.0	0.63 - 1.00	1	1 / 50	**48005**
TM2-E06	0.18	0.37	0.37	0.37	0.75	22.5	1 - 1.60	1.6	1 / 50	**48006**
TM2-E07	0.37	0.75	0.75	1.10	1.50	33.5	1.6 - 2.50	2.5	1 / 50	**48007**
TM2-E08	0.55	1.10	1.50	1.50	2.20	51.0	2.5 - 4.00	4	1 / 50	**48008**
TM2-E10	1.10	2.20	2.20	3.00	4.00	78.0	4 - 6.30	6.3	1 / 50	**48010**
TM2-E14	1.50	3.00	4.00	4.00	5.50	138	6 - 10.0	9	1 / 50	**48014**
TM2-E16	2.20	5.50	5.50	7.50	9.00	170	9 - 14.0	13	1 / 50	**48016**
TM2-E20	4.00	7.50	7.50	9.00	15.0	223	13 - 18.0	17	1 / 50	**48020**
TM2-E21	5.50	9.00	11.0	11.0	18.5	327	17 - 23.0	21	1 / 50	**48021**
TM2-E22	5.50	11.0	11.0	15.0	22.0	327	20 - 25.0	23	1 / 50	**48022**
TM2-E32	7.50	15.0	15.0	18.5	22.0	416	24 - 32.0	24	1 / 50	**48032**
TM3-E40	11.0	18.5	22.0	25.0	33.0	480	25 - 40.0	32	1 / 15	**48040**
TM3-E63	15.0	30.0	33.0	40.0	55.0	550	40 - 63.0	50	1 / 15	**48063**
TM3-E80	22.0	40.0	45.0	55.0	63.0	665.5	56 - 80.0	64	1 / 15	**48080**

Documents corresponding to the product:
Standard EN 60947-1
EN 60 947-2; EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".

Voltage release (VR) for TM 2

5 YEAR WARRANTY *for industrial usage, 3 years warranty

For increasing the effectiveness of the thermomagnetic breakers TM 2-Exx operation, they can be supplied with auxiliary devices, designed for widening the practice range and improving the technical characteristics of the breakers.

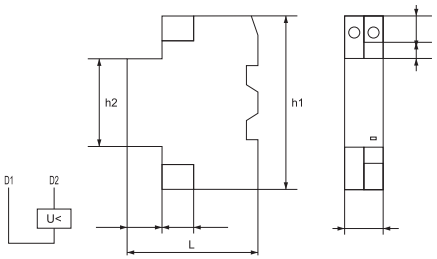
The release is designed to switch off the thermomagnetic breaker when the controlling voltage falls under breaking level 0.55 to 0.7 UN and does not allow switching on of the breaker unless the voltage is over 0.85 Un.

Functions:
- switching off the breaker at power supply voltage fall under 0.55 – 0.7 Un
- does not allow switching on of the breaker when the power supply voltage is under 0.85 Un
- prevents unwarranted secondary start of the breaker at falling off and restoring of the power supply voltage
- protects the motor at lack/lowering of the phase voltage
- used as a protective operating element in control panels of induction motors
- remarkable with high reliability of current characteristics

Mounting:
- laterally to a breaker
- At the side of the breaker through special openings



Type	Voltage (V)	Catalogue number
TM2 AU225	230	**48099**
TM3 AU385	400	**48098**



Documents corresponding to the product:
Standard EN 60529

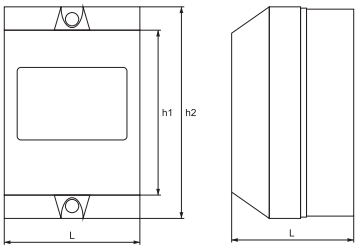
Watertight box for TM 2-E

5 YEAR WARRANTY *for industrial usage, 3 years warranty

Specially designed plastic box with silicon screen for increasing the IP code from dust and moisture to IP 65. Designed for thermal-magnetic circuit breakers of up to 32A
- Mounting:
  - mounting position: vertical gradient – maximum± 5°
  - mounted to horizontal surfaces (walls) with bolts
  - the breaker TM2 Exx is fixed inside of it on rail
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)



Type	Catalogue number
TM2 E	**8083**



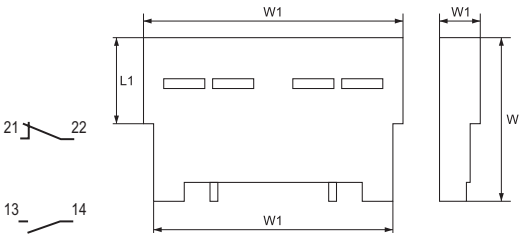
Auxiliary contact block TM2 AE11- front mounting

5 YEAR WARRANTY *for industrial usage, 3 years warranty



It is designed to switch on operational systems or signalization. Designed with one NO and one NC contact. It changes the position of its contacts according to the position of the breaker (switched on/off) to which it is mounted.
- Mounting:
  - laterally to a breaker TM2-Exx
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

Type	Catalogue number
TM2 AE11	**48912**





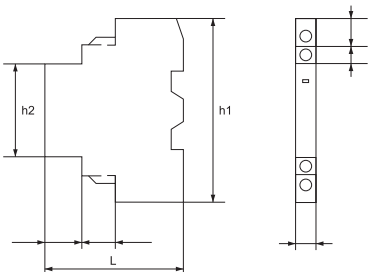
Auxiliary contact block TM2 AE11- side mounting

5 YEAR WARRANTY *for industrial usage, 3 years warranty

It is designed to switch on operational systems or signalization. Designed with one NO and one NC contact. It changes the position of its contacts according to the position of the breaker (switched on/off) to which it is mounted.

- Mounting:
  - laterally to a breaker TM2-Exx
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

Type	Catalogue number
TM2 AN11	**48911**
TM3 AN11	**48913**



Documents corresponding to the product:
Standard EN 60947-1
EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".



Starters for direct start

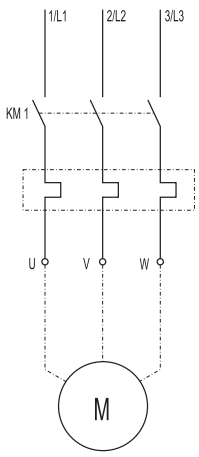
5 YEAR WARRANTY *for industrial usage, 3 years warranty

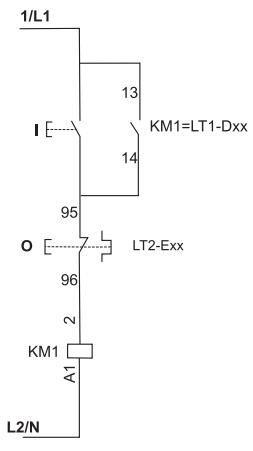
The electromagnetic starters LT 5 Dxx series are devices designed for remote control, direct control and protection of induction motors or other electrical consumers. They are a combination of contactors LT 1 Dxx series and thermal protection LT 2 Exx factory cabled. The starters are offered on the market in metal or plastic boxes with the corresponding IP code from dust and moisture. At mounting there should be provided protection of the device from short circuit through breakers or disconnectors. If necessary, at client's order the factory mounted thermal protection in the pneumatic starter can be substituted. The choice of a suitable protection prevents motor's operation at unusual temperature conditions and guarantees maximum constant operation, increases the effectiveness and prolongs the term of exploitation.

Functions:
- switching on/off alternating current consumers
- does not allow secondary unwarranted switching on of the starter at transitory lowering of the voltage
- protects the motor from overload in the range of the corresponding thermal protection
- remarkable with high reliability of current characteristics

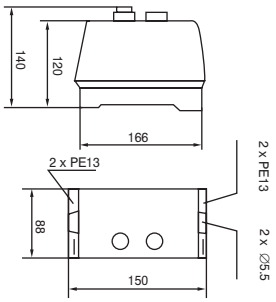
Technical data:
- Rated voltage of the controlling voltage: 230/400V AC; 50/60 Hz

Note: In case you need different controlling coils voltage of the starters you can turn to our regional representatives.
- Rated operating voltage: 690V
- Rated operating current range: from 7 to 93 A AC
- insulation voltage: 690V
- Surge voltage wear resistance:≥6000V
- Joining terminal: screw terminal
- Little power consumption and small dimensions
- Connecting:
  - flexible or rigid conductors with or without cable terminal for joining to the consumer and section according to the motor power
  - two by two inlets/outlets supplied with orifices for the cables
- Possibility for range adjustment of the protection activating
- IP code: IP 44
- Possibility for operation at higher frequency
- Mounting:
  - mounting to a flat surface (wall) with bolts/screws
  - mounting position: vertical gradient – maximum± 5°
- Plastic: wear resistance of UV rays and non-flammable (self-extinguishing material)
- Metal corpus: corrosion-proof coating
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m





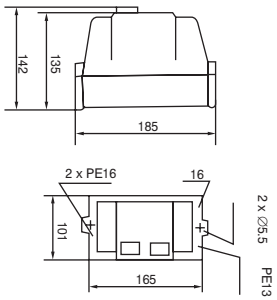




Type	Rated capacity of motors 50/60Hz AC-3 category 220V 230V	380V 400V	415V 440V	Rated current (A)	Thermal relay adjustment range	Coil voltage (V)	Packing/ Box (pcs)	Catalogue number
LT5 D093	2.2	4.0	4.0	9	7 .. 10A	230	1 / 16	**43091**
						400	1 / 16	**43092**
LT5 D123	3.0	5.5	5.5	12	9 .. 13A	230	1 / 16	**43121**
						4.0	1 / 16	**43122**
LT5 D185	4.0	7.5	9.0	18	12 .. 18A	230	1 / 16	**43181**
						400	1 / 16	**43182**

Note: Upon request the thermal relay will be replaced

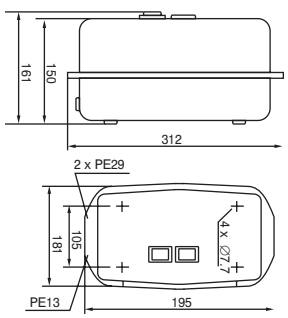




Type	Rated capacity of motors 50/60Hz AC-3 category 220V 230V	380V 400V	415V 440V	Rated current (A)	Thermal relay adjustment range	Coil voltage (V)	Packing/ Box (pcs)	Catalogue number
LT5 D255	5.5	11	11	25	17 .. 25A	230	1 / 16	**43251**
						400	1 / 16	**43252**
LT5 D325	7.5	15	15	32	23 .. 32A	230	1 / 16	**43321**
						400	1 / 16	**43322**

Note: Upon request the thermal relay will be replaced





Type	Rated capacity of motors 50/60Hz AC-3 category 220V 230V	380V 400V	415V 440V	Rated current (A)	Thermal relay adjustment range	Coil voltage (V)	Packing/ Box (pcs)	Catalogue number
LT5 D405	11.0	18.5	22	40	30 .. 40A	230	1/6	**43401**
						400	1/6	**43402**
LT5 D655	18.5	30.0	37	65	48 .. 65A	230	1/6	**43651**
						400	1/6	**43652**
LT5 D955	25.0	45.0	45	95	80 .. 93A	230	1/6	**43951**
						400	1/6	**43952**

Note: Upon request the thermal relay will be replaced

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".



"Star/delta"starter

5 YEAR WARRANTY *for industrial usage, 3 years warranty

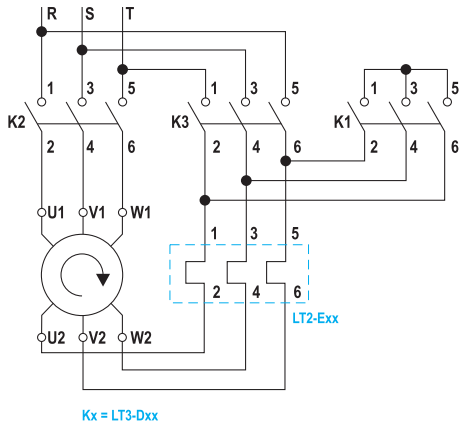
The electromagnetic starters LT 3 Dxx series are devices designed for remote control, direct control and protection of induction motors coiled and operating according to a starter scheme "star/delta". They are a combination of three contactors LT 1 Dxx series, time relay and a set of buttons "start" and "stop" factory cabled. They provide the easy motor unwinding giving possibility for setting the time for unwinding in "star" as the time for switching between "star" and "delta" is fixed to 0.5 seconds.
The starters are offered on the market in two types:
- closed type – metal boxes providing the corresponding IP code from dust and moisture (IP 54) as at mounting there should be provided protection of the device from short circuit through breakers or disconnectors
- open type – for mounting in distribution boxes as at mounting there should be provided protection of the device from short circuit through breakers or disconnectors

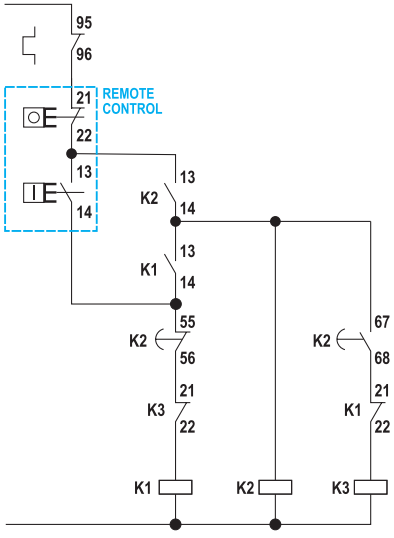
The starters are offered on the market without mounted thermal protection which is purchased separately according to the motor capacity. The choice of a suitable protection prevents motor's operation at unusual temperature conditions and guarantees maximum constant operation, increases the effectiveness and prolongs the term of exploitation.
If necessary, at client's order the power supply operating voltage of the pneumatic starter can be changed.

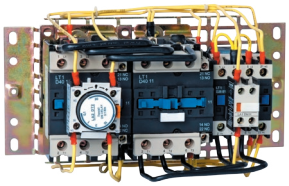
Functions:
- switching on/off alternating current three phase motors operating according to a scheme "star - delta"
- does not allow secondary unwarranted switching on of the starter at transitory lowering of the voltage
- protects the motor from overload in the range of the corresponding thermal protection
- indication of the operating condition through a valve indicator
- possibility for mounting of additional contacts (for the open type)
- remarkable with high reliability of current characteristics

Technical data:
- Rated voltage of the controlling voltage: 400V AC; 50/60 Hz

Note: In case you need different controlling coils voltage of the starters you can turn to our regional representatives.
- Rated operating voltage: 690V
- Rated operating current range: from 7 to 93A AC
- insulation voltage: >690V
- Surge voltage wear resistance:≥6000V
- Joining terminal: screw terminal
- Little power consumption and small dimensions
- Connecting:
  - flexible or rigid conductors with or without cable terminal for joining to the consumer and section according to the motor power
  - three by three inlets/outlets supplied with orifices for the cables
- Possibility for operation at higher frequency
- IP code: IP54
- Mounting:
  - mounting to a flat surface (wall) with bolts/screws
  - mounting position: vertical gradient – maximum± 5°
- The metal body is covered with corrosion-proof paint
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m







Type designation (without a box)	Overall dimensions (mm)		
	height	width	depth
LT3-D25A	135	170	160
LT3-D32A	135	170	160
LT3-D40A	150	285	190
LT3-D65A	150	285	190
LT3-D95A	150	310	190

Type designation (without a box)	Rated capacity (kW)				Rated current (A)	Coil voltage (V AC)	Packing/ Box (pcs)	Catalogue number
	220V 230V	380V 400V	415V	440V				
LT3-D25A	11	15	15	15	25	400	1 / 6	**43253**
LT3-D32A	15	18.5	18.5	18.5	32	400	1 / 6	**43323**
LT3-D40A	18.5	22	22	22	40	400	1 / 4	**43403**
LT3-D65A	30	55	55	55	65	400	1 / 4	**43653**
LT3-D95A	37	75	75	75	95	400	1 / 4	**43953**

Note: It is necessary that thermal protection with suitable range is mounted to protect the controlled motor.
The shown values of magnetic starters are for normal regimes for motor control, for hard operation regimes are chosen starters which correspond to the current rating of the motor.



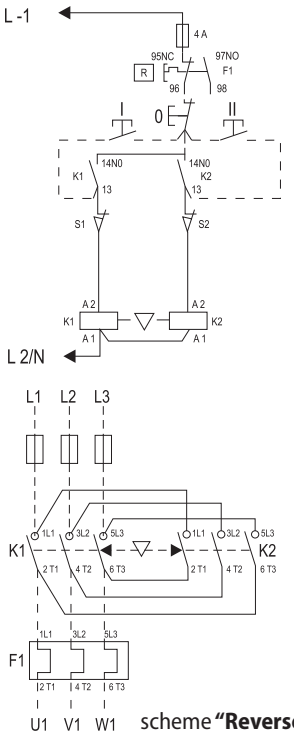
Type designation (with box)	Overall dimensions (mm)		
	height	width	depth
LT 3 -B-D25A	370	240	160
LT 3 -B-D32A	370	240	160
LT 3 -B-D40A	470	265	160
LT 3 -B-D65A	470	265	160
LT 3 -B-D95A	470	265	160

Type designation (with box)	Rated capacity (kW)				Rated current (A)	Coil voltage (V AC)	Packing/ Box (pcs)	Catalogue number
	220V 230V	380V 400V	415V	440V				
LT 3 - B - D25A	11	15	15	15	25	400	1 / 4	**43254**
LT 3 - B - D32A	15	18.5	18.5	18.5	32	400	1 / 4	**43255**
LT 3 - B - D40A	18.5	22	22	22	40	400	1 / 2	**43256**
LT 3 - B - D65A	30	55	55	55	65	400	1 / 4	**43257**
LT 3 - B - D95A	37	75	75	75	95	400	1 / 2	**43258**

Note: It is necessary that thermal protection with suitable range is mounted to protect the controlled motor.
The shown values of magnetic starters are for normal regimes for motor control, for hard operation regimes are chosen starters which correspond to the current rating of the motor.

Documents corresponding to the product:
Standard EN 60947-1
EN 60947-4-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".





scheme **"Reverse"**

Reverse starter

5 YEAR WARRANTY *for industrial usage, 3 years warranty

The electromagnetic starters LT4 Dxx series are devices used for direct start, reverse start and protection of induction motors with short connected rotor. They are a combination of two contactors LT1 Dxx series supplied with two buttons "start" and one "stop" factory cabled. They provide the unwinding of the motor in one of the directions with possibility for pushing the button "stop" and giving command from the other "start" for changing the motor winding direction. The two contactors are mechanically blocked and do not allow simultaneous start in both winding directions. The starters are offered – closed type in metal boxes providing the corresponding IP code from dust and moisture (IP54) as at mounting there should be provided protection of the device from short circuit through breakers or disconnectors. The starters are offered with mounted thermal protection which can be substituted according to the motor power. The choice of a suitable protection prevents motor's operation at unusual temperature conditions and guarantees maximum constant operation, increases the effectiveness and prolongs the term of exploitation.
If necessary, at order the power supply operating voltage of the pneumatic starter can be changed.

Functions:
- switching on alternating current three phase motors in one winding direction, switching off and change of the winding direction at giving a signal
- does not allow secondary unwarranted switching on of the starter at transitory lowering of the voltage
- protects the motor from overload in the range of the corresponding thermal protection
- remarkable with high reliability of current characteristics

Technical data:
- Rated voltage of the controlling voltage: 400V AC; 50/60 Hz

Note: In case you need different controlling coils voltage of the starters you can turn to our regional representatives.
- Rated operating voltage: 690V
- Rated operating current range: from 7 to 93 A AC
- insulation voltage: 690V
- Surge voltage wear resistance:≥6000V
- Joining terminal: screw terminal
- Little power consumption and small dimensions
- Connecting:
  - flexible or rigid conductors with or without cable terminal for joining to the consumer and section according to the motor power
  - three by three inlets/outlets supplied with orifices for the cables
- Possibility for operation at higher frequency
- IP code: IP 44
- Mounting:
  - mounting to a flat surface (wall) with bolts/screws
  - mounting position: vertical gradient – maximum± 5°
- The metal body is covered with corrosion-proof paint
- Ambient temperature: -10°C + 65°C
- Altitude: up to 2000m

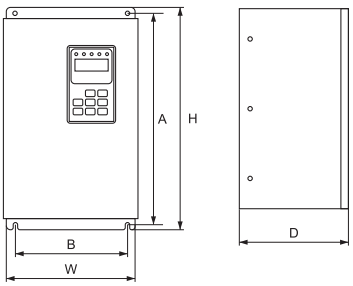
Type designation (with a box)	Rated capacity (kW) 220V 230V	380V 400V	415V	440V	Overall dimensions (mm) height	width	depth	Rated current (A)	Coil voltage (V AC)	Packing/Box (pcs)	Catalogue number
LT 4 - B - D25A	11.0	15.0	15.0	15.0	240	240	160	25	400	1 / 8	**43001**
LT 4 - B - D32A	15.0	18.5	18.5	18.5	240	240	160	32	400	1 / 4	**43002**
LT 4 - B - D40A	18.5	22.0	22.0	22.0	270	265	160	40	400	1 / 2	**43003**
LT 4 - B - D65A	30.0	55.0	55.0	55.0	270	265	160	65	400	1 / 4	**43004**
LT 4 - B - D95A	37.0	75.0	75.0	75.0	270	265	160	95	400	1 / 4	**43005**
LT 4 - B - D25A	11.0	15.0	15.0	15.0	240	240	160	25	230	1 / 4	**43006**
LT 4 - B - D32A	15.0	18.5	18.5	18.5	240	240	160	32	230	1 / 4	**43007**
LT 4 - B - D40A	18.5	22.0	22.0	22.0	270	265	160	40	230	1 / 4	**43008**
LT 4 - B - D65A	30.0	55.0	55.0	55.0	270	265	160	65	230	1 / 4	**43009**
LT 4 - B - D95A	37.0	75.0	75.0	75.0	270	265	160	95	230	1 / 4	**43010**

Type of sign
ELM1000- G -0150 T3 C

- lid type code: C=metal clips; B=plastic lid
- power supply code: T3=three-phase; S2= single phase
- motor power
- inverter type: G=constant momentum
- inverter model

Documents corresponding to the product:
Standard EN60898-1
EN 60947-2
The products are in accordance with the directives of EC "Low voltage directives (LVD) no 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".





ELM 1000 frequency inverters

3 YEAR WARRANTY

Frequency inverters are designed to control three-phase induction motors with short-circuited rotor. They provide for the implementation of some control laws, thus becoming an indispensable part of the control systems for conveyors and packaging machines, pumps, air conditioning systems, etc. The ELM 1000 inverter provides the so-called no-sensor control, V/f control and impulse control while the output load can reach up to 150% within 60 seconds. It features easy definition of curves and easy parameters setting of inverter through the use of control panel buttons. The inverter can auto calibrate according to the motor power, i.e. if the inverter is connected to a motor with power different from that set by the inverter manufacturer, it automatically adjusts its programmable parameters to suit the motor parameters.

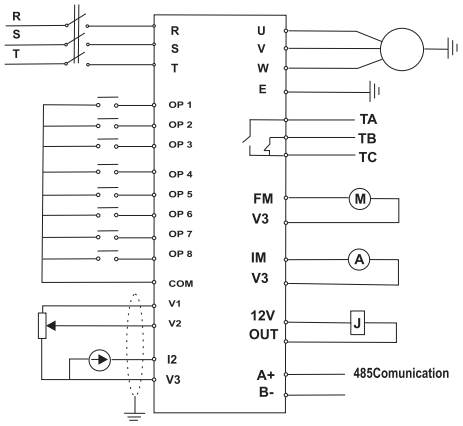
Functions:
- rotation speed increase – automatic and manual
- sliding compensation: from 0 to 20%
- no-sensor control of the motor
- adjustment of the V/F control curve – linear or quadratic
- energy saving through automatic optimization of the V/F curve
- PID control law implementation option
- omission of resonance frequencies
- JOG function
- 'counter' function
- automatic restart option in case of power supply failure
- fifteen speed degrees control option
- control choice from the control panel; external or COM terminal
- frequency control from the control panel, external potentiometer by current or by voltage
- auto-calibration in accordance with the switched motor
- incoming signals on clockwise or counter-clockwise rotation, multi-step control, restart, etc.
- outgoing discrete control signal 24V
- outgoing analogue control signal 0 – 10V
- DC brake in static mode
- dynamic breaking with external breaking resistor – used in inert electric motor load
- output voltage adjustment option
- activation of output safety functions option
- electronic motor protection

Technical features:
- Rated working voltage: 230/400V AC; 50 Hz
- Permissible working voltage deviation: ±10%
- Unbalance of phases: < 3%
- Frequency fluctuation: < 5%
- Output frequency: 0 – 400 Hz
- Output voltage: from 0 to Ubx max
- Overload capacity:
  - constant: up to 110%
  - momentary: up to 150%
- Precision of output frequency adjustment: 0.1%
- Type of connection:
  - the connection of the inverter to the power supply should always be done through a circuit breaker of the MCB or MCCB type
  - connection of consumer to power terminals: through conductors suitable for the power
  - connection of control circuits: flexible conductor up to 1.5 mm^2

Note: It is not recommendable to mount contactors or other commutation devices between the frequency inverter and the motor, except as described in the product passport.
- Mounting:
  - mounting to a flat surface by means of bolts
  - mounting position – vertical gradient maximum ± 5°

Note: When more than one inverter is mounted in a board, it is recommendable to mount them side by side and when this is not possible, the appropriate cooling conditions should be provided.
- Plastic: UV-rays resistant and fire resistant (self-extinguishing material)
- Ambient temperature: -10° to 65° C
- Altitude : up to 2000 m
- Function enhancement option: through the inclusion of additional modules

Type	Overall dimensions (mm)					
	H	W	A	B	D	d
ELM1000-G0007S2B	150	105	139	94	120	Ø4
ELM1000-G0015S2B	170	125	160	114	140	Ø5
ELM1000-G0022S2B	170	125	160	114	140	Ø5
ELM1000-G0007T3B	170	125	160	114	140	Ø5
ELM1000-G0015T3B	170	125	160	114	140	Ø5
ELM1000-G0022T3B	170	125	160	114	140	Ø5
ELM1000-G0037T3B	250	162	233	145	150	Ø6
ELM1000-G0040T3B	250	162	233	145	150	Ø6
ELM1000-G0055T3B	300	200	282	182	160	Ø6
ELM1000-G0075T3B	300	200	282	182	160	Ø6
ELM1000-G0110T3C	340	225	322	160	220	Ø6
ELM1000-G0150T3C	380	230	362	186	225	Ø6



Type	Input voltage (V)	Maximum output power (kW)	Maximum current output (A)	Packing/Box (pcs)	Catalogue number
ELM1000-G0007S2B	230	0.75	4.5	1 / 4	**423107M**
ELM1000-G0015S2B	230	1.5	7	1 / 4	**423115M**
ELM1000-G0022S2B	230	2.2	9	1 / 4	**423122M**
ELM1000-G0007T3B	400	0.75	2	1 / 4	**423307M**
ELM1000-G0015T3B	400	1.5	4	1 / 4	**423315M**
ELM1000-G0022T3B	400	2.2	6.5	1 / 4	**423322M**
ELM1000-G0037T3B	400	3.7	8	1 / 1	**423337M**
ELM1000-G0040T3B	400	4.0	9	1 / 1	**423340M**
ELM1000-G0055T3B	400	5.5	12	1 / 1	**423355M**
ELM1000-G0075T3B	400	7.5	17	1 / 1	**423375M**
ELM1000-G0110T3C	400	11	23	1 / 1	**423391M**
ELM1000-G0150T3C	400	15	32	1 / 1	**423392M**

Documents corresponding to the product:
Standard EN60947-4-2
EN 60947-1
The products are in accordance with the directives of EC "Low voltage directives (LVD) no 2006/95/EC" and "Electromagnetic Compatibility Directives (EMC) no. 2004/108/EC".



Soft starter ELM 2500

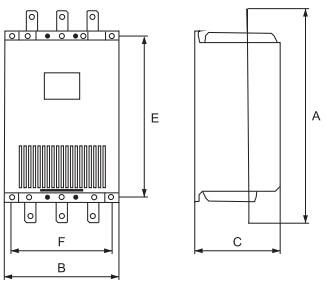
3 YEAR WARRANTY

Soft starters are designed to control the start of three-phase induction motors with short-circuited rotor. A number of motor control issues are avoided through them, and namely: prolonged start moments, auto-ignition of motor, there is no need of stardelta switching, auto-transformer switching, resistant switching, etc. The ELM 2500 soft starter pertains to the AC53b type of starters as per the standard requirements and it provides rotation of motor and once the operation mode is set, a shunt contactor of the LT 1 D/F series is switched to control motor operation as the soft starter is not designed to control motors in a set mode. Under a stop command in accordance with the selected control scheme, the soft starter can or can not be included in shutting the motor down.

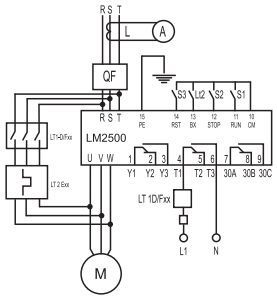
Functions:
- System functions
  - over-voltage protection – motor will switch off when power supply exceeds the preset limits
  - overload protection – protects the motor from overloading
  - phase loss protection
  - temperature overload protection
- Control functions
  - output faults
  - motor faults diagnostics
  - keyboard or outward control
  - delayed start option
  - faults memory

Technical features:
- Rated working voltage: 230/400V AC; 50 Hz
- Permissible working voltage deviation: ±10%
- Unbalance of phases: < 3%
- Frequency fluctuation: < 5%
- Obligatory bypass contactor installation
- Mounting :
  - mounting to a flat surface through bolts
  - mounting position – vertical gradient maximum ± 5°

Note: When more than one soft starter is mounted in a board, it is recommendable to mount them side by side and when this is not possible, the appropriate cooling conditions should be provided.
- Plastic: UV-rays resistant and fire resistant (self-extinguishing material)
- Altitude : up to 2000 m



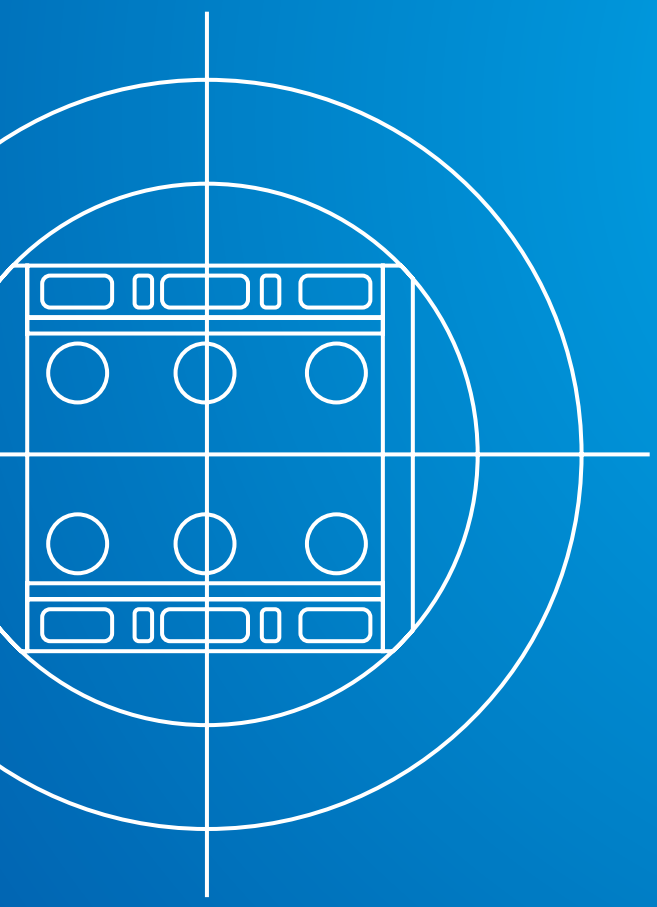
Type	Overall dimensions (mm)					
	A	B	C	E	F	d
EL M25015	250	153	162	219	140	Ø6
EL M25022	250	153	162	219	140	Ø6
EL M25037	250	153	162	219	140	Ø6
EL M25045	250	153	162	219	140	Ø6
EL M25055	250	153	162	219	140	Ø6
EL M25075	510	260	194	389	232	Ø8



Type	Power of motor (kW)	Rated current (A)	Type of bypass contactor	Section of power supply conductors	Packing/Box (pcs)	Catalogue number
EL M25015	15	30	LT 1-D 50	10	1 / 1	**42225015**
EL M25022	22	45	LT 1-D 50	10	1 / 1	**42225022**
EL M25037	37	76	LT 1-D 80	16	1 / 1	**42225037**
EL M25045	45	90	LT 1-D 95	25	1 / 1	**42225045**
EL M25055	55	110	LT 1-F 115	25	1 / 1	**42225055**
EL M25075	75	150	LT 1-F 150	35	1 / 1	**42225075**

CAPACITY COEFFICIENT COMPENSATION

CAPACITY
COEFFICIENT COMPENSATION



ELMARK®

Complex compensating devices | 90

Capacitor batteries for reactive energy compensation | 91

Cosφ regulator | 91







Complex compensating devices

3 YEAR WARRANTY

The use of electrical energy in industry is invariably connected with its transformation. The development of semiconductor elements and the broader coming of semi-conductor transformers, frequency control, welding machines and electrical arc furnaces in industrial projects have a negative impact over the electrical power quality in the electro distributing systems. Induction machines need reactive energy to create electromagnetic field. The reactive component of current is taken from the electro distributing systems but it leads to additional losses in the power supply system and makes shorter the exploitation term of electrical devices. This leads to curving of the sinusoid form of current and voltage and interferences with harmonic character. Compensating the reactive power means to fill up the system in such a way that the needed reactive power to be created from the compensating device instead of being taken from the electro transportation system. This leads to killing the voltage fall and cable losses and increasing the outlet power of the power transporters and cutting down the bills for overconsumption of reactive energy paid by consumers to the electricity supply company. In practice compensating the reactive energy and high harmonics through LC filters combined in compensating installations has the broadest spreading.

There are several types of compensation according to their location:

- individual compensation – when to every single motor or consumer is mounted a compensating system. It is applied to powerful motors and transformers with fixed capacity.
- installation compensation – when the consumers from the whole section (workshop) are grouped and compensation is accomplished for the whole section.
- overall compensation – accomplished at full compensation in the inlet of the installation.

According to the type of the compensating devices compensation can be:

- passive – when the system supplies constant reactive power. In this case the system does not react to changes in the size and nature of the harmonic components and also to the per cent increase of the reactive energy in time.
- active – broader spread. The system controls the form of the consumed current and generates different capacity depending on the load changes.

When designing the electro distributing system of industrial projects the following tasks are taken into consideration:

- defining the factor of non-sinusoid of the consumers and the voltage harmonic components
- defining the additional loading of the capacitor batteries from the harmonic components and calculating the filtering elements if needed

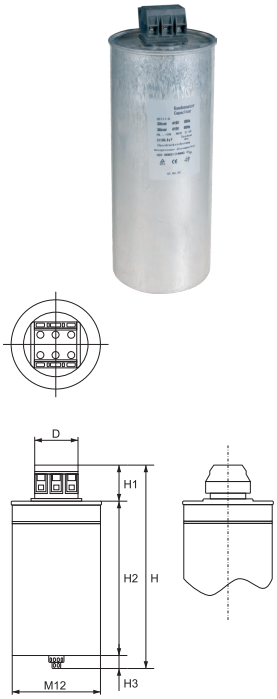
The calculation of the compensating device capacity is done by reading the reactive energy of the system and the working time of the system. Compensating devices represent a device of one or several metal boxes with common rail system, automatic regulator for cosφ control RPSF-xx series, different number of capacitor batteries (according to the capacity of the device) with different capacity HY 111 series, contactors for capacitor batteries control CJ 19-43 series, protective elements, etc.

The broadest spreading of compensation has acquired the compensation of harmonics and reactive energy with capacitors for high voltage. Capacitors HY 111 series are voltage remeasured and are able to endure overload from harmonic components up to 7% from the basic harmonics. They are used in systems with high harmonics foul up to 25%.

The high harmonics composition is defined after measuring the influence rate of each separate harmonics compared to the first one. In Bulgaria mostly spread are 5, 7, 9, 11 and 13 harmonics. The capacitors are remeasured for voltage 415V and are normally mounted right in the compensation systems.

When the high harmonics are over 25% the system is taken to be foul and in this case except using capacitors, filters for leveling the harmonics are to be used as well. These filters are calculated on the basis of the corresponding voltage harmonics and differ for the different harmonics. They are calculated using complex mathematical programme which reads the foul rate, the significance per cent of the voltage harmonic component, etc.

Documents corresponding to the product:
Standard EN 60831-1
EN 60831-2



Dimensions (mm)

D	H1	H3
30	35	16

Capacitor batteries for reactive energy compensation

3 YEAR WARRANTY

Capacitor batteries HY 111 series are specially designed three phase dry capacitors for compensation of reactive energy and correction of the capacity factor. It represents an aluminum cylindrical body in which a metal polypropylene folio is mounted which does not require special impregnation. The permittivity characteristics are acquired through filling with a special mixture on a vegetable base (resins). The capacitor battery is constructed in such a way that at failure (overload from voltage, current or temperature) breaks the connection to the upper cover where are the connections to the power supply. This is done by a specially constructed valve for overpressure mounted right above the capacitor element.
The breaking of the inner couplings provides protection to the staff and environment from damage due to capacitor element failure. There is a three phase capacitor in the cylindrical body with built in resistor for rarefying the capacitors.

The capacitor battery can be used both for passive and active compensation.

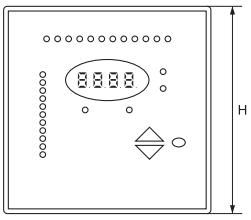
Technical data:
- Rated operating voltage: 450V; 50Hz
- insulation voltage: 690V
- Surge voltage wear resistance: 6kV per minute
- Capacity: from 5,0 to 100,0 kVAr at 450V
- Tolerance: ±5%
- Operating temperature: -40°C - +65°C
- Capacity losses: 0.5W/kVAr
- Built in discharging resistance
- Admissible current overload: twice as much the peak current
- Discharge time: <50V per minute
- Altitude: 2000m

Mounting:
- With bolt M12 orM16 to a flat horizontal base

Type of the battery	Dimensions H / Ø (mm)	Operating voltage (V)	Battery capacity (kVAr)	Capacity (μF)	Packing/Box (pcs)	Catalogue number
HY 11A5	210/76	450	5.0	3X26.2	6	**49005**
HY 11A7	210/76	450	7.5	3X39	6	**49007**
HY 111A10	240/76	450	10.0	3X52.4	6	**49010**
HY 111A15	240/86	450	15.0	3X78.9	6	**49015**
HY 111A20	240/116	450	20.0	3X105	6	**49020**
HY 111A30	280/160	450	30.0	3X157	6	**49030**
HY 111A50	345/180	450	50.0	3X262	6	**49050**
HY 111A100	300/300	450	100.0	3X524	6	**49100**
HY 111A12*	230 / 85	690	12.5	3X27.9	6	**49031**
HY 11A25*	280 / 115	690	25	3X55.7	6	**49032**

Note: *Suitable for wind generators





Controller for automatic regulation of the capacity factor (cosφ regulator)

3 YEAR WARRANTY

The automatic regulators of the capacity factor RPCF-xx series are devices for monitoring of low voltage systems and control of switching on of capacitor batteries for the capacity factor compensation. There is possibility for adjustment of the system parameters and control. Manufactured by the latest CMOS technology, they are distinguished with high degree of data security, easy programming and secure control of the outlets. There is possibility for indication and setting the parameters of the power supply system as: capacity coefficient, display of the system parameters such as voltage, current and capacity, losses, protection against overload, overload indication or lack of voltage, etc.
The change of parameters is performed through a combination of buttons on the front panel. There is light diode to indicate which parameter is being displayed on the screen and which outlets are in operation. The display is four digital. There is possibility for choice of the working conditions: manual or automatic.

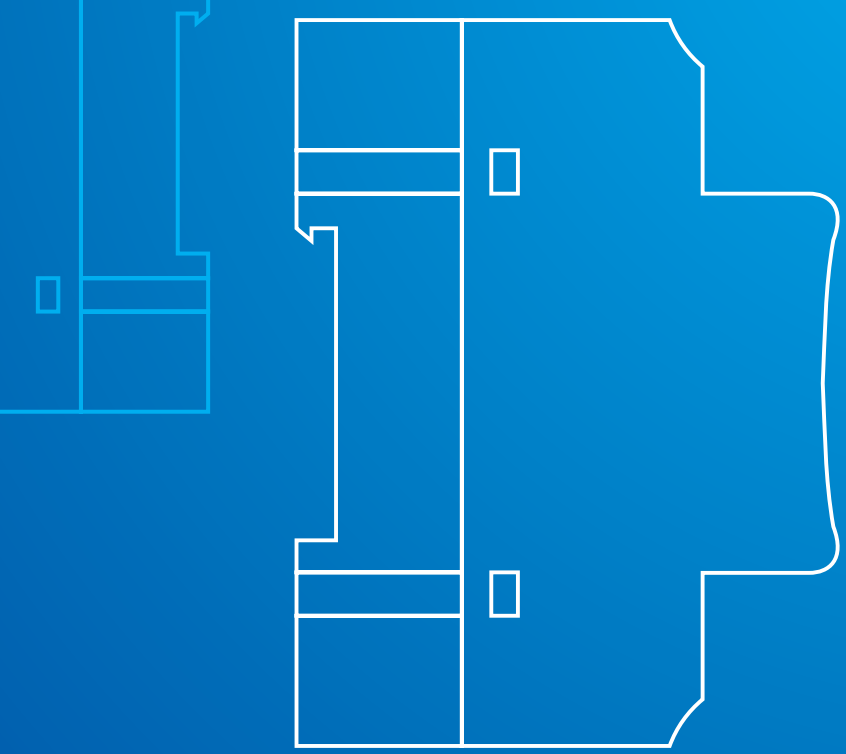
Technical data:
- Rated operating voltage: 230/400V
- Operating frequency: 45 – 65Hz
- insulation voltage: 690V
- Surge voltage wear resistance: 6kV per minute
- Measurement range: from 0 to 9999kVAr
- Measurement accurateness:
  - voltage: ±1.0%
  - current: ±1.0%
  - capacity coefficient: ±1.0%
  - reactive energy: ±2.0%
- Operating temperature: -10+65°C
- Humidity: 30 – 60%
- Display: 4 digital
- Responsiveness: 20mA
- Outlet: 7A
- Number of outlets: 12 and 16
- Altitude: up to 2500m

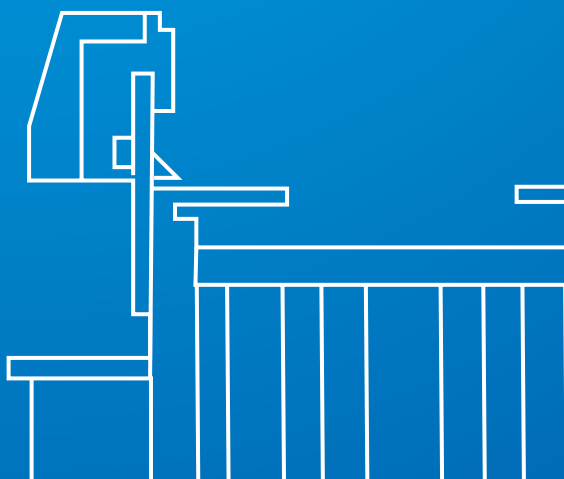
Mounting:
- On the front panel of the box through cutting an opening

Type	Number of steps	Dimensions H (mm)	Packing/Box (pcs)	Catalogue number
HY-RPCF12	12	122x122	8	**49120**
HY-RPCF16	16	144x144	8	**49160**

TIMERS, RELAYS AND DISPLAYING DEVICES

TIMERS, RELAYS
AND DISPLAYING DEVICES





ELMARK

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Programmable digital one-channel timer TE 15A

3 YEAR WARRANTY

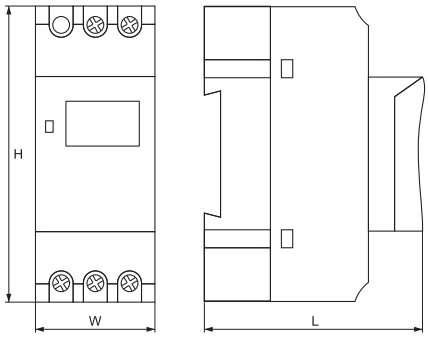
The timer is manufactured under the CMOS technology with a quartz minicontroller which makes it reliable for operation. The timer is adjusted for DIN-rail mounting. It can memorize up to eight ON/OFF programs (ON/OFF cycles). Each program setting is done through the push buttons. Programming starts with selection of the days of the week (you can choose among a whole week cycle, work days cycle, weekend cycle, or a specific day of the week); then the cycle start time and end time are set. If you have selected work days cycle, then the program will start and stop at the set times each work day of the week. This is one ON/OFF program. Where necessary, other programs can be memorized up to the limit of eight possible programs. If you continue setting new programs the first memorized program will be deleted. The minimal interval for cycle programming is 1 minute.

Type	Packing/Box (pcs)	Catalogue number
TE 15 A	1 / 100	**50036**

Dimensions (mm)		
H	W	L
85	36	64

Technical data:
- Display: LCD
- Power supply voltage: 230V; 50Hz
- Operations: 8 switching ON/OFF
- Time deviation: <2s (at 25°C)
- Battery for programme storing: up to 15 days
- Power consumption: <5VA
- Switched on indicator
- Electrical wear resistance: 10^5 cycles
- Mechanical wear resistance: 10^7 cycles
- Operating temperature: -10°C ÷ +65C
- Humidity: 35 – 85%RH
- Number of contacts: 1NO + 1NC
- Commutating capacity:
  - active load: up to 6A
  - inductive load: up to 2.5
- Weight: 120g

Mounting:
- DIN-rail





Programmable digital one-channel timer TE 15B

3 YEAR WARRANTY

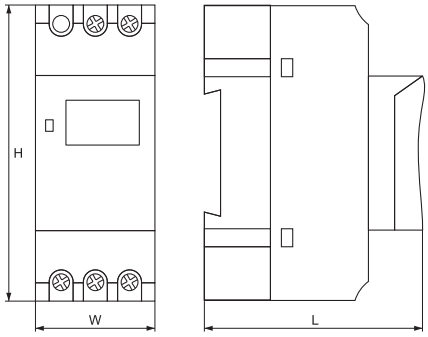
The timer is manufactured under the CMOS technology with a quartz minicontroller which makes it reliable for operation. The timer is adjusted for DIN-rail mounting.It can memorize up to six ON/OFF programs (ON/OFF cycles). Each program setting is done through the push buttons. Programming starts with selection of the days of the week (you can choose among a whole week cycle, work days cycle, weekend cycle, or a specific day of the week); then the cycle start time and end time are set. If you have selected work days cycle, then the program will start and stop at the set times each work day of the week. This is one ON/OFF program. Where necessary, other programs can be memorized up to the limit of eight possible programs. If you continue setting new programs the first memorized program will be deleted. The minimal interval for cycle programming is 1 minute. There is possibility for automatic correction of the time according to the seasonal sun variations.

Type	Packing/Box (pcs)	Catalogue number
TE 15 B	1 / 100	**50101**

Dimensions (mm)		
H	W	L
85	36	64

Technical data:
- Display: LCD
- Automatic adjustment of the current time (time correction winter/summer)
- Power supply voltage: 230V; 50Hz
- Operations: 6 switching ON/OFF
- Time deviation: <2s (at 25°C)
- Battery for programme storing: up to 15 days
- Power consumption: <5VA
- Switched on indicator
- Electrical wear resistance: 10^5 cycles
- Mechanical wear resistance: 10^7 cycles
- Operating temperature: -10 ÷ +65°C
- Humidity: 35 – 85%RH
- Number of contacts: 1NO + 1NC
- Commutating capacity:
  - active load: up to 6A
  - inductive load: up to 2.5
- Weight: 120g

Mounting:
- DIN-rail





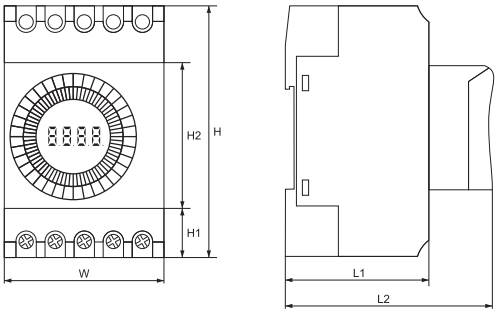
Programmable digital one-channel timer TE 20

3 YEAR WARRANTY

The timer is manufactured under the CMOS technology with a quartz minicontroller which makes it reliable for operation. The timer is adjusted for DIN-rail mounting. It is possible to adjust forty-eight ON/OFF cycles. Each program setting is done through selection of the cycle start and end time with the push buttons. When a program is on, the time cycle is indicated as a dimmed out section on the dial. For example, if you start a 2-hour program the 2-hour portion between On and Off times on the dial becomes dark. The minimal interval for cycle programming is 15 minutes. The battery allows programme storing at lack of power supply.

Technical data:
- Power supply voltage: 230V; 50Hz
- Time deviation: <2s (at 25°C)
- Battery for programme storing and operation: up to 150 hours
- Power consumption: <5VA
- Switched on indicator
- Electrical wear resistance: 10^5 cycles
- Mechanical wear resistance: 10^7 cycles
- Operating temperature: -10 ÷ +65°C
- Humidity: 35 – 85%RH
- Number of contacts: 1NO + 1NC
- Li-Ion battery: 150h
- Commutating capacity:
  - active load: up to 16A
- Weight: 120g

Mounting:
- DIN-rail



Type	Packing/Box (pcs)	Catalogue number
TE 20	1 / 92	**50100**

Dimensions (mm)

H	H1	H2	W	L1	L2
85	20	45	54.5	34	66



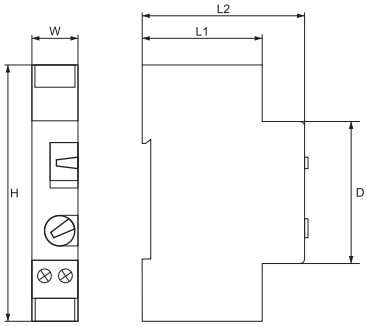
Tariff switching clock (timer) TE 18

3 YEAR WARRANTY

The timer is adjusted for DIN-rail mounting. It is used for switching on tariff lighting in housing buildings and switching off after the adjusted time. Easy to adjust time intervals, mounting and conducting. Reliable to use.

Technical data:
- Power supply voltage: 230V; 50Hz
- Adjustment range: 0.5 to 20 min
- Power consumption: <2.5VA
- Operating temperature: -5 ÷ +65°C
- Humidity: 45 – 95%RH
- Number of contacts: 1NO
- Commutating capacity:
  - active load: up to 16A
  - inductive load: up to 10 A
- Weight: 75g

Mounting:
- DIN-rail



Type	Packing/Box (pcs)	Catalogue number
TE 18	1 / 200	**35005**

Dimensions (mm)

H	W	L1	L2	D
82	18	40	65	45



Time relay "star/delta" TE 19

3 YEAR WARRANTY

The time relay is manufactured under the most modern methods of qualitative and reliable materials. The timer is adjusted for DIN-rail mounting. It is used to provide reliable and safe time hold at "star/delta" starters and it is used for setting fixed time intervals. Programming is done through selection of the time unit (seconds or minutes) and rate (x 0.1 or x1) by the slide switches, and then selection of a value from the timer knob (from 0 to 10). Whenever timer circuit receives a signal, it executes the set cycle and then stops until a new signal is available. It gives possibility for time adjustment for motor unwinding in star up to 600s and time change to delta according to the consumer's need.

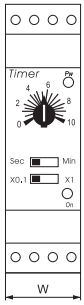
Type	Packing/Box (pcs)	Catalogue number
TE19	1 / 200	**50102**

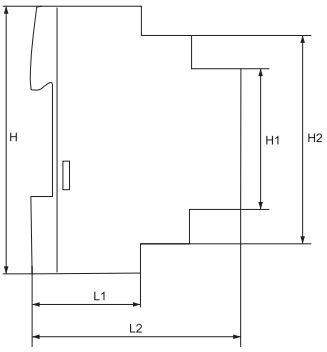
Dimensions (mm)

H	W	L1	L2	H1	H2
85	24	34	66	45	60

Technical data:
- Power supply voltage: 230V; 50Hz
- Adjustment range for operation in star: 1 to 600 seconds
- Repetition accuracy: ±5% from the whole scale
- Adjustment accuracy: ±5% from the whole scale
- Zeroing time: <0.5s
- Power consumption: <5VA
- Electrical wear resistance: 100 000 cycles
- Mechanical wear resistance: 1 000 000 cycles
- Operating temperature: -10 ÷ +65°C
- Humidity: 45 – 85%RH
- Commutating capacity: up to 5A
- Indication:
  - at operation in "star": red indication
  - at operation in "delta": green indication
- Weight: 150g

Mounting:
- DIN-rail







Timer TE8A – 1a, TE8A – 2a

3 YEAR WARRANTY

The timer is manufactured under the most modern technology CMOS with a quartz minicontroller which makes it precise, qualitative and reliable. It has a built in battery which allows operation of the timers without charging up to 150 hours. The timer is adjusted for DIN-rail mounting. Timer programming is done through selection of the operational day(s) of the week, followed by selection of the start time and end time. You may choose out of ten modes (one for each day of the week, one for the work days, one for the weekends and one for the whole week). When setting the time, you should start first with the hours and then continue with the minutes.
TE8A - 1a - Up to eight programs can be memorized. The on/off time resolution is 1 minute.
TE8A - 2a - It has two operating channels, each of which can adjust four programmes for a day or a week with minimal interval of 1 minute for switching on and off.
Indication on LCD display with high resolution and showing the time in hours, minutes and seconds.

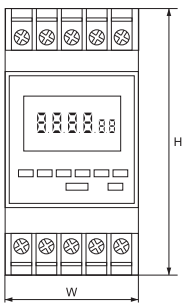
Type	Packing/Box (pcs)	Catalogue number
TE8A - 1a	1 / 75	**50113**
TE8A - 2a	1 / 75	**50114**

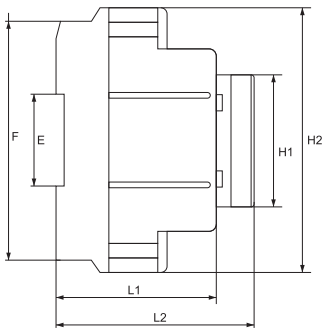
Dimensions (mm)

H	H1	H2	W
100	50	68	50
E	L1	L2	F
36	60	74	90

Technical data:
- Power supply voltage: 230V; 50Hz
- Power consumption: <5VA
- Electrical wear resistance: 10^7 cycles
- Mechanical wear resistance: 10^5 cycles
- Operating temperature: -10°C ÷ +65°C
- Temperature of storage: up to 70C
- Humidity: 45 – 85%RH
- Commutating capacity: up to 16A
- Two outlet relays
- Li-Ion battery: 150h
- Weight: 150g

Mounting:
- DIN-rail







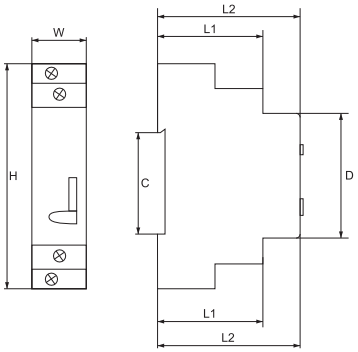
Impulse relay

3 YEAR WARRANTY

Impulse relays allow circuit remote control. They can be operated manually, remotely, from several control points, or by impulses. Impulse relays are most frequently used for the control of lighting circuits in various public places with multiple control points.

Technical data:
- Control voltage: 230V
- Rated current of the power circuit: 16A
- Electrical endurance: 200000 cycles
- Maximum switching frequency: 5 operations/minute
- Impulse duration: 50ms

Connection:
- tunnel terminals



Type	Packing/Box (pcs)	Catalogue number
EPN510	8 / 160	**50300**

Dimensions (mm)

H	W	C	D	L1	L2
85	24	36	45	34	66



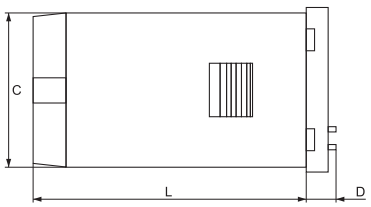
Timer TE6B

3 YEAR WARRANTY

The timer is manufactured under the most modern technology CMOS with a quartz minicontroller which makes it precise, qualitative and reliable. The timer is modulated to be mounted on the front panel of boards. The direction of operation is adjusted – direct or reverse. There is possibility to adjust the time range from 0.01 second to 99 hours 59 minutes, possibility for correction of the set values during operation. Indication on LCD display with high resolution and showing the time in hours, minutes and seconds.

Technical data:
- Power supply voltage: 230V; 50Hz
- Possibility for choice of operating range:
  - from 0.01 second to 99.99 seconds
  - from 1 second to 99.59 minutes
  - from 1 minute to 99.59 hours
- Error: <0.01% ±0.05s
- Minimal duration of the input pulse: 20ms
- Power consumption: <5VA
- Electrical wear resistance: 10^7 cycles
- Mechanical wear resistance: 10^5 cycles
- Operating temperature: -10 ÷ +65°C
- Temperature of storage: up to 70°C
- Humidity: 45 – 85%RH
- Commutating capacity at active load: 3A
- Weight: 300g

Mounting:
- on the front panel of the board



Type	Packing/Box (pcs)	Catalogue number
TE6B	1 / 100	**50104**

Dimensions (mm)

D	W	L
8.5	45	80

Timer TE48S-S

3 YEAR WARRANTY



The timer is manufactured under the most modern technology CMOS with a quartz minicontroller which makes it precise, qualitative and reliable. The timer is modulated to be mounted on the front panel of boards. The direction of operation is adjusted – direct or reverse. It represents two separate operating channels, each of which can operate independently with time range adjustment from 1 second to 99 minutes. Possibility for correction of the set values during operation. First, select the time unit (seconds or minutes) and then set the time. Depending on the timer coupling, it can be used as a cyclic timer relay, i.e. it initially counts the first time set, then counts the second time set, then starts counting over the first time again, etc. until a stop signal is received. In another mode, the timer can count the set time and stop until a new signal is received to count the next cycle. Indication on LCD display with high resolution and showing the time in hours, minutes and seconds.

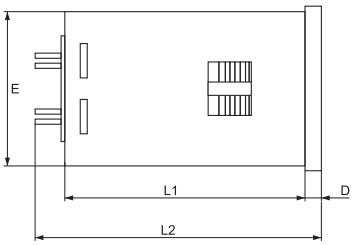
Type	Packing/Box (pcs)	Catalogue number
TE48S-S	84	**50105**

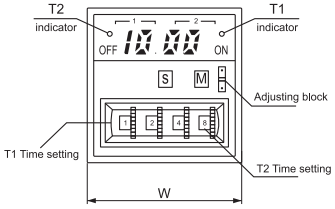
Dimensions (mm)

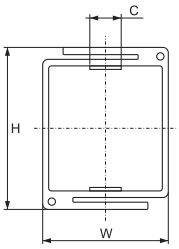
D	E	L1	L2
5	44.8	74	95
C	H	W	
15	58	48	

Technical data:
- Power supply voltage: 230V; 50Hz
- Admissible variation of the input voltage: 85-110%U
- Possibility for choice of operating range:
  - from 1 to 99 seconds
  - from 1 minute to 99 minutes
- Error: <0.01% ±0.05s
- Minimal duration of the input pulse: 20ms
- Power consumption: <5VA
- Electrical wear resistance: 10^7 cycles
- Mechanical wear resistance: 10^5 cycles
- Operating temperature: -10 ÷ +65°C
- Temperature of storage: up to 70°C
- Humidity: 45 – 85%RH
- Commutating capacity at load: 3A
- Weight: 300g

Mounting:
- on the front panel of the board







Timer TE 19M

3 YEAR WARRANTY



Timer is developed using modern technologies from quality and reliable materials and is adapted for mounting on DIN rail. It is used for providing time intervals in eight time programs, which are assigned by combinations of the keys. There is an option for it to operate in time ranges (assigned by the keys K4, K5,K6): seconds, minutes or hours depending on the necessity of the user. Power contact up to 3A.

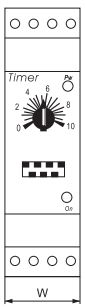
Type	Packing/Box (pcs)	Catalogue number
TE 19M	1 / 200	**50102M**

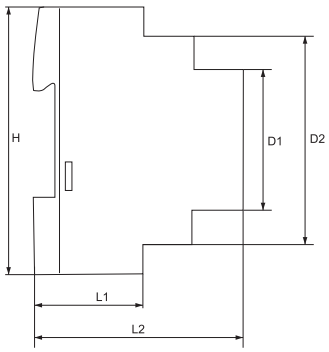
Dimensions (mm)

H	W	H1	H2	L1	L2
85	24	45	60	34	66

Technical characteristics:
- Input voltage: 230V; 50Hz
- Range of setting: from 0.6 sec to 100 hours
- Accuracy of setting: ± 5% from the whole scale
- Time for nullifying: <0.5 seconds
- Consumed capacity: < 5VA
- Electrical endurance (number of cycles): 100 000 cycles
- Mechanical endurance (number of cycles): 1 000 000 cycles
- Operation temperature: -10 ÷ +65°C
- Humidity: 45 - 85%RH
- Computing option: up to 5A
- Indication:
  - on power supply: red indication
  - on operational output relay: green indication
- Weight: 150 gr.
- Time functions: according to the programming guide

Mounting method:
- DIN rail



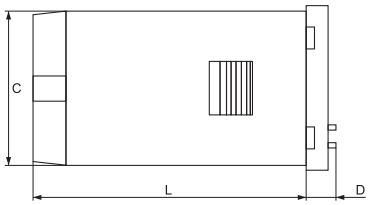




Universal digital counter CE2J

3 YEAR WARRANTY

The device is manufactured under the modern technology CMOS which allows high speed of counting and high counting reliability. It has a built in battery which allows data storing for more than 10 years. It is supplied with a digital display with black lighting digits, providing excellent visibility at different lighting. The counter is to be mounted on the front panel of the boards. It is used for impulse sequence counting with accumulation or deduction. There is possibility for relay outlet operation at reaching beforehand set value, and also a possibility for changing the position of the decimal point.



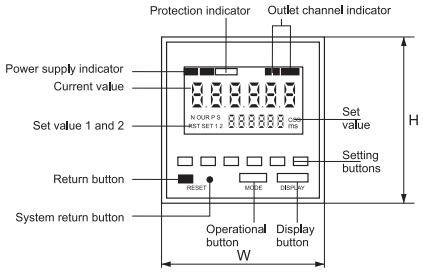
Documents corresponding to the product:
Standard EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
CE2J	1 / 45	**50111**

Dimensions (mm)

H	W	C	D	L
68	68	65	8.5	90

Technical data:
- Display: LCD
- Power supply voltage: 230V; 50Hz
- Counting range: 0 - 99999
- Counting speed: 30/3k cps
- Zeroing: outside impulse
- Battery for programme storing: up to 10 years
- Power consumption: <5VA
- Operating temperature: -10 ÷ +65°C
- Humidity: 35 – 85%RH
- Commutating capacity: relay outlet with active load: up to 3A
- Weight: 250g



Mounting:
- on the front panel
- opening with dimensions: 45x45

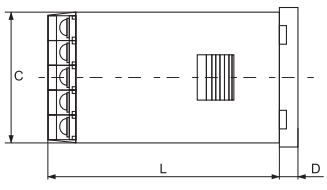


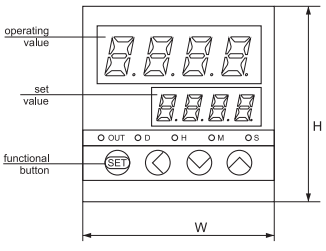
Combined digital counter/timer CE10J

3 YEAR WARRANTY

The device is for front mounting in the board. It can be used as a counter or timer choosing a definite combination from keys. It is manufactured under the modern technology CMOS which allows high speed of counting, precision at operation as a timer and high reliability. It has a built in battery which allows data storing for more than 10 years. It is supplied with a digital display providing excellent visibility at different lighting. It is used for impulse sequence counting with accumulation or deduction. There is possibility for relay outlet operation at reaching beforehand set value, and also a possibility for changing the position of the decimal point.

Technical data:
- Display: LCD
- Power supply voltage: 230V; 50Hz
- Counting range: 0 – 999
- Timer range: 0.01 – 99h99min
- Counting speed: 30/500 cps
- Zeroing: outside impulse
- Battery for programme storing: up to 10 years
- Power consumption: <3VA
- Mechanical wear resistance: 107 cycles
- Operating temperature: -5 ÷ +65°C
- Humidity: 35 – 85%RH
- Commutating capacity: relay outlet with active load: up to 3A
- Weight: 120g





Mounting:
- on the front panel
- opening with dimensions: 45x45

Documents corresponding to the product:
Standard EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
CE10J	1 / 45	**50120**

Dimensions (mm)

H	W	C	D	L
68	68	65	6	90

Total digital counter CE15J

3 YEAR WARRANTY

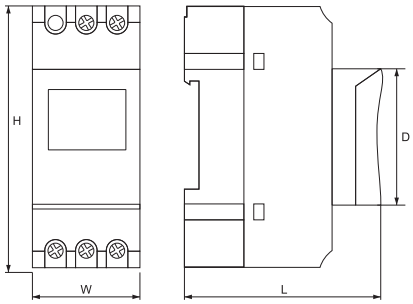


The device is to be mounted on DIN-rail. It is used as an impulse counter with no outside power supply. For that purpose there is a Li battery built in the device which provides data storing and operation of the device for 5 years. It has eight digital lighting display providing excellent visibility at different lighting. It is used for impulse sequence counting with accumulation.

Technical data:
- Display: LCD
- Power supply voltage: built in battery
- Inlet signal: 100-230V AC/DC
- Counting accuracy: <0.002%
- Data storing battery: up to 5 years
- Operating temperature: -5 ÷ +65°C
- Humidity: 35 – 85%RH
- Weight: 120g

Mounting:
- DIN-rail

Dimensions (mm)			
H	W	D	L
86	36	45	64



Documents corresponding to the product: EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
CE15J	1 / 100	**50112**

Total digital counter CE15L

3 YEAR WARRANTY

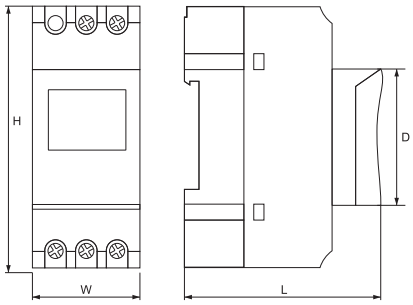


The device is to be mounted on DIN-rail. It is used as a time impulse counter with no outside power supply. For that purpose there is a Li battery built in the device which provides data storing and operation of the device for 5 years. It has eight digital lighting display providing excellent visibility at different lighting. It is used for time impulse sequence counting with accumulation. It displays the operated time.

Technical data:
- Display: LCD
- Power supply voltage: built in battery
- Inlet signal: 100-230V AC/DC
- Counting accuracy: <0.002%
- Battery for data storing: up to 5 years
- Operating temperature: -5 ÷ +65°C
- Humidity: 35 – 85%RH
- Weight: 120g

Mounting:
- DIN-rail

Dimensions (mm)			
H	W	D	L
86	36	45	64



Documents corresponding to the product: EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
CE15L	1 / 100	**50115**

Phase sequence indicator EK - RSTB

3 YEAR WARRANTY

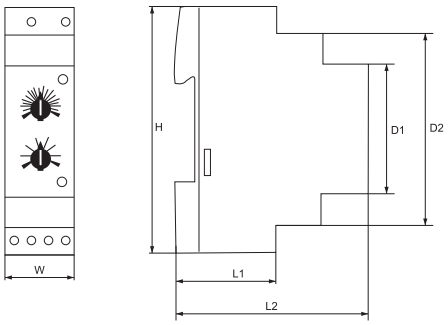


The device is to be mounted on DIN-rail. It is used for control and indication of the presence, sequence and quality of the phases. The device indicates the following fault:
- lack of one or several phases;
- change in the sequence of the phases;
- lowering of the power supplying voltage: under 10%;
- increasing of the power supplying voltage: over 10%;
- phase asymmetry of the power supplying voltage: ±10%

In the presence of one of the conditions above a relay starts operating in the device which breaks the controlling circuit.
The time between fault indication and outlet relay switching on can be adjusted in order to prevent unwilling stops at very short breaks. When the voltage is back to normal limits, the device receives energy (indication lights) according to the hysteresic values. At phase sequence fault the device operates immediately.

Technical data:
- Power supply voltage: 400V; 50Hz
- Possibility for operation range adjustment: 0.1 – 10 seconds
- Possibility for working range adjustment: from 300 to 480 V
- Electrical wear resistance: 1 000 000 cycles
- Mechanical wear resistance: 10 000 000 cycles
- Indication:
  - green LED – indication for a change in the condition
  - red LED - failure
- Operating temperature: -5 ÷ +65°C
- Humidity: 35 – 85%RH
- Weight: 120g

Mounting:
- DIN-rail



Documents corresponding to the product: EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
EK - RSTB	1 / 200	**50103**

Dimensions (mm)					
H	W	D1	D2	L1	L2
85	24	45	60	34	66



Documents corresponding to the product: EN 60947-5-1; EN 61810

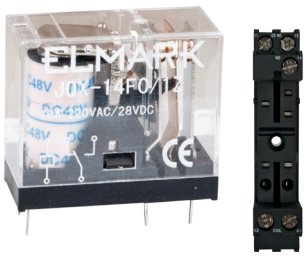
Industrial Relays and Bases

3 YEAR WARRANTY

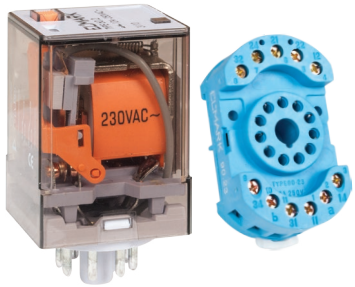
Devices intended for construction of automation and signalling boards. They are mainly used for command transfer towards the executive mechanisms. Currents of comparatively heavy values enabling the direct control of industrial executive mechanisms are commuted in comparatively small sizes. The contact surfaces are made from silver-coated electrolytic copper. The entire contact system is closed within a lid of colourless fire-proof plastic with a test-button installed to it. The base provides a safe electric connection of the conductors of the electric installation and the relays and is used to install the relay to the DIN busbar.

Technical Characteristics:
- Supply voltage: from 12 to 230V AC, 50 Hz and from 12 to 110V DC
- Acceptable deviation of the supply voltage: 85 -110% Un
- Rated current of the sockets: 10A AC
- Electrical endurance: 1 000 000 cycles
- Isolation resistance: 500 mΩ /min (500V)
- Impulse tension resistance: 2000V, 50Hz
- Dielectric strength: 1000V AC/1 min
- Turn-out time: 25ms
- Working temperature: -5 ÷ + 65°C
- Humidity: 35 - 85% RH

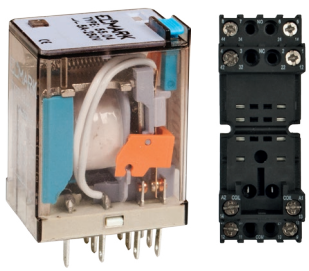
Method of installation:
- on a DIN rail by means of a socket



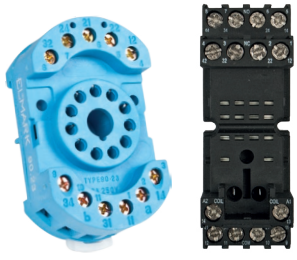
Relay type	Voltage of the coil (V)	Socket type	Resistance of the coil (Ω)	Number of contacts	Packing/Box (pcs)	Catalogue number
ELM - 14FC	12 VDC	ELM-RT624-B	260	NO+NC	100 / 1000	**57141**
ELM - 14FC	24 VDC	ELM-RT624-B	1080	NO+NC	100 / 1000	**57142**
ELM - 14FC	48 VDC	ELM-RT624-B	4260	NO+NC	100 / 1000	**57143**



Relay type	Voltage of the coil (V)	Socket type	Resistance of the coil (Ω)	Number of contacts	Packing/Box (pcs)	Catalogue number
ELM - 60.2	12 VDC	ELM - 90.22	96	2NO+2NC	20 / 300	**57601**
ELM - 60.2	24 VDC	ELM - 90.22	384	2NO+2NC	20 / 300	**57602**
ELM - 60.2	48 VDC	ELM - 90.22	1540	2NO+2NC	20 / 300	**57603**
ELM - 60.2	230 VAC	ELM - 90.22	7400	2NO+2NC	20 / 300	**57605**
ELM-60.2	24VAC	ELM-90.22		2NO+2NC	20 / 300	**57606**
ELM - 60.13	12 VDC	ELM - 90.23	96	3NO+3NC	20 / 300	**57611**
ELM - 60.13	24 VDC	ELM - 90.23	384	3NO+3NC	20 / 300	**57612**
ELM - 60.13	48 VDC	ELM - 90.23	1540	3NO+3NC	20 / 300	**57613**
ELM - 60.13	110 VAC	ELM - 90.23	1700	3NO+3NC	20 / 300	**57614**
ELM - 60.13	230 VAC	ELM - 90.23	7400	3NO+3NC	20 / 300	**57615**
ELM-60.13	24VAC	ELM90.23		3NO-3NC	20/300	**57616**



Relay type	Voltage of the coil (V)	Socket type	Resistance of the coil (Ω)	Number of contacts	Packing/Box (pcs)	Catalogue number
ELM - 55.02	12 VDC	ELM - RT702-B	42	2NO+2NC	50 / 500	**57521**
ELM - 55.02	24 VDC	ELM - RT702-B	168	2NO+2NC	50 / 500	**57522**
ELM - 55.02	48 VDC	ELM - RT702-B	675	2NO+2NC	50 / 500	**57523**
ELM - 55.02	230 VAC	ELM - RT702-B	14000	2NO+2NC	50 / 500	**57525**
ELM55.02	24VAC	ELM - RT702-B		2NO+2NC	50/500	**57526**
ELM - 55.04	12 VDC	ELM-RT704-B	42	4NO+4NC	50 / 500	**57541**
ELM - 55.04	24 VDC	ELM-RT704-B	168	4NO+4NC	50 / 500	**57542**
ELM - 55.04	48 VDC	ELM-RT704-B	675	4NO+4NC	50 / 500	**57543**
ELM - 55.04	110 VAC	ELM-RT704-B	3500	4NO+4NC	50 / 500	**57544**
ELM - 55.04	230 VAC	ELM-RT704-B	14000	4NO+4NC	50 / 500	**57545**
ELM-55.04	24VAC	ELM-RT704-B		4NO+4NC	50/500	**57546**



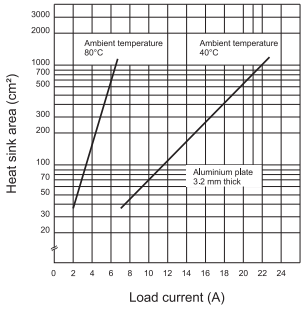
Socket type	Dimensions (mm)	Number of terminals (pcs.)	Packing/Box (pcs)	Catalogue number
ELM - RT624-B	76 x 15	5	20 / 600	**57901**
ELM - RT702-B	76 x 27	11	10 / 240	**57902**
ELM - RT704-B	76 x 27	14	10 / 240	**57912**
ELM - 90.22	68 x 38	8	10 / 400	**57904**
ELM - 90.23	68 x 38	11	10 / 400	**57905**



Industrial Solid State Relays (SSR)

3 YEAR WARRANTY

Industrial SSR are intended for mounting in power and control cabinets as an output switch devices with reliable ON/OFF performance. The SSR are based on the CMOS technology. The non-contact electronic switch is optically separated from the input signal by a photoelectric coupler. This allows use of switch currents of up to 50A despite of the devices small overall size. Another important feature of the relay is that output load can be regulated depending on the input signal value. The relay is mainly used to transmit control signals to actuating mechanisms since it can work at comparatively high currents making it possible to directly control actuators. SSR have transparent plastic covers to additionally improve their safety level. The SSR use is connected with considerable heat emissions, so measures must be taken to dispense the excessive thermal energy in the atmosphere. This is achieved through application of specially deigned radiators. The correct definition of radiator parameters is of critical importance. It is made by calculating the heat generation capacity with the formula: Heat generation = active load current x 3.0 W/A. The heat removal surface is estimated with the help of the following graphic:



Documents corresponding to the product: EN 60947-5-1; EN 61810

Technical Specifications:

- Load/output voltage: 30/400V 50 Hz or the solid state voltage regulators
- Rated output current: from 10A to 60A
- Insulating voltage: 1000 MΩ /min (500V)
- Impulse voltage stability: 2000V, 50Hz
- Dielectric Strength: < 2500VAC / 1 min
- Leakage current: <2mA
- Turn-on time: <10ms
- Operating temperature: -5°C + 65°C
- Relative Humidity: 35 - 85%RH



Type	Relay Type	Control Voltage (V)	Output Voltage (V)	Number of phases	Output Current (A)	Packing/Box (pcs)	Catalogue number
ZG3NC - 2 - 10B	SSR	3-32VDC	230VAC	1	10	10 / 100	**57710**
ZG3NC - 2 - 20B	SSR	3-32VDC	230VAC	1	20	10 / 100	**57720**
ZG3NC - 2 - 25B	SSR	3-32VDC	230VAC	1	25	10 / 100	**57725**
ZG3NC - 2 - 40B	SSR	3-32VDC	230VAC	1	40	10 / 100	**57740**
ZG3NC - 2 - 60B	SSR	3-32VDC	230VAC	1	60	10 / 100	**57760**
ZG3NC - 3 -10B	SSR	3-32VDC	400VAC	2	10	10 / 100	**57713**
ZG3NC - 3 - 20B	SSR	3-32VDC	400VAC	2	20	10 / 100	**57723**
ZG3NC - 3 - 25B	SSR	3-32VDC	400VAC	2	25	10 / 100	**57735**
ZG3NC - 3 - 40B	SSR	3-32VDC	400VAC	2	40	10 / 100	**57743**
ZG3NC - 3 - 60B	SSR	3-32VDC	400VAC	2	60	10 / 100	**57763**

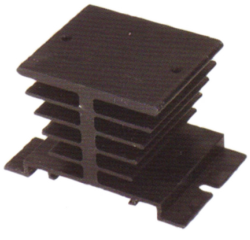


Type	Relay Type	Control Voltage (V)	Output Voltage (V)	Number of phases	Output Current (A)	Packing/Box (pcs)	Catalogue number
ZG1NC - 2 - 10D	SS voltage regulator	1-10VDC	0-230VAC	1	10	10 / 100	**57810**
ZG1NC - 2 - 20D	SS voltage regulator	1-10VDC	0-230VAC	1	20	10 / 100	**57820**
ZG1NC - 2 - 25D	SS voltage regulator	1-10VDC	0-230VAC	1	25	10 / 100	**57825**
ZG1NC - 2 - 40D	SS voltage regulator	1-10VDC	0-230VAC	1	40	10 / 100	**57840**
ZG1NC - 3 -10D	SS voltage regulator	1-10VDC	0-400VAC	2	10	10 / 100	**57813**
ZG1NC - 3 - 20D	SS voltage regulator	1-10VDC	0-400VAC	2	20	10 / 100	**57823**
ZG1NC - 3 - 25D	SS voltage regulator	1-10VDC	0-400VAC	2	25	10 / 100	**57835**
ZG1NC - 3 - 40D	SS voltage regulator	1-10VDC	0-400VAC	2	40	10 / 100	**57843**



Type	Relay Type	Control Voltage (V)	Output Voltage (V)	Number of phases	Output Current (A)	Packing/Box (pcs)	Catalogue number
ZG33 - 3 - 10B	SSR	3-32VDC	400VAC	3	10	1 / 30	**57831**
ZG33 - 3 - 20B	SSR	3-32VDC	400VAC	3	20	1 / 30	**57832**
ZG33 - 3 - 25B	SSR	3-32VDC	400VAC	3	25	1 / 30	**57833**
ZG 33 - 3 - 40B	SSR	3-32VDC	400VAC	3	40	1 / 30	**57834**

Note: The relay output must be supplied with a varistor to ensure its over-voltage protection, whenever RRS is used to control inductive loads.



Type of Radiator	Overall Dimensions (L/W/H)	Approximate Load (A)	Packing/Box (pcs)	Catalogue number
QW-A 50	60 x 50 x 50	15	1 / 50	**57906**
QW-B 72	72x100x50	20	1 / 50	**57907**
QW-B 100	100x100x50	25	1 / 50	**57908**
QW-C 115	115x100x50	40	1 / 50	**57909**
QW-E 50	150x88x35	75	1 / 40	**57910**



Documents corresponding to the product: Standard EN 61010-1; EN 60044-1; EN 60044-6

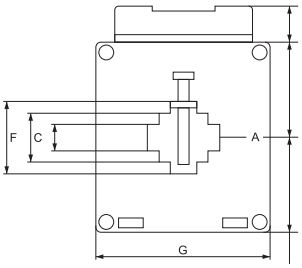
Current measurement transformers MES - xx/xx type

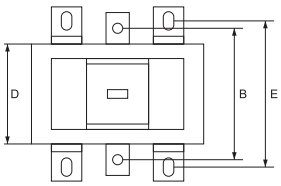
3 YEAR WARRANTY

The measurement transformers find application at current measuring, current regulation, systems for current characteristics watching, systems for reactive energy compensation, signaling, etc. They are with x/5 gear ratio as X is the inlet range of the transformer.

Technical data:
- Maximum operating voltage: 720V; 50Hz
- Admissible deviation of the operating current: 1.2 x In
- Inlet current: 50 – 1200A
- Outlet current: 5A
- Impulse voltage wear resistance: 4000V; 50Hz (1min)
- Operating temperature: -5 ÷ +65°C
- Humidity: 35 – 85%RH
- Precision class: 0.5

Mounting:
- Current transformers can be DIN rail mounted;
- vertically or horizontally to the power supplying rails according to the opening of the transformer
- Current transformers can be mounted on flat surfaces by use of fixing clamps.





Type	Overall dimensions (mm)						
	A	B	C	D	E	F	G
MES - 75/30	88	52	52	41	77	31	31
MES - 75/40	88	52	52	41	77	41	41
MES - 86/60	117	57	57	184	77	61	61

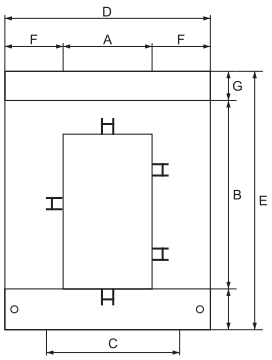
Type	Range	Precision class	Capacity VA	Weight kg	Packing/Box (pcs)	Catalogue number
MES - 75/30	50/5	0.5	1.5	0.60	1 / 40	**45050A**
MES - 75/30	75/5	0.5	1.5	0.60	1 / 40	**45075A**
MES - 75/30	100/5	0.5	1.5	0.60	1 / 40	**45103A**
MES - 75/30	150/5	0.5	2.5	0.60	1 / 40	**45153A**

Type	Range	Precision class	Capacity VA	Weight kg	Packing/Box (pcs)	Catalogue number
MES - 75/40	200/5	0.5	5	0.60	1 / 40	**45204A**
MES - 75/40	250/5	0.5	5	0.60	1 / 40	**45254A**
MES - 75/40	300/5	0.5	10	0.60	1 / 40	**45304A**
MES - 75/40	400/5	0.5	10	0.60	1 / 40	**45404A**
MES - 75/40	500/5	0.5	10	0.60	1 / 40	**45504A**
MES - 75/40	600/5	0.5	15	0.60	1 / 40	**45604A**

Type	Range	Precision class	Capacity VA	Weight kg	Packing/Box (pcs)	Catalogue number
MES - 86/60	400/5	0.5	15	0.60	1 / 40	**45406A**
MES - 86/60	500/5	0.5	15	0.60	1 / 40	**45506A**
MES - 86/60	600/5	0.5	15	0.60	1 / 40	**45606A**
MES - 86/60	800/5	0.5	15	0.60	1 / 40	**45806A**
MES - 86/60	1000/5	0.5	15	0.60	1 / 32	**45906A**
MES - 86/60	1200/5	0.5	15	0.60	1 / 32	**45916A**



Documents corresponding to the product: Standard EN 60044-1



Current transformers, type CP

3 YEAR WARRANTY

Current measuring transformers of duct type. Specially designed to be installed in measuring circuits without removing cables in current measuring circuit. CP Transformers save installation time and decrease installation costs

Technical Specification:

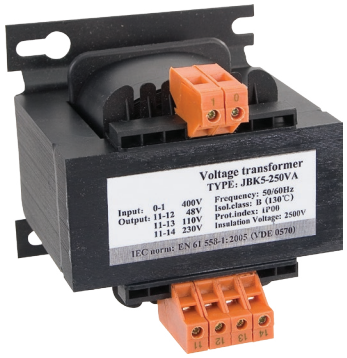
- small size table:
- secondary coil rated current 5A
- rated voltage 720V
- frequency 50Hz
- rated load: up to 30VA
- safety coefficient: fs≤5
- accuracy class :0.5; 1
- secondary coil connection: cable shoe terminal

Type	Overall dimensions (mm)						
	A	B	C	D	E	F	G
CP 23	20	30	51	89	111	34	47
CP 58	50	80	78	114	145	32	32
CP 88	80	80	108	144	145	32	32

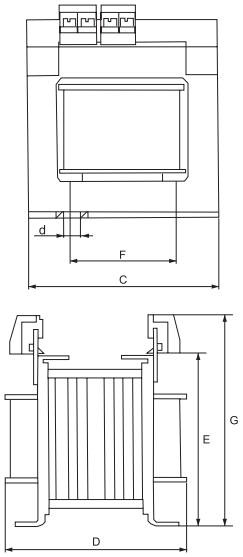
Type	Range	Precision class	Capacity VA	Weight kg	Packing/Box (pcs)	Catalogue number
CP 23	200/5	1	1.5	0,74	1 / 45	**452320**
CP 23	250/5	1	1,5	0,74	1 / 45	**452325**
CP 23	300/5	0,5	1,5	0,74	1 / 45	**452330**

Type	Range	Precision class	Capacity VA	Weight kg	Packing/Box (pcs)	Catalogue number
CP 58	250/5	0,5	1,5	0,87	1 / 36	**455825**
CP 58	300/5	0,5	1,5	0,87	1 / 36	**455830**
CP 58	400/5	0,5	1,5	0,87	1 / 36	**455840**
CP 58	500/5	0,5	2,5	0,87	1 / 36	**455850**
CP 58	600/5	0,5	2,5	0,87	1 / 36	**455860**

Type	Range	Precision class	Capacity VA	Weight kg	Packing/Box (pcs)	Catalogue number
CP 88	400/5	0,5	1,5	1	1 / 20	**458840**
CP 88	500/5	0,5	1,5	1	1 / 20	**458850**
CP 88	600/5	0,5	1,5	1	1 / 20	**458860**
CP 88	750/5	0,5	2,5	1	1 / 20	**458875**
CP 88	800/5	0,5	2,5	1	1 / 20	**458880**
CP 88	1000/5	0,5	5	1	1 / 20	**458890**



Documents corresponding to the product:
Standard EN 60051-1



EVT5 - control voltage transformer

3 YEAR WARRANTY

Functions:
Reduction of main voltage within standard range
- Galvanic separation of the power supply circuit from the operation circuit

Technical features:
- Input voltage: 400 or 230 V
- Frequency : 50/60Hz
- Short circuit resistance: unstable
- Temperature class: B (130ºC)
- Construction: open (for installation in other products)
- Magnetic circuit: cold rolled electric furnace steel
- Coils: pure electrotechnical copper
- IP code: IP20

Connection:
- flexible or hard conductors of relevant section to terminals

Mounting:
- Mounting in distribution boards or products
- fastening: by means of screws/bolts to the surface
- position: vertical
- ambient temperature: -20 ÷ +65ºC

Type	Initial voltage (V)	Secondary voltage (V)	Power VA	Dimensions C	D	E	F	G	d	Packing / Box (pcs.)	Catalogue number
EVT5 - 100VA	230	48-36	100	84	90	63	65	95	4	16	**45248**
EVT5 - 100VA	400	48-36	100	84	90	63	65	95	4	16	**45448**
EVT5 - 100VA	230	24-12	100	84	90	63	65	95	4	16	**45243**
EVT5 - 100VA	400	24-12	100	84	90	63	65	95	4	16	**45443**
EVT5 - 250VA	230	48-24-12	250	130	100	120	53	130	20	16	**45242**
EVT5 - 250VA	230	48-36	250	130	100	120	53	130	20	16	**45242N**
EVT5 - 250VA	400	48-24-12	250	130	100	120	53	130	20	12	**45442**
EVT5 - 250VA	400	48-36	250	130	100	120	53	130	20	12	**45442N**
EVT5 - 250VA	230	24-12	250	130	100	120	53	130	20	12	**45244**
EVT5 - 250VA	400	24-12	250	130	100	120	53	130	20	12	**45444**
EVT5 - 500VA	230	48-24-12	500	150	113	133	53	140	20	4	**45245**
EVT5 - 500VA	230	48-36	500	150	113	133	53	140	20	4	**45245N**
EVT5 - 500VA	400	48-24-12	500	150	113	133	53	140	20	4	**45445**
EVT5 - 500VA	400	48-36	500	150	113	133	53	140	20	4	**45445N**
EVT5 - 500VA	230	24-12	500	150	125	133	53	140	20	4	**45246**
EVT5 - 500VA	400	24-12	500	150	125	133	53	140	20	4	**45446**
EVT5 - 500VA	230	110-48-24	500	150	125	133	53	140	20	4	**45215**
EVT5 - 500VA	400	110-48-24	500	150	125	133	53	140	20	6	**45415**
EVT5 -1000VA	230	48-24-12	1000	170	125	150	65	155	20	2	**45241**
EVT5 -1000VA	230	48-36	1000	170	125	150	65	155	20	2	**45241N**
EVT5 - 1000VA	400	48-24-12	1000	170	125	150	65	155	20	2	**45441**
EVT5 - 1000VA	400	48-36	1000	170	125	150	65	155	20	2	**45441N**
EVT5 - 1000VA	230	24-12	1000	170	125	150	65	155	20	2	**45247**
EVT5 - 1000VA	400	24-12	1000	170	125	150	65	155	20	2	**45447**
EVT5 - 1600VA	230	48-24-12	1600	190	125	150	65	170	20	2	**452416**
EVT5 - 1600VA	230	48-36	1600	190	125	150	65	170	20	2	**452416N**
EVT5 - 1600VA	400	48-24-12	1600	190	125	150	65	170	20	2	**454416**
EVT5 - 1600VA	400	48-36	1600	190	125	150	65	170	20	2	**454416N**
EVT5 - 1600VA	230	24-12	1600	190	125	150	65	170	20	2	**452417**
EVT5 - 1600VA	400	24-12	1600	190	125	150	65	170	20	2	**454417**



Bell

5 YEAR WARRANTY

Used for sound signalization in housing and industrial buildings.
- Sound level: 70 dB

Consumption:
- 3.6VA for power supply 8 -12V
- 5VA for power supply 230V

Mounting on DIN-rail

Type	Un (V)	Packing / Box (pcs)	Catalogue number
Bell	8-12	1 / 17 170	**5012**
Bell	230	1 / 17 170	**5220**



Bell transformer

5 YEAR WARRANTY

Modified for power supply of bells and other signal devices with alternating voltage 8V, 12V, 24V and capacity up to 3.8A.
- The voltage of the primary winding voltage is 230V
- Mounting on DIN-rail

Type	Packing / Box (pcs)	Catalogue number
Bell transformer	1 / 80	**5001**



Digital Temperature Controller Type CD - 701

3 YEAR WARRANTY

The device is intended for industrial control and monitoring of temperature. It allows monitoring and adjustment of temperatures of up to 1999°C depending on the used sensor – thermocouple or thermoresistor. The device allowsprogramming of the used type of sensor (K (CA) ; J (IC) PT 100, etc.) and the controller working range. It also allows selection of the control algorithm, error adjustment, indication hysteresis curve adjustment and alarm settings. The controller is intended for mounting on control panels. It is user friendly and can be set through the push buttons on the device front panel. The program can be password protected. When operational, the display shows the set temperature and the current temperature.

Technical Specifications:
- Rated voltage: 230V, 50 Hz
- Permissible voltage deviation: 85 - 110% Un
- Input signal: from thermocouple, thermoresistor or unified signal (4-20mA; 0-10VDC)
- Output: Relay
- Emergency Output: Relay
- Electrical life: 1 000 000 cycles.
- Indication:
  - Green LED – indicates the measured (current) temperature
  - Red LED – indicates the set temperature
- Insulation resistance: 20 MΩ /min (500V)
- Impulse voltage stability: 2000V, 50Hz
- Operating temperature: -5°C ÷ +65°C
- Relative Humidity: 35 - 85%RH

Mounting:
- on the front panel

Documents corresponding to the product: Standard EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
CD - 701	1	**50124**



Thermocouple and thermo resistance

3 YEAR WARRANTY

The thermo-measuring elements are designed for measuring the temperature in the point of contact between the surface (warmed or cooled) and the thermo-element. They are a comparatively cheap and the most wide-spread method for temperature measurement. The thermocouples are produced by accumulating two conductors from a special measuring alloy in one common head. Each of these elements has a specific electromotive voltage at a specific temperature. The temperature measuring is based on the difference in the electromotive powers between the hot and the cool end of the thermocouple, while this difference in the form of voltage of several milivolts is supplied at the input of the thermoregulator, which displays the measured temperature. Each thermocouple is produced and calibrated for measuring of specific temperature ranges depending on the alloys of which it is made. When thermocouples measuring great distances from the thermoregulators are used (more than 15 points), it is obligatory to use compensatory cable corresponding to the type of the thermocouple. The thermo-resistant elements action is based on the capacity of specific alloys, very often Pt100 to change their resistance when the temperature is changed. For each temperature value is specified a value of resistance. This value is supplied at the input of the thermoregulator, which displays the measured temperature.

Each thermoregulator operates with a specific type of thermo-element.

Type of thermo-element	Symbol	Temperature range	Type of catching	Sizes of the head	Size of the free end	Packing/ Box (pcs)	Catalogue number
K	WRNT - 01	0 ÷ 400°C	nut	30 x 35	1m	1 / 300	**50K40G**
K	WRNT - 31	0 ÷ 400°C	Bayonet	30 x 35	0.5m	1 / 200	**50K40B**
K	WRNT - 13	0 ÷400°C	explosion-proof	Ø6	2m	1 / 200	**50K40EX**
J	WRKT - 01	0 ÷400°C	nut	30 x 35	1m	1 / 300	**50J40G**
J	WRKT - 13	0 ÷400°C	explosion-proof	Ø6	2m	1 / 300	**50J40EX**



Digital voltmeter/amperemeter EKDP 15 A/V

3 YEAR WARRANTY

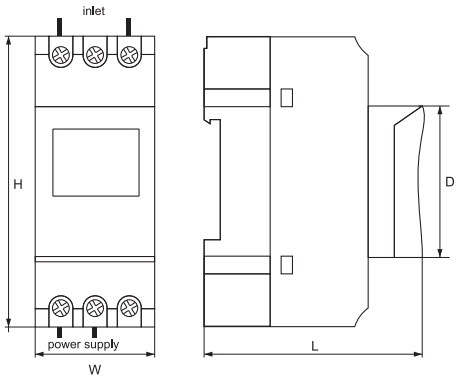
Digital device adjusted for DIN-rail mounting and offered in two types:
- amperemeter
- voltmeter

It is supplied with LCD display where the measurement quantity is displayed with numbers with 31/2 size. It has high accuracy of analogue-digital transfer, measurement precision and electromagnetic interference stability. There is possibility for adjustment of the measurement range through built in micro switches. Adjusted to measure constant current (AD,DV) and alternating current (AA,VA) quantities.

Technical data:
- Power supply voltage: 100 - 240V; 50Hz
- Inlet signal:
  - operating as voltmeter: 2 – 700V (the range is adjusted from inside)
  - operating as amperemeter: 5 – 2000A (the range is adjusted from inside)

Note: At current range over 5A a current measurement transformer should be used
- Consumption: <5A
- Impulse voltage wear resistance: 4000V; 50Hz (1min)
- Operating temperature: -5 ÷ +65°C
- Humidity: 35 – 85%RH
- Precision: 0.5% from the whole scale
- Display: LCD
- Weight: 150gr

Mounting:
- DIN-rail



Documents corresponding to the product:
Standard EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
EKDP-15AA	1 / 100	**50117A**
EKDP-15AD	1 / 100	**50117D**
EKDP-15VA	1 / 100	**50116A**
EKDP-15VD	1 / 100	**50116D**

Dimensions (mm)

H	W	L	D
88	36	64	45



Digital voltmeter/amperemeter and frequency meter EKDP7

3 YEAR WARRANTY

Digital device adjusted for mounting on the front panel of electrical boards and offered in the following types:
- amperemeter:

EKDP7 – AA – amperemeter for alternating current
EKDP7 – DA – amperemeter for direct current
- voltmeter:

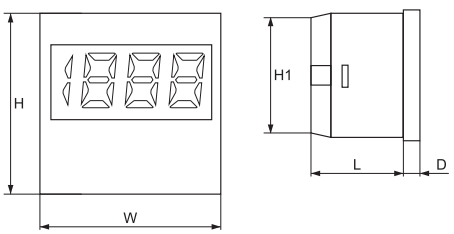
EKDP7 – AV – voltmeter for alternating current
EKDP7 – DV – voltmeter for direct current
EKDP7 – Hz – frequency meter

It is supplied with LCD display where the measurement quantity is displayed with numbers with 31/2 size. It has high accuracy of analogue-digital transfer, measurement precision and electromagnetic interference stability. There is possibility for adjustment of the measurement range through built in micro switches. Adjusted to measure direct current and alternating current quantities.

Technical data:
- Power supply voltage: 100 - 240V; 50Hz
- Inlet signal:
  - operating as voltmeter: 2 – 700V (the range is adjusted from inside)
  - operating as amperemeter: 5 – 2000A (the range is adjusted from inside

Note: For high current range a current measurement transformer should be used for alternating current device and a measurement shunt for direct current.
- Consumption: <5A
- Impulse voltage wear resistance: 4000V; 50Hz (1min)
- Operating temperature: -5 ÷ +65°C
- Humidity: 35 – 85%RH
- Precision: 0.5% from the whole scale
- Display: LCD
- Weight: 130gr

Mounting:
- on the front panel



Documents corresponding to the product:
Standard EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
EKDP7-AV	1 / 84	**50106**
EKDP7-AA	1 / 84	**50107**
EKDP7-DV	1 / 84	**50108**
EKDP7-DA	1 / 84	**50109**
EKDP7-HZ	1 / 84	**50110**

Dimensions (mm)

H	W	H1	D	L
72	72	68	6	42



Analogue (pointer) panel meters SD72 type for build-in

3 YEAR WARRANTY

Analogue devices adjusted for mounting on the front panel of electrical boards. Designed for frequency measurement, capacity, alternating or direct voltage and current of the power supply grid, with overall dimensions 72x72mm. They are manufactured on the basis of bridge measurement schemes. There is possibility for display change for the higher scopes of measuring.

Documents corresponding to the product:
Standard EN 60051-1



Type	Type of the measurment system	Precision class	Range	Note	Packing/Box (pcs)	Catalogue number
amperemeter AC	MEMSI	1.5	0-40A	-	1 / 100	**50118**
amperemeter AC	MEMSI	1.5	0-100A	current transfer 100/5	1 / 100	**654010**
amperemeter AC	MEMSI	1.5	0-200A	current transfer 200/5	1 / 100	**654020**
amperemeter AC	MEMSI	1.5	0-400A	current transfer 400/5	1 / 50	**654040**
amperemeter AC	MEMSI	1.5	0-600A	current transfer 600/5	1 / 50	**654060**
amperemeter AC	MEMSI	1.5	0-1000A	current transfer 1000/5	1 / 50	**654100**
amperemeter AC	MEMSI	1.5	0-1500A	current transfer 1500/5	1 / 50	**654150**
voltmeter AC*	MEMSI	1.5	0-500V	-	1 / 50	**50125**
frequency meter**	ME	0.5	45-65Hz	-	1 / 50	**50126**
cosφ meter	MEMSI	1.5	3P 400V	-	1 / 50	**50127**
amperemeter DC	MEMC	1.5	0-5A	-	1 / 50	**50128**
amperemeter DC	MEMC	1.5	0-50A	outer resistor 60mV	1 / 50	**50129**
voltmeter DC	MEMC	1.5	0-50V	-	1 / 50	**50130**
voltmeter DC	MEMC	1.5	0-100V	-	1 / 20	**50131**
wattmeter	MEMSI	1.5	0-3000W 1P240V	-	1 / 25	**50132**
wattmeter	MEMSI	1.5	0-3000W 3P 3 line	-	1 / 25	**50133**
wattmeter	MEMSI	1.5	0-3000W 3P 4 line	-	1 / 25	**50134**

Note: MEMSI - magnetic-electrical movable steel instrument; MEMC – magnetic-electrical movable coil
* Possibility for supplying with voltage transformer X/100V for range expanding
** Possibility for voltage 110V, 230V , 400V

Documents corresponding to the product: Standard IEC 62052-11; IEC 62053-21; IEC 62056-21

DIN Rail Mounted kWh Meters

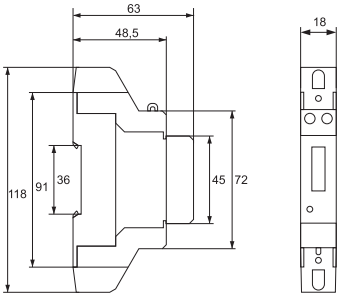
3 YEAR WARRANTY

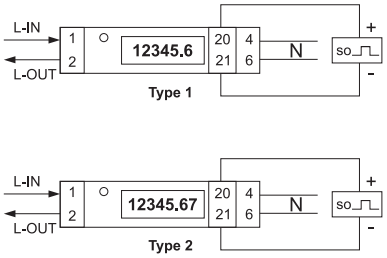
Electronic single and three phase kWh meters intended for DIN rail mounting and active energy measurement. Meters are suitable for home and commercial applications. They perform direct measurement of the real consumption of electric power and the results are shown on the LCD display. The system doesn't need any additional adjustment or calibration.
The range includes single and multi-tariff models.

Technical Specifications:

- Direct power consumption measurement: up to 20 (80) A; 50/60Hz
- Automatic temperature compensation
- LED phase voltage outage indicator.
- Indication for wrong cable connection
- Indication for wrong measurement
- Accuracy class: 1
- Number of tariffs: see the table below
- Meter constant: See the table below

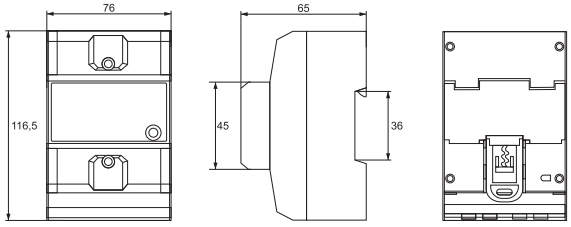


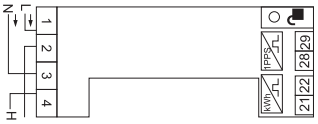


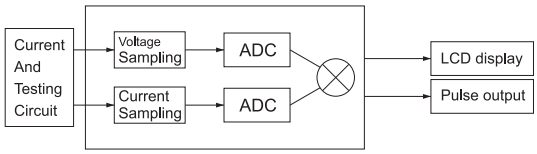


Type	Measuring range	Number of Tariffs	Meter constant (imp/kWh)	Voltage (V)	Overall dimensions (mm) height / width / depth	Packing/Box (pcs)	Catalogue number
DDS - 1Y - 45	5 (45)	1	1000	230	63 / 18 / 118	1 / 120	**50214**



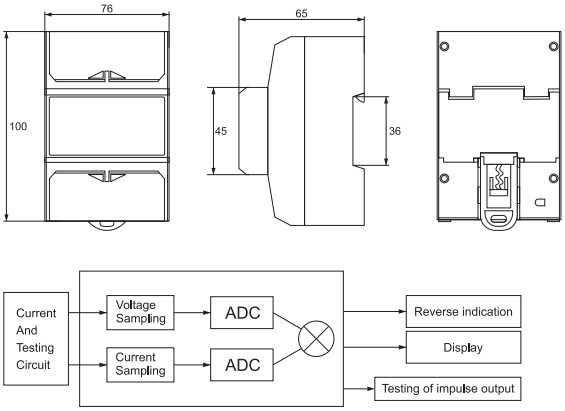


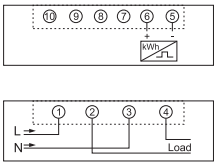




Type	Measuring range	Number of Tariffs	Meter constant (imp/kWh)	Voltage (V)	Overall dimensions (mm) height / width / depth	Packing/Box (pcs)	Catalogue number
DD4F-S01-1Y-60	5(60)	4	1600	230	116.5 / 76 / 65	1 / 48	**50220**

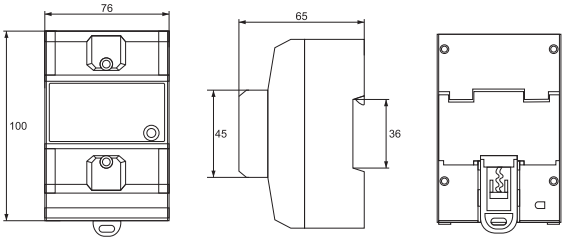


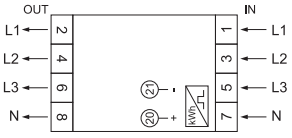




Type	Measuring range	Number of Tariffs	Meter constant (imp/kWh)	Voltage (V)	Overall dimensions (mm) height / width / depth	Packing/Box (pcs)	Catalogue number
DDS - 1Y - 100	10 (100)	1	1600	230	65 / 76 / 100	1 / 45	**50260**

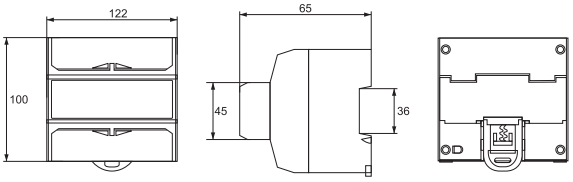


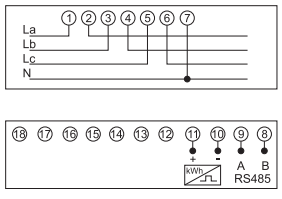




Type	Measuring range	Number of Tariffs	Meter constant (imp/kWh)	Voltage (V)	Overall dimensions (mm) height / width / depth	Packing/Box (pcs)	Catalogue number
DDS - 3Y 80	20 (80)	1	800	3x230/400	65 / 76 / 100	1 / 45	**50380**



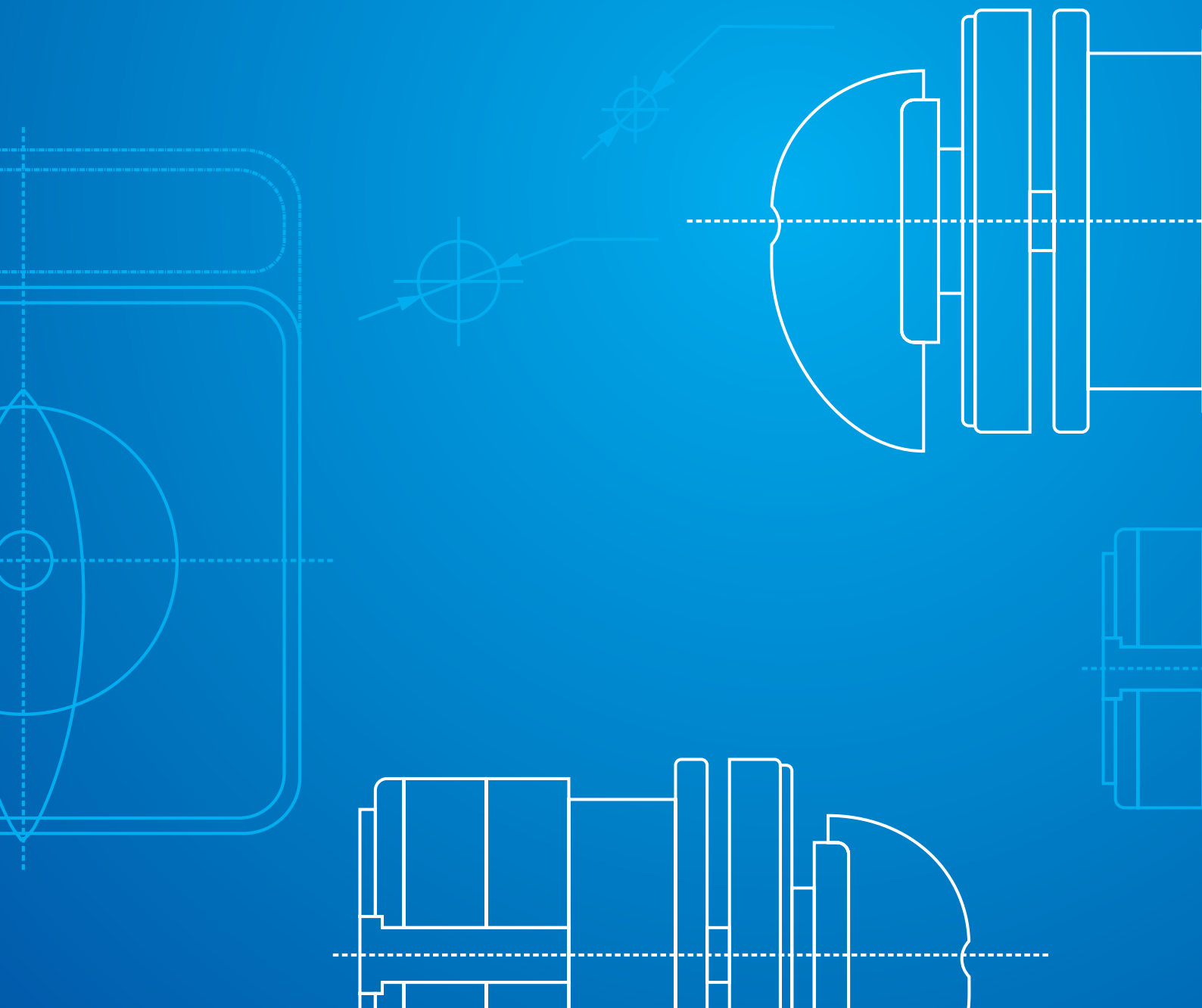




Type	Measuring range	Number of Tariffs	Meter constant (imp/kWh)	Voltage (V)	Overall dimensions (mm) height / width / depth	Packing/Box (pcs)	Catalogue number
DTGS-S01-3Y100	10(100)	4	800	3X230/400	122 / 100 / 65	1 / 30	**50400**

ELEMENTS FOR AUTOMATION, MONITORING AND CONTROL

ELEMENTS



ELMARK®

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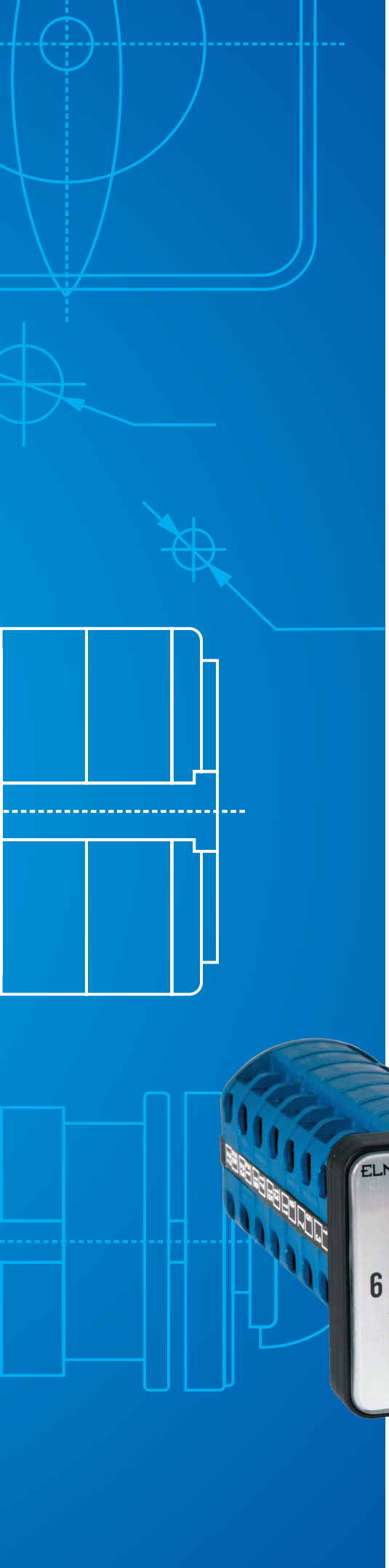


All-purpose limit switch – series CSA-xxx

3 YEAR WARRANTY

The all-purpose limit switches are devices used in automatic systems as a control element. They are used for setting of gearing limits. They are mounted on transport lines, conveyors and other linear progressive motion machines. They feature a vibration-resistant metal shell.

Product conformity documentation:

- Standard: EN 60947-1; EN 60947-5-1
- Dielectric strength: 1000V AC
- Insulating resistance: 100mΩ
- Electrical endurance (number of cycles): 500 000 with active load
- Mechanical endirance (number of cycles): 1 000 000
- Gearing speed: 5mm/s to 0.5 m/s
- Rated voltage: 230V
- Rated current: up to 10A
- IP code: IP66
- Cable input: cable glandPG11
- Section of power supply conductor: up to 2mm^2
- Fastening strength of terminals: 6-8kgf/cm





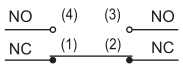


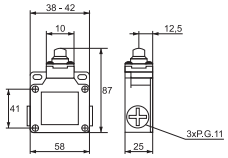


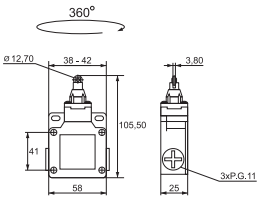


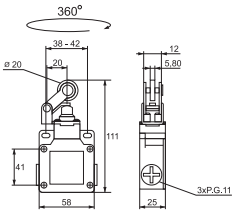


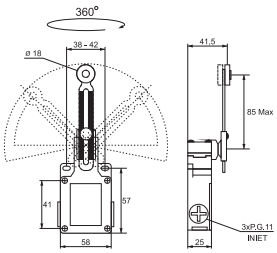
Type of contact system

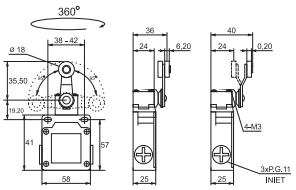


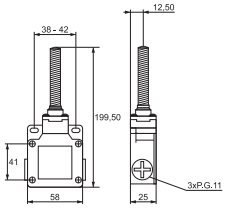












Type	Type of the head	Power of starting (g)	Power of release (g)	Switching position	General movement	Rated current	Packing/ Box (pcs)	Catalogue number
CSA - 001	metal cylinder	800	400	2.0mm	5.8mm	10A-active 4A-inductive	10 / 90	**46A001**
CSA - 003	cylinder with metal roll	800	400	2.0mm	5.8mm	10A-active 4A-inductive	10 / 90	**46A003**
CSA - 012	horizontal lever with metal roll	800	400	2.0mm	5.8mm	10A-active 4A-inductive	10 / 90	**46A012**
CSA - 031	adjustable lever with metal roll	400	100	22.5°	95°	10A-active 4A-inductive	10 / 80	**46A031**
CSA - 021	lever with metal roll	400	100	22.5°	95°	10A-active 4A-inductive	10 / 80	**46A021**
CSA - 081	spring lever	150	50	22.5°	50mm	10A-active 4A-inductive	10 / 80	**46A081**

All-purpose limit switch – series TZ-6xxx

3 YEAR WARRANTY

The all-purpose limit switches are installed on transport lines, conveyors and other linear progressive motion machines. The miniature limit switch is mounted in an aluminum shell, resistant to vibrations, lubricants and water.

Product conformity documentation:

- Standard: EN 60947-1; EN 60947-5-1
- Dielectric strength: 1000V AC
- Insulating resistance: 100mΩ
- Contact resistance: 15mΩ
- Electrical endurance (number of cycles): 500 000 with active load
- Mechanical endurance (number of cycles): 10 000 000
- Gearing speed: 0.1mm/s to 0.5 m/s
- Rated voltage: 230V
- IP code: IP65
- Cable input: cable gland PG11
- Section of power supply conductor: up to 1.5mm^2













Type of contact system



Type	Type of the head	Power of starting (g)	Power of release (g)	Switching position	General movement	Rated current	Packing/ Box (pcs)	Catalogue number
TZ-6001	metal cylinder	350g	115g	0.5mm	5.5mm	15A-active 5A-inductive	1 / 50	**466001**
TZ -6101	oil-resistant metal cylinder	800g	240g	2mm	5mm	15A-active 5A-inductive	1 / 50	**466101**
TZ -6102	oil-resistant cylinder with metal roll	500g	100g	1mm	3.5mm	15A-active 5A-inductive	1 / 50	**466102**
TZ -6104	oil-resistant horizontal lever with metal roll	640g	230g	5mm	6mm	15A-active 5A-inductive	1 / 50	**466104**
TZ -6143	oil-resistant vertical lever with metal roll	640g	230g	5mm	6mm	15A-active 5A-inductive	1 / 50	**466143**
TZ -6106	spring lever	150g	-	20°	-	-	1 / 50	**466106**

Universal Limit Switch – Series CM-1xxx

3 YEAR WARRANTY

Limit switches of the CM series are used mainly as replacement of the limit switches of the TZ series or for setting the movement limits of some types of equipment. The switches are supplied with screw cable terminals. They can work at resistance loads as high as 15A, and are of single circuit type. Limit switches have high accuracy and can operate at wide variety of speeds.

Items are compliant with the following standards:
EN 60947-1; EN 60947-5-1

- Dielectric Strength: 1000V AC
- Insulation Resistance: 100mΩ min. (at 500VDC)
- Contact Resistance: 5mΩ
- Electrical Life (No. of cycles): 500 000 with non-inductive load
- Mechanical Life (No. of cycles): 5 000 000
- Operating frequency: 20 electrical operations/ minute
- Operating speed: 0.1mm/s to 1.0m/s
- Rated voltage: 230V
- IP code: IP65
- Fastening strength of terminals: 6-8kgf/cm



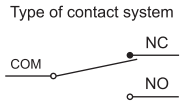


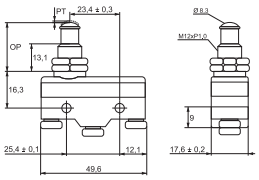


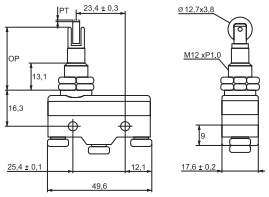


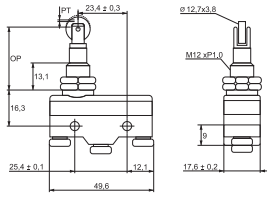


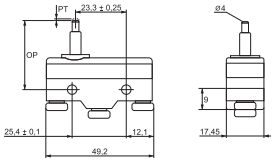


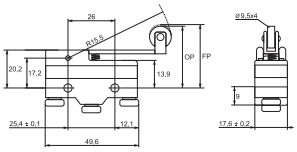


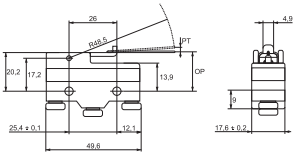












Type	Type of the head	Power of starting (g)	Power of release (g)	Switching position	General movement	Rated current	Packing/ Box (pcs)	Catalogue number
CM -1307	Metal cylinder	350g	114g	0.4mm	5.5mm	15A-active 5A-inductive	1 / 480	**468105**
CM -1309	Cylinder and transverse metal roll	350g	114g	0.4mm	5.5mm	15A-active 5A-inductive	1 / 480	**468106**
CM -1308	Cylinder longitudinal metal roll	350g	114g	0.4mm	5.5mm	15A-active 5A-inductive	1 / 480	**468109**
CM -1305	Metal cylinder	350g	114g	0.4mm	1.6mm	15A-active 5A-inductive	1 / 480	**468110**
CM -1703	Extended metal roll	160g	22g	7.1mm	1.02mm	15A-active 5A-inductive	1 / 480	**468113**
CM -1705	Spring lever	10g	3g	20mm	5.6mm	15A-active 5A-inductive	1 / 480	**468117**








All-purpose limit switch – series TZ-8xxx

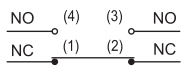
3 YEAR WARRANTY

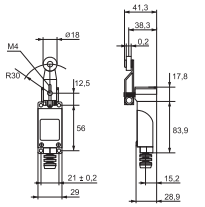
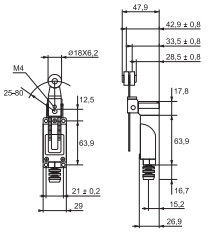
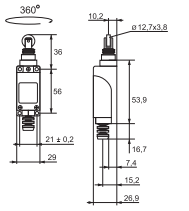
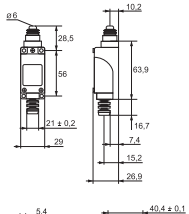
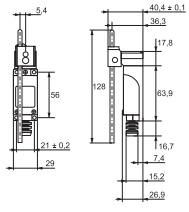
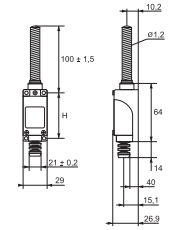
The all-purpose limit switches are devices used for setting gearing limits. They are mounted on transport lines, conveyors and other linear progressive motion machines. They have small dimensions and a vibration-resistant metal shell with plastic lid, resistant to oil and water.

Product conformity documentation:

- Standard: EN 60947-1; EN 60947-5-1
- Dielectric strength: 1000V AC
- Insulating resistance: 100MΩ
- Contact Resistance: 25mΩ
- Electrical endurance (number of cycles): 500 000 with active load
- Mechanical endurance (number of cycles): 5 000 000
- Gearing speed: 5mm/s to 0.5 m/s
- Rated voltage: 230V
- IP code: IP40
- Cable input: cable gland PG11
- Section of power supply conductor: up to 2mm
- Fastening strength of terminals: 6-8kgf/cm

Type of contact system



Type	Type of the head	Power of starting (g)	Power of release (g)	Switching position	General movement	Rated current	Packing/ Box (pcs)	Catalogue number
TZ -8104	lever with metal roll	750g	100g	20°	50°	5A-active 3A-inductive	10 / 100	**468104**
TZ -8108	adjustable lever with metal roll	750g	100g	20°	50°	5A-active 3A-inductive	10 / 100	**468108**
TZ -8112	cylinder with metal roll	900g	150g	1.5mm	4.0mm	5A-active 3A-inductive	10 / 100	**468112**
TZ -8111	metal cylinder	900g	150g	1.5mm	4.0mm	5A-active 3A-inductive	10 / 100	**468111**
TZ -8107	metal rod	750g	100g	20°	50°	5A-active 3A-inductive	10 / 100	**468107**
TZ -8167	spring lever	150g	-	30mm	-	5A-active 3A-inductive	10 / 100	**468167**

All-purpose limit switch – series CWL-xxx

3 YEAR WARRANTY

The all-purpose limit switches are devices used for setting gearing limits. They are mounted on transport lines, conveyors and other linear progressive motion machines. They have aluminium shell of high mechanic strength and resistance to oil, water and pressure.

Product conformity documentation:

- Standard: EN 60947-1; EN 60947-5-1
- Dielectric strength: 1000V AC
- Insulating resistance: 100mΩ
- Contact resistance: 15mΩ
- Electrical endurance (number of cycles): 500 000 with active load
- Mechanical endurance (number of cycles): 10 000 000
- Gearing speed: 1mm/s to 2 m/s
- Rated voltage: 230V
- IP code: IP66
- Cable input: cable gland
- Metal shell
- Vibration-resistant





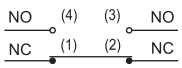


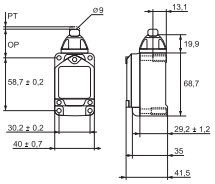


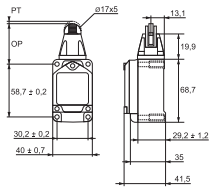


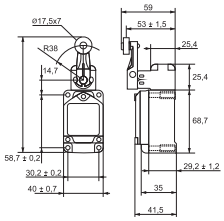


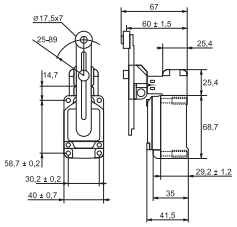
Type of contact system

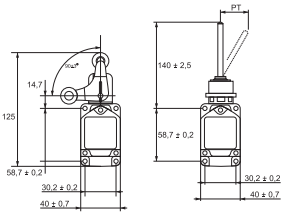


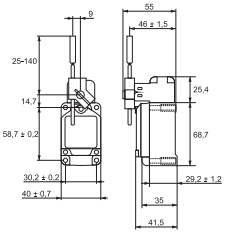












Type	Type of the head	Power of starting (g)	Power of release (g)	Switching position	General movement	Rated current	Packing/ Box (pcs)	Catalogue number
CWLD	metal cylinder	2720g	910g	2.0mm	6.4mm	10A-active 3A-inductive	1 / 50	**46LD**
CWLD2	cylinder with metal roll	2720g	910g	2.0mm	5.6mm	10A-active 3A-inductive	1 / 50	**46LD2**
CWL-CA2-2	lever with metal roll	1360g	227g	20°	50°	10A-active 3A-inductive	1 / 50	**46LCA2-2**
CWL-CA12-2-Q	adjustable lever with metal roll	2720g	910g	20°	50°	10A-active 3A-inductive	1 / 50	**46LCA12-2-Q**
CWL-CA32-41	fork	1200g	-	55°	90±10°	10A-active 3A-inductive	1 / 50	**46LCA32-41**
CWLNJ	oil-resistant spring lever	150g	-	28mm	90±10°	10A-active 3A-inductive	1 / 50	**46LNJ**
CWLCL	metal rod	142g	28g	20°	50°	10A-active 3A-inductive	1 / 50	**46LCL**

Universal Limit Switch – Series CZ93-xx

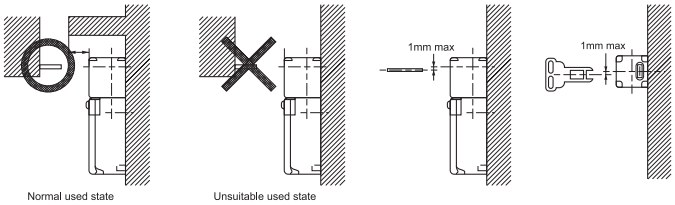
3 YEAR WARRANTY

Limit switches of the CZ 93 series are Safety Key Interlock Switches. They are used in object control systems with high safety requirements. The limit switch body is mounted to the fixed system component, while the safety key is mounted to the movable system component. System operation cannot start, unless a full interlocking is achieved. Safety key interlock switches can operate at up to 10A non-inductive resistance load, 3A lamp load and 5A inductive load. They have high operating accuracy at wide variety of speeds. These limit switches are available in two versions depending on the operating contacts number: 2NC and NO+NC

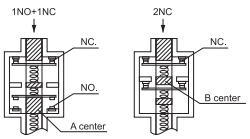
Items are compliant with the following standards:
EN 60947-1; EN 60947-5-1

- Dielectric Strength: 2500V AC
- Insulation Resistance: 100mΩ min. (at 500VDC)
- Contact Resistance: 25mΩ
- Electrical Life (No. of cycles): 50 000 with non-inductive load
- Mechanical Life (No. of cycles): 2 000 000
- Operating frequency: 30 electrical operations/ minute
- Operating speed: 0.1mm/s to 0.5m/s
- Rated voltage: 230V
- IP code: IP65

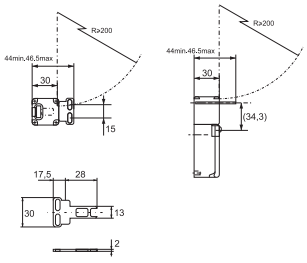




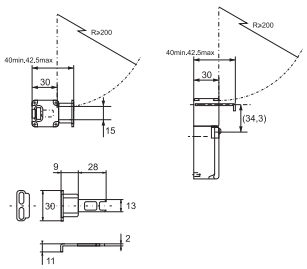
Type of the contact system

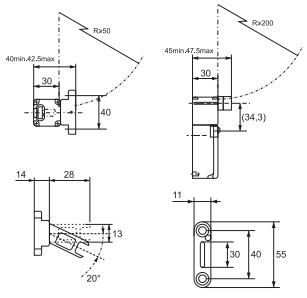












Type	Key type	Power of starting (g)	Power of release (g)	Switching position	General movement	Rated current	Packing/ Box (pcs)	Catalogue number
CZ-93BPG01	CZ93-K1	147N	29.4N	6 mm	28mm	10A-active 3A-inductive	10 / 100	**46CZ08**
CZ-93CPG01	CZ93-K1	147N	29.4N	6 mm	28mm	10A-active 3A-inductive	10 / 100	**46CZ09**
CZ-93BPG02	CZ93-K2	147N	29.4N	6 mm	28mm	10A-active 3A-inductive	10 / 100	**46CZ10**
CZ-93CPG02	CZ93-K2	147N	29.4N	6 mm	28mm	10A-active 3A-inductive	10 / 100	**46CZ11**
CZ-93BPG03	CZ93-K3	147N	29.4N	6 mm	28mm	10A-active 3A-inductive	10 / 100	**46CZ12**
CZ-93CPG03	CZ93-K3	147N	29.4N	6 mm	28mm	10A-active 3A-inductive	10 / 100	**46CZ13**

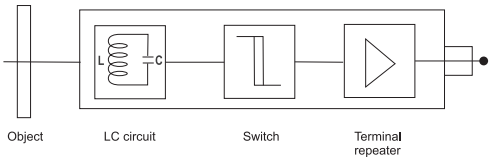
Type	Key Actuating	Packing / Box (pcs)	Catalogue number
CZ 93 - K 1	Horizontal	1 / 100	**46CZ931**
CZ 93 - K 2	Vertical	1 / 100	**46CZ932**
CZ 93 - K 3	Adjustable	1 / 100	**46CZ933**

All-purpose proximity switch – series LM xx

5 YEAR WARRANTY *for industrial usage, 3 years warranty

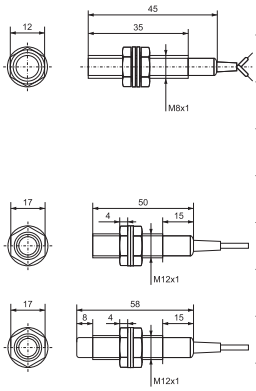
Proximity induction sensors are all-purpose switches used in machine systems and equipment for no contact surveillance of metal elements motion. They can also be used in other machine systems applications as no contact control sensors for level of liquids, control sensors for the speed and position of rotating chains, etc. They are developed on the base of PNP and NPN transition. They have small dimensions and feature a metal cylindrical shell resistant to vibrations and a plastic lid which is oil and water resistant.

- Insulating resistance: ≥ 50 M Ω
- Gearing distance: from 2 mm to 7 mm
- Precision of repetition: 0.01
- Ambient temperature: -25˚C to +65˚C
- Gearing speed: 5mm/s
- Rated voltage: 6~36VDC; 90~230VAC
- IP code: IP 67

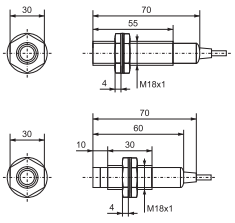



EL-LM8

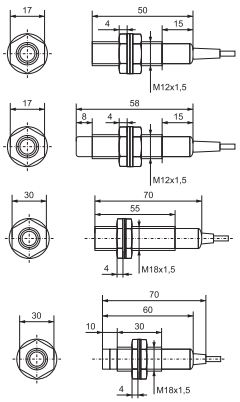

EL-LM12




EL-LM18




EL-LM22



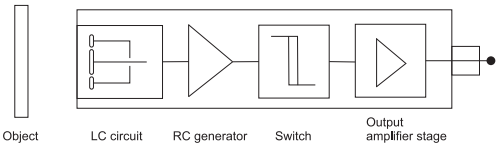
Type	Start distance (mm)	Power supply voltage	Type of transition	Type of contact	Output load	Packing / Box (pcs)	Catalogue number
EL-LM8-3002NA	2	15~30 VDC	NPN	NO	130 mA	2 / 200	**46LM 8-32NA**
EL-LM8-3002NB	2	15~30 VDC	NPN	NC	130 mA	2 / 200	**46LM 8-32NB**
EL-LM8-3002PA	2	15~30 VDC	PNP	NO	130 mA	2 / 200	**46LM 8-32PA**
EL-LM8-3002PB	2	15~30 VDC	PNP	NC	130 mA	2 / 200	**46LM 8-32PB**
EL-LM8-2002A	2	90~230VAC	SCR	NO	150 mA	2 / 200	**46LM 8-22A**
EL-LM12-3004NA	4	15~30 VDC	NPN	NO	200 mA	2 / 200	**46LM 12-34NA**
EL-LM12-3004NB	4	15~30 VDC	NPN	NC	200 mA	2 / 200	**46LM 12-34NB**
EL-LM12-3004PA	4	15~30 VDC	PNP	NO	200 mA	2 / 200	**46LM 12-34PA**
EL-LM12-3004PB	4	15~30 VDC	PNP	NC	200 mA	2 / 200	**46LM 12-34PB**
EL-LM12-2004A	4	90~230VAC	SCR	NO	300 mA	2 / 200	**46LM 12-24A**
EL-LM18-3008NA	8	15~30 VDC	NPN	NO	200 mA	1 / 100	**46LM 18-38NA**
EL-LM18-3008NB	8	15~30 VDC	NPN	NC	200 mA	1 / 100	**46LM 18-38NB**
EL-LM18-3008PA	8	15~30 VDC	PNP	NO	200 mA	1 / 100	**46LM 18-38PA**
EL-LM18-3008PB	8	15~30 VDC	PNP	NC	200 mA	1 / 100	**46LM 18-38PB**
EL-LM18-2008A	8	90~230VAC	SCR	NO	300 mA	1 / 100	**46LM 18-28A**
EL-LM22-3010NA	10	15~30 VDC	NPN	NO	200 mA	1 / 100	**46LM 22-30NA**
EL-LM22-3010NB	10	15~30 VDC	NPN	NC	200 mA	1 / 100	**46LM 22-30NB**
EL-LM22-3010PA	10	15~30 VDC	PNP	NO	200 mA	1 / 100	**46LM 22-30PA**
EL-LM22-3010PB	10	15~30 VDC	PNP	NC	200 mA	1 / 100	**46LM 22-30PB**
EL-LM22-2010A	10	90~230VAC	SCR	NO	300 mA	1 / 100	**46LM 22-20A**
EL-LM12-4002A	2	230VAC	inductive	NO	100 mA	2 / 200	**46LM 12-44A**
EL-LM12-4004A	4	230VAC	inductive	NO	300 mA	2 / 200	**46LM 12-46A**
EL-LM18-4006A	5	230VAC	inductive	NO	100 mA	1 / 100	**46LM 18-44A**
EL-LM18-4008A	8	230VAC	inductive	NO	300 mA	1 / 100	**46LM 18-48A**

Capacitive sensors – series CM xx

5 YEAR WARRANTY *for industrial usage, 3 years warranty

Capacitive sensors are used in machine systems and equipment for no-contact motion surveillance. They consist of two coaxial electrodes, a condenser and RC generator. This type of sensors reacts to both metal and non-metal objects, as the gearing distance for non-metal objects depends on their dielectric constants. They allow gearing distance adjustment for non-magnetic conductive materials. They are developed on the base of PNP and NPN transition. They have small dimensions and feature a metal cylindrical shell resistant to vibrations and a plastic lid which is oil and water resistant.

- Insulating resistance: ≥ 50 M Ω
- Gearing distance: from 2 mm to 15 mm
- Precision of repetition: 0.01
- Ambient temperature: -25˚C to +65˚C
- Gearing speed: 5mm/s
- Rated voltage: 6~36VDC; 90~230VAC
- IP code: IP 54



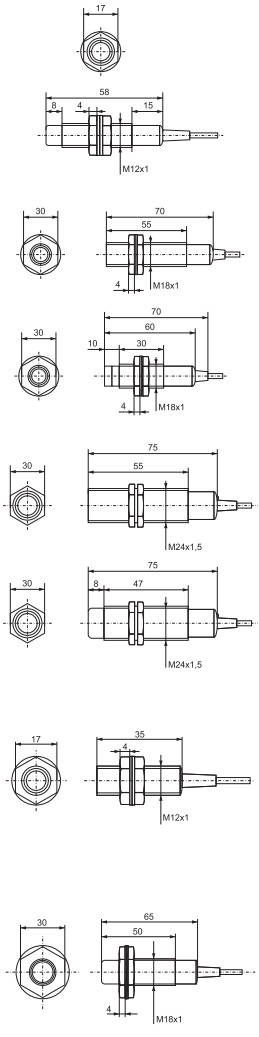

EL-CM12


EL-CM18


EL-CM24


EL-SM12


EL-XM18



Type	Start distance (mm)	Power supply voltage	Type of transition	Type of contact	Output load	Packing / Box (pcs)	Catalogue number
EL-CM12-3004NA	0~4	15~30 VDC	NPN	NO	200 mA	1 / 100	**46CM 12-32NA**
EL-CM12-3004NB	0~4	15~30 VDC	NPN	NC	200 mA	1 / 100	**46CM 12-32NB**
EL-CM12-3004PA	0~4	15~30 VDC	PNP	NO	200 mA	1 / 100	**46CM 12-32PA**
EL-CM12-3004PB	0~4	15~30 VDC	PNP	NC	200 mA	1 / 100	**46CM 12-32PB**
EL-CM18-3008NA	0~8	15~30 VDC	NPN	NO	200 mA	1 / 100	**46CM 18-38NA**
EL-CM18-3008NB	0~8	15~30 VDC	NPN	NC	200 mA	1 / 100	**46CM 18-38NB**
EL-CM18-3008PA	0~8	15~30 VDC	PNP	NO	200 mA	1 / 100	**46CM 18-38PA**
EL-CM18-3008PB	0~8	15~30 VDC	PNP	NC	200 mA	1 / 100	**46CM 18-38PB**
EL-CM18-2008A	0~8	90~230VAC	SCR	NO	300 mA	1 / 100	**46CM 18-28A**
EL-CM24-3012NA	8	15~30 VDC	NPN	NO	200 mA	1 / 100	**46CM 24-12NA**
EL-CM24-3012NB	8	15~30 VDC	NPN	NC	200 mA	1 / 100	**46CM 24-12NB**
EL-CM24-3012PA	8	15~30 VDC	PNP	NO	200 mA	1 / 100	**46CM 24-12PA**
EL-CM24-3012PB	8	15~30 VDC	PNP	NC	200 mA	1 / 100	**46CM 24-12PB**
EL-CM24-2012A	8	90~230VAC	SCR	NO	300 mA	1 / 100	**46CM 24-12A**
EL-SM12-3110NA	10	15~30 VDC	NPN	NO	200 mA	2 / 200	**46SM 12-31NA**
EL-SM12-3110NB	10	15~30 VDC	NPN	NC	200 mA	2 / 200	**46SM 12-31NB**
EL-SM18-3110PA	10	15~30 VDC	PNP	NO	200 mA	1 / 100	**46SM 18-31PA**
EL-SM18-3110PB	10	15~30 VDC	PNP	NC	200 mA	1 / 100	**46SM 18-31PB**
EL-XM18-305PMI	5	15~30 VDC	inductive	NO	100 mA	1 / 100	**46XM 18-35A**
EL-XM18-305PMU	5	15~30 VDC	inductive	NC	100 mA	1 / 100	**46XM 18-35B**
Note: Sensor of Hall							
EL-XM24-308PMI	8	15~30 VDC	inductive	NO	300 mA	1 / 100	**46XM 24-38A**
EL-XM24-308PMU	8	15~30 VDC	inductive	NC	300 mA	1 / 100	**46XM 24-38B**

Note: MI - current type; MU - voltage type

Photoelectrical sensor

5 YEAR WARRANTY *for industrial usage, 3 years warranty

Photoelectrical sensors of the Gxx series are all-purpose switches used in machine systems and equipment for no contact surveillance of motion of elements. They are based on the photoelectric principle of operation – inside the sensor there is a photo signal emitter and receiver of the returned signal. There are three types of sensors: diffuse sensors, reflector sensors and emitter-receiver sensors. These types of sensors differ in the way of returning the signal. They allow for gearing distance adjustment. They are developed on the base of PNP and NPN transition. They have small dimensions and feature a metal cylindrical shell resistant to vibrations and a plastic lid which is oil and water resistant.


EL-G12


EL-G18


EL-G30

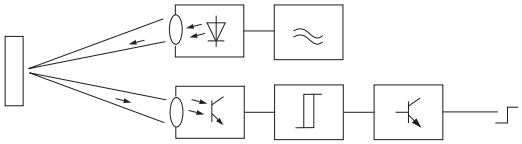

EL-G35

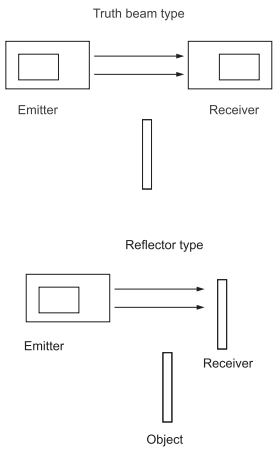

EL-G50

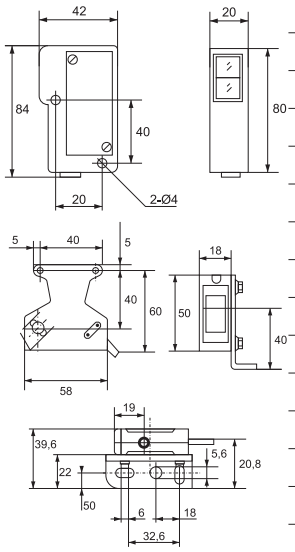

EL-BZJ

Technical features:

- Insulating resistance: ≥ 50 M Ω
- Gearing distance: from 2 mm to 7 mm
- Precision of repetition: 0.01
- Ambient temperature: -25˚C to +65˚C
- Gearing speed: 5mm/s
- Rated voltage: 6~36VDC; 90~230VAC
- IP code: IP 67







Type	Start distance	Power supply voltage	Type of transition	Type of contact	Type of sensor	Packing / Box (pcs)	Catalogue number
EL-G12-3A07NA	70 mm	15~30 VDC	NPN	Ø12; l=50	Diffuse	1 / 100	**46G12A071**
EL-G12-3A07PA	70 mm	15~30 VDC	PNP	Ø12; l=50	Diffuse	1 / 100	**46G12A072**
EL-G12-3B1NA	1 m	15~30 VDC	NPN	Ø12; l=50	Reflector	1 / 100	**46G123B11**
EL-G12-3B1PA	1 m	15~30 VDC	PNP	Ø12; l=50	Reflector	1 / 100	**46G123B12**
EL-G12-3C3NA	3 m	15~30 VDC	NPN	Ø12; l=50	Truth beam	1 / 100	**46G123C11**
EL-G12-3C3PA	3 m	15~30 VDC	PNP	Ø12; l=50	Truth beam	1 / 100	**46G123C12**
EL-G18-3A10NA	100 mm	15~30 VDC	NPN	Ø18; l=70	Diffuse	1 / 100	**46G18A101**
EL-G18-3A10PA	100 mm	15~30 VDC	PNP	Ø18; l=70	Diffuse	1 / 100	**46G18A102**
EL-G18-3B2NA	2 m	15~30 VDC	NPN	Ø18; l=70	Reflector	1 / 100	**46G183B11**
EL-G18-3B2PA	2 m	15~30 VDC	PNP	Ø18; l=70	Reflector	1 / 100	**46G183B12**
EL-G18-3C5NA	5 m	15~30 VDC	NPN	Ø18; l=70	Truth beam	1 / 100	**46G185C11**
EL-G18-3C5PA	5 m	15~30 VDC	PNP	Ø18; l=70	Truth beam	1 / 100	**46G185C12**
EL-G30-3A70NA	500 mm	15~30 VDC	NPN	Ø22; l=70	Diffuse	1 / 100	**46G30A101**
EL-G30-3A70PA	500 mm	15~30 VDC	PNP	Ø22; l=70	Diffuse	1 / 100	**46G30A102**
EL-G30-3B3NA	3 m	15~30 VDC	NPN	Ø22; l=70	Reflector	1 / 100	**46G303B11**
EL-G30-3B3PA	3 m	15~30 VDC	PNP	Ø22; l=70	Reflector	1 / 100	**46G303B12**
EL-G30-3C101NA	10 m	15~30 VDC	NPN	Ø22; l=70	Truth beam	1 / 52	**46G305C11**
EL-G30-3C101PA	10 m	15~30 VDC	PNP	Ø22; l=70	Truth beam	1 / 52	**46G305C12**
EL-G35-3A50NA	500 mm	15~30 VDC	NPN	NO	Diffuse	1 / 100	**46G35A101**
EL-G35-3A50PA	500 mm	15~30 VDC	PNP	NO	Diffuse	1 / 100	**46G35A102**
EL-G35-3B3NA	3 m	15~30 VDC	NPN	NO	Reflector	1 / 100	**46G353B11**
EL-G35-3B3PA	3 m	15~30 VDC	PNP	NO	Reflector	1 / 100	**46G353B12**
EL-G35-3C5NA	5 m	15~30 VDC	NPN	NO	Truth beam	1 / 50	**46G355C11**
EL-G35-3C5PA	5 m	15~30 VDC	PNP	NO	Truth beam	1 / 50	**46G355C12**
EL-G50-3A30NA	500 mm	15~30 VDC	NPN	NO	Diffuse	1 / 100	**46G50A101**
EL-G50-3A30PA	500 mm	15~30 VDC	PNP	NO	Diffuse	1 / 100	**46G50A102**
EL-G50-3B4NA	4 m	15~30 VDC	NPN	NO	Reflector	1 / 100	**46G503B11**
EL-G50-3B4PA	4 m	15~30 VDC	PNP	NO	Reflector	1 / 100	**46G503B12**
EL-G50-3C5NA	5 m	15~30 VDC	NPN	NO	Truth beam	1 / 50	**46G505C11**
EL-G50-3C5PA	5 m	15~30 VDC	PNP	NO	Truth beam	1 / 50	**46G505C12**
EL-BZJ-211	10 mm	15~30 VDC	Reflector	NO	Colour detector	1 / 50	**46BZJ211**
EL-BZJ-311	9mm	15~30 VDC	Reflector	NO	Colour detector	1 / 50	**46BZJ311**
EL-BZJ-411	9mm	15~30 VDC	Reflector	NO	Colour detector	1 / 50	**46BZJ411**



Power supplies

3 YEAR WARRANTY

The DRP-xx-xx series of power supplies are voltage reduction and rectification units ideally suited to provide stable power supply of systems and equipment for contact-free movement monitoring elements (such as inductive, capacity and photo sensors, logic elements and systems, etc.). They have small overall dimensions and can be installed on a DIN rail. The power units have metal or plastic cases resistant to vibrations and plastic oil- and waterproof covers. They are able to provide stable output voltage at comparatively fluctuating input voltage. Devices have built-in overload and short circuit protection, allowing short time overload of up to 130%. Power supplies are available with various output voltages (5, 12, 15 and 24 V DC) and different output power rates.

Technical Specifications:
- Input voltage: 80 ~ 230V AC
- Over-voltage: 115 ~ 135% of the rated output voltage
- Overload: 120 ~ 120% of the rated output power
- Terminals: Input – 2 screw terminals; Output: 4 screw terminals;
- IP code: IP44
- Power indicator
- Installation: DIN rail
- Cooling: Free air cooling convection



Type	Output Voltage (V)	Output Load (A)	Tolerance	Power (W)	Dimensions W/H/L (mm)	Packing / Box (pcs)	Catalogue number
DR - 45 -5	5	5	±2%	25	78 / 93 / 56	1 / 50	**46DR455**
DR - 45 - 12	12	3.5	±1%	42	78 / 93 / 56	1 / 50	**46DR4512**
DR - 45 - 15	15	2.8	±1%	42	78 / 93 / 56	1 / 45	**46DR4515**
DR - 45 - 24	24	2	±1%	48	78 / 93 / 56	1 / 16	**46DR4524**

Type	Output Voltage (V)	Output Load (A)	Tolerance	Power (W)	Dimensions W/H/L (mm)	Packing / Box (pcs)	Catalogue number
DR - 75 -12	12	6.3	±2%	75	55.5 / 125.3 / 100	1 / 18	**46DR7512**
DR - 75 - 24	24	3.2	±1%	75	55.5 / 125.3 / 100	1 / 18	**46DR7524**
DRP - 240 - 24	24	10	±1%	240	125.5 / 125.3 / 100	1 / 12	**46DR2424**



Float switches

3 YEAR WARRANTY

Float switches of the type QW-xx-xx are sealed units for direct pump control. They are intended for continuous liquid level maintenance in pools, tanks or ponds exercised through direct control of the pumping in or out process in the respective reservoir. They are pre-wired and depending on the chosen configuration can control either the pumping in, or pumping out of the reservoir. They allow direct control of single phase pumps with mounted power of 1 kW. Float switches are waterproof.

The automatic level control units of the DHC1Y-xx series are intended for mounting on pumping control panels. They do not use any additional sensors, but conductive probes to contact the liquid. The unit sends low (harmless) voltage signals to the probes and once a contact between a probe and liquid is established, the unit changes its contactors' state. Units are available in three variants with different number of control contacts suitable for different applications. Each contact can transfer current of up to 5A, which is enough to ensure control over the powerful pumps' contactors or to directly control pumps with mounted power of 1 kW. The automatic level control units can be installed on a DIN rail.



QW - 70AB



QW - M 15 - 3

Type	Number of probes (No. of levels)	Output Load (A)	Accuracy	Operating Voltage (V)	Note	Packing / Box (pcs)	Catalogue number
DHC1Y - S	1	5	±1%	230	-	100	**46DW001**
DHC1Y - SD	3	5	±1%	230	-	100	**46DW002**
DHC1Y - T	1	5	±1%	230	2 pumps control	100	**46DW003**

Type	Number of probes (No. of levels)	Output Load (A)	Accuracy	Operating Voltage (V)	Note	Packing / Box (pcs)	Catalogue number
QW - M 15 - 3	2	6	±1%	230	-	1 / 30	**46DW004**
QW - 70AB	2	4	±1%	230	-	1 / 20	**46DW005**



Rotary switches LW26 series

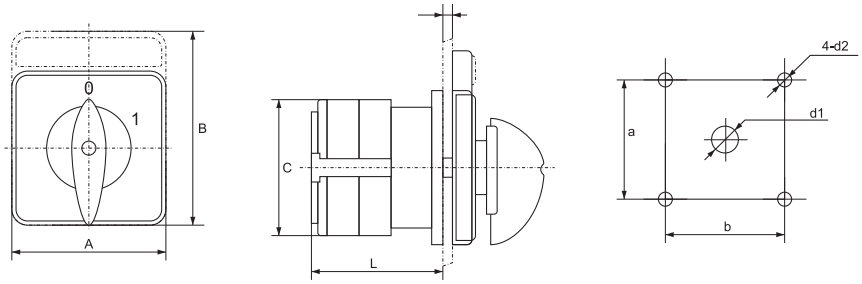
5 YEAR WARRANTY *for industrial usage, 3 years warranty

The rotary switches LW26 series are produced for switching on/off electrical circuits with commutated current from 20 to 160A. They are designed on the bases of the rotor-eccentric switching on which is realized through turning of the handle to 60 or 90 degrees. The normal operation is used for commutation of two, three or four conductor systems. There are special rotary switches that switch on under given connection schemes and are used to control motors, electric welding machines and other consumers.

Documentation corresponding to the product:
Standard: EN 60947-1; EN 60947-3-1

Technical data:
- Power supply voltage: 230/400V; 50Hz
- Insulation voltage: 690V
- Impulse voltage wear resistance: 6000V
- Mechanical wear resistance: 3x105 commutation cycles
- Operating temperature: -10 ÷ +65°C
- Humidity: 35 – 85% RH
- Commuting capacity: up to 160A according to the tables
- Plastic: UV rays wear resistance
- IP code:
  - IP42 for the ordinary breakers mounted in a panel
  - IP65 for the breakers offered in a box
- Cable connection: screw joining
- Tightening moment of the bolt: 1.33N
- Maximum section of the power supply conductors: according to the dimensions table
- Weight: according to the number of the contacts

Mounting:
- directly to the control panel
- thickness of the surface to which it is mounted: max 5mm



Dimensions	Front panel	Joining conductor (mm2)	Overall dimensions (mm)				Mounting dimensions (mm)			
			A	B	C	L	a	b	d1	d2
LW26-20	M1 panel	1x2.5	48	48	43	22 + 9.6n	36	36	Ø8.5	Ø4.5
	M1 panel with inscription field		48	60	43	22 + 9.6n	36	36	Ø8.5	Ø4.5
LW26-25	M1 panel	1x4.0	48	48	45.2	23+12.8n	36	36	Ø8.5	Ø4.5
LW26-32	M2 panel	1x6.0	64	64	58	29.2 + 12.8n	48	48	Ø10	Ø4.5
LW26-63	M2 panel	1x16	64	64	66	29.2 + 21.5n	48	48	Ø10	Ø4.5
LW26-125	M3 panel	1x35	88	88	84	35 + 26.5n	68	68	Ø13	Ø6
LW26-160	M3 panel	1x50	88	88	88	35 + 32.5n	68	68	Ø13	Ø6

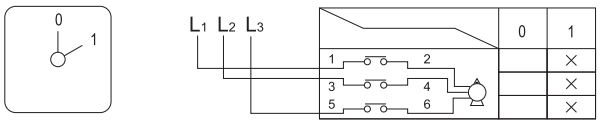
* **n** - number of modules



Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 - 10Q	Q10 three-poles switching on; motor starting and stopping; voltage turning on/off to the consumers	10	2	1 / 100	**492101**
LW26 - 16Q		16	2	1 / 100	**492161**
LW26 - 20Q		20	2	1 / 100	**492201**
LW26 - 25Q		25	2	1 / 100	**492251**
LW26 - 32Q		32	2	1 / 72	**492321**
LW26 - 63Q		63	2	1 / 64	**492631**
LW26 - 125Q		125	2	1 / 24	**492951**
LW26 - 160Q		160	2	1 / 27	**492961**

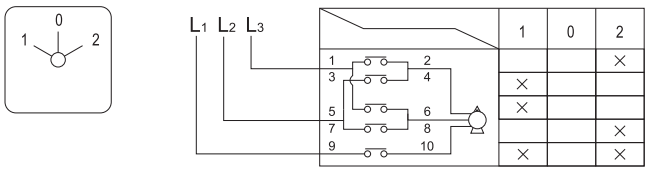


Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26GS - 20/04	Q11 three-poles switching over; motor starting and stopping; voltage turning on/off to the consumers; possibility for access control	20	2	1 / 100	**492207**
LW26GS - 25/04		25	2	1 / 100	**492257**
LW26GS - 32/04		32	2	1 / 72	**492327**
LW26GS - 63/04		63	2	1 / 64	**492637**





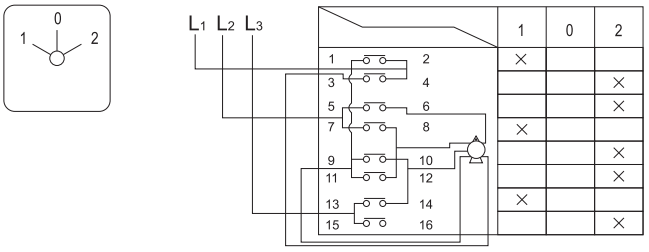
Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 - 20N	N11 3-position – 2 start positions and 1 stop;for motor reversing	20	3	1 / 100	**492202**
LW26 - 25N		25	3	1 / 100	**492252**
LW26 - 32N		32	3	1 / 64	**492322**
LW26 - 63N		63	3	1 / 48	**492632**
LW26 - 125N		125	3	1 / 24	**492952**
LW26 - 160N		160	3	1 / 18	**492962**





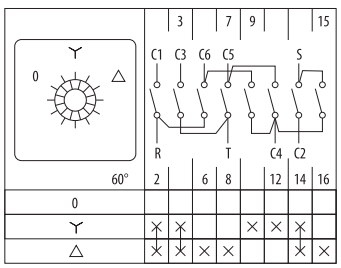
Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 - 25S	S19 3-position – 2 start positions and 1 stop; for two speed motor control; switching over between charging*	25	4	1 / 100	**492253**
LW26 - 63S		63	4	1 / 48	**492633**
LW26 - 125S		125	4	1 / 24	**492953**
LW26 - 160S		160	4	1 / 18	**492963**

Note: It is necessary that additional bridges be placed at switching over between charging



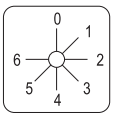


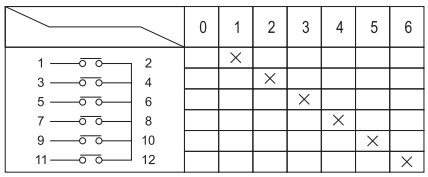
Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 - 25 SD	S21 3-position switching on star/delta	25	4	1 / 100	**492025**
LW26 - 63 SD		63	4	1 / 48	**492063**





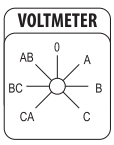
Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 - 32H 5881/3	H5881/3 – 85 for welding transformer windings switching over	32	3	1 / 64	**492324**
LW26 - 63H 5881/3		63	3	1 / 48	**492634**

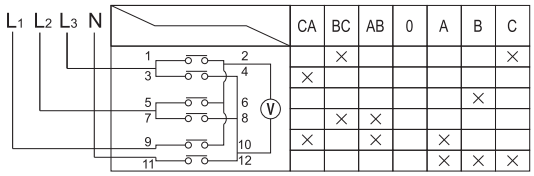






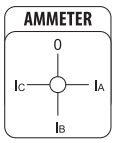
Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 - 20 YH5/3	YH5/3 - 66 for voltage switching over	20	3	1 / 72	**492205**

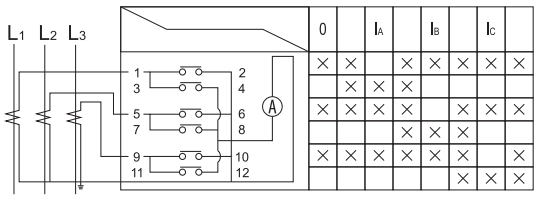






Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 - 20 LH3/3	LH3/3 - 58 for amperemeter switching on to current transformers	20	3	1 / 100	**492206**



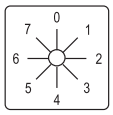




Type	Scheme	IP code:	Packing / Box (pcs)	Catalogue number
LW26 - 20-25-Q	Box for LW26-20/25	IP 42	1 / 76	**492037**
LW26 - 32-Q	Box for LW26-32	IP 42	1 / 30	**492038**
LW26 - 20-25-DIN	Adaptor for DIN-rail for LW26-20/25		15 / 1500	**492039**



Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 4.I7168/7	4.I7168/7	20	7	1 / 100	**492028**



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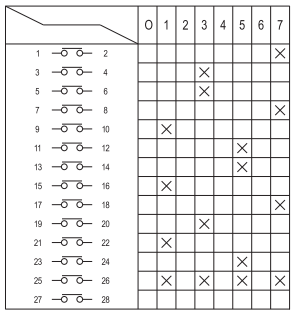
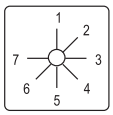




Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW26 4.H6518/5	4.H6518/5	25	5	1 / 100	**492029**



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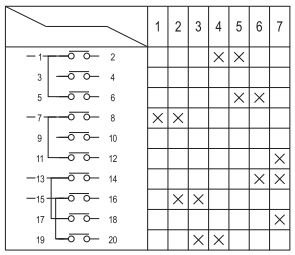
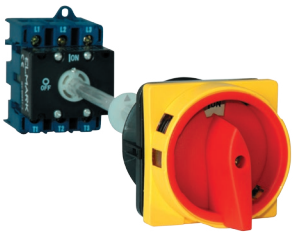
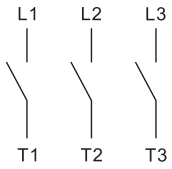




Type	Scheme	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW30-20	LW30-20	20	3	1 / 32	**492030**
LW30-32	LW30-32	32	3	1 / 32	**492031**
LW30-40	LW30-40	40	3	1 / 32	**492033**
LW30-63	LW30-63	63	3	1 / 32	**492034**

* Possibility for access control

LW30-20-100A
ON/OFF switch 3 poles

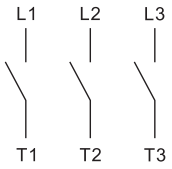


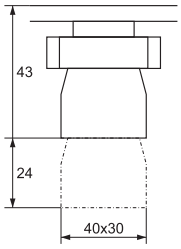


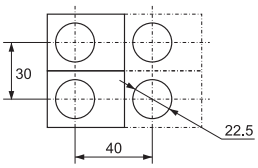
Type	Scheme	IP code:	In (A)	Levels	Packing / Box (pcs)	Catalogue number
LW30-32	LW30-32	IP54	32	3	1 / 30	**492032**

* Possibility for access control

LW30-20-100A
ON/OFF switch 3 poles







Overall dimensions
Diagram for drill the openings

Buttons and LED indicators

5 YEAR WARRANTY *for industrial usage, 3 years warranty

These are devices used in control and indication systems, command boards and panels in industrial automation systems. They are manufactured to commutate controlling circuits and to control the switching on or off executive mechanisms such as relays, contactors, etc. The signal lamps and indicators find broad application in all industrial fields. The devices endure short time current overload up to 10A, and normally they can commutate thermal current up to 6A in their contact system. The connection to the contact terminals is through screw terminals to which operational conductors with section up to 2.5mm^2 can be joined.

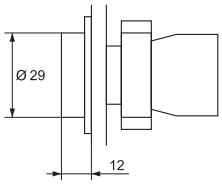
Documentation corresponding to the product:
- Standard: EN 60947-1; EN 60947-5-1

Technical data:
- Insulation voltage: 660V; 50/60Hz
- Impulse voltage wear resistance: 6000V;
- Rated current: 6A (230V AC); 0.3A (230V DC)
- Short circuit protection: safety device 10A gG outside in the circuit
- Mechanical wear resistance: 1x106 commutation cycles
- Power of mechanical compression:
  - at closing: 20N
  - at opening: 8N
- Operating temperature: -20 - +65°C
- Humidity: 35 – 85%RH
- Tightening moment of the joining conductors: 0.15Nm
- Section of the conductor: 1x0.5; 1x0.75; 1x1; 1x1.5; 1x2.5mm^2

Mounting:
- to a flat metal or plastic surface with thickness: max 4mm
- opening with size: Ø 22.5mm

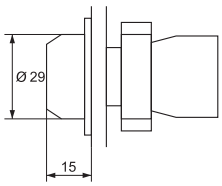


Type	Description	Type of contacts	Rated current (A) at 400V	Colour	Packing / Box (pcs)	Catalogue number
EL 2- BA 21	Button round with spring reverse	NO	6	black	20 / 300	**401021**
EL 2- BA 31		NO	6	green	20 / 300	**401031**
EL 2- BA 51		NO	6	yellow	20 / 300	**401051**
EL 2- BA 61		NO	6	blue	20 / 300	**401061**
EL 2- BA 42		NC	6	red	20 / 300	**401042**



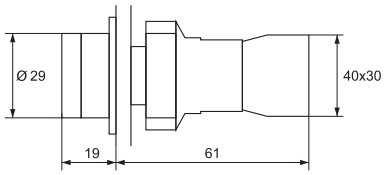


Type	Description	Type of contacts	Rated current (A) at 400V	Colour	Note	Packing / Box (pcs)	Catalogue number
EL 2- BP 31	Button round with spring reverse	NO	6	green	IP=65 Provided from silicon lid	20 / 300	**401032**
EL 2- BP 42		NC	6	red	IP=65 Provided from silicon lid	20 / 300	**401043**



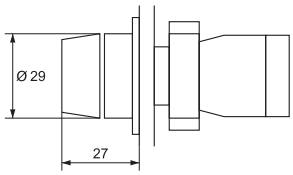


Type	Description	Type of contacts	Rated current (A) at 400V	Colour	Packing / Box (pcs)	Catalogue number
EL 2- BW3471	Button round with spring reverse and LED indicator	24V	6	red	20 / 200	**401474**
EL 2- BW3371		24V	6	green	20 / 200	**401374**
EL 2- BW3571		24V	6	yellow	20 / 200	**401574**
EL 2- BW3671		24V	6	blue	20 / 200	**401674**
EL 2- BW3471		110V	6	red	20 / 200	**401473**
EL 2- BW3371		110V	6	green	20 / 200	**401373**
EL 2- BW3571		110V	6	yellow	20 / 200	**401573**
EL 2- BW3671		110V	6	blue	20 / 200	**401673**
EL 2- BW3471		230V	6	red	20 / 200	**401471**
EL 2- BW3371		230V	6	green	20 / 200	**401371**
EL 2- BW3571		230V	6	yellow	20 / 200	**401571**
EL 2- BW3671		230V	6	blue	20 / 200	**401671**



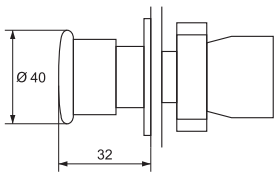


Type	Description	Type of contacts	Rated current (A) at 400V	Colour	Note	Packing / Box (pcs)	Catalogue number
EL 2- BD 21	Switch with arrest	1NO	6	black	two-position	20 / 200	**401421**
EL 2- BD 33		2NO	6	black	three-position	20 / 200	**401433**





Type	Description	Type of contacts	Rated current (A) at 400V	Colour	Note	Packing / Box (pcs)	Catalogue number
EL 2- BC 42	Button with head "mushroom" type	1NC	6	red	spring reverse	15 / 150	**401642**

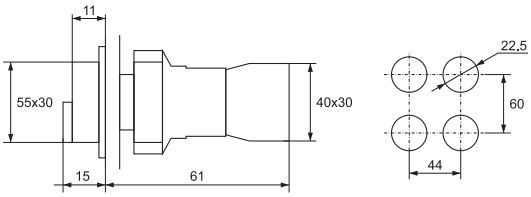




Type	Description	Type of contacts	Rated current (A) at 400V	Colour	Note	Packing / Box (pcs)	Catalogue number
EL 2- BS 545	Button with head "mushroom" type	1NC + 1NO	6	red	release with spinning	15 / 150	**401545**

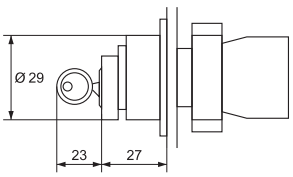


Type	Description	Type of contacts	Rated current (A) at 400V	Voltage (V)	Note	Packing / Box (pcs)	Catalogue number
EL 2- BW8475	Button double	1NO+1NC	6	24 AC	Green and red button + LED indicator	20 / 200	**401844**
EL 2-BW8475	Button double	1NO+1NC	6	230 AC	Green and red button+LED indicator	20/200	**401845**



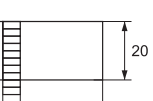


Type	Description	Type of contacts	Rated current (A) at 400V	Note	Packing / Box (pcs)	Catalogue number
EL 2- BG 21	Change-over switch with switch	1NO	6	two-position with switch	20 / 200	**401121**





Type	Description	Rated current (A) at 400V	Colour	Packing / Box (pcs)	Catalogue number
AD56-22-W-230	LED indicators	230V AC	white	10 / 500	**401123**
AD56-22-W-110		110V AC	white	10 / 500	**401111**
AD56-22-W-24		24V AC/DC	white	10 / 500	**401124**
AD56-22-A-110		110V AC	amber	10 / 500	**401211**
AD56-22-A-24		24V AC/DC	amber	10 / 500	**401224**
AD56-22-A-230		230V AC	amber	10 / 500	**401223**
AD56-22-PG-230		230V AC	green	10 / 500	**401323**
AD56-22-PG-110		110V AC	green	10 / 500	**401311**
AD56-22-PG-24		24V AC/DC	green	10 / 500	**401324**
AD56-22-B-230		230V AC	blue	10 / 500	**401523**
AD56-22-B-110		110V AC	blue	10 / 500	**401511**
AD56-22-B-24		24V AC/DC	blue	10 / 500	**401524**
AD56-22-Y-230		230V AC	yellow	10 / 500	**401723**
AD56-22-Y-110		110V AC	yellow	10 / 500	**401711**
AD56-22-Y-24		24V AC/DC	yellow	10 / 500	**401724**
AD56-22-R-230		230V AC	red	10 / 500	**401423**
AD56-22-R-110		110V AC	red	10 / 500	**401411**
AD56-22-R-24		24V AC/DC	red	10 / 500	**401424**





Type	Description	Type of contacts	Colour	Packing / Box (pcs)	Catalogue number
EL02 - BE101	1	1 NO	green	100 / 1000	**401001**
EL02 - BE102	2	1 NC	red	100 / 1000	**401002**

Buttons and switches with box

3 YEAR WARRANTY



Type	Description	IP code:	Overall dimensions (mm) L	H	W	Type of the contact	Colour	Packing / Box (pcs)	Catalogue number
EL1-B134	switching on 0-1	IP44	68	68	50	1 NO	black	1 / 100	**401134**



Type	Description	IP code:	Overall dimensions (mm) L	H	W	Type of the contact	Colour	Packing / Box (pcs)	Catalogue number
EL1-B102	1 button with spring return	IP44	68	68	50	1 NO	green	1 / 100	**401102**
EL1-BP102	1 button with spring return	IP65	68	68	50	1 NO	green	1 / 100	**401132**



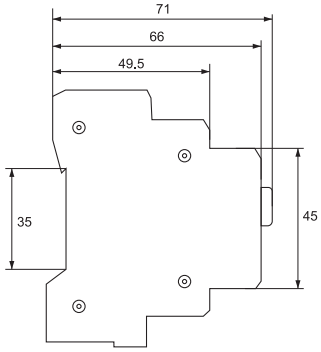
Type	Description	IP code:	Overall dimensions (mm) L	H	W	Type of the contact	Colour	Packing / Box (pcs)	Catalogue number
EL1-B213	2 buttons with spring return	IP44	104	68	50	1 NC 1 NO	1 - red 1 - green	1 / 100	**401213**
EL1-BP213	2 buttons with spring return	IP65	104	68	50	1 NC 1 NO	1 - red 1 - green	1 / 100	**401233**



Type	Description	IP code:	Overall dimensions (mm) L	H	W	Type of the contact	Colour	Packing / Box (pcs)	Catalogue number
EL1-B339	3 buttons with spring return	IP44	134	68	50	1 NO 1 NC 1 NO	1 - green 1 - red 1 - green	1 / 50	**401339**
EL1-BP339	3 buttons with spring return	IP65	134	68	50	1 NO 1 NC 1 NO	1 - green 1 - red 1 - green	1 / 50	**401349**



Type	Description	IP code:	Overall dimensions (mm) L	H	W	Type of the contact	Colour	Packing / Box (pcs)	Catalogue number
EL1-B174	Emergency button with head "mushroom" type Ø40.Release through turning	IP44	68	68	50	1 NC	red	1 / 100	**401174**



Documents corresponding to the product:
Standard EN 60947-1
EN 60 947-5-1 t

Buttons and LED indicators

5 YEAR WARRANTY *for industrial usage, 3 years warranty

These are devices used in control and indication systems adjusted for mounting in command boards and panels directly on DIN-rail. They are manufactured to commutate controlling circuits and to control the switching on or off executive mechanisms such as relays, contactors, etc. The signal lamps and indicators find broad application in all industrial fields. The devices endure short time current overload up to 20A, and normally they can commutate current up to 10A with their contact system. The connection to the contact terminals is through screw terminals to which operational conductors with section up to 2.5mm^2 can be joined. There are also designed buttons combined with lamps.

Technical data:
- Insulation voltage: 660V; 50/60Hz
- Impulse voltage wear resistance: 6000V;
- Rated current: up to 10A (230V AC)
- Short circuit protection: safety device 10A gG outside in the circuit
- Rated consumed current (for indicators and buttons combined with indicators): <20mA
- wear resistance (indicators): >2000h
- Mechanical wear resistance (buttons): 1x106 commutation cycles
- Power of mechanical compression:
  - at closing: 20N
  - at opening: 8N
- Operating temperature: -20 - +65°C
- Humidity: 35 – 85%RH
- Tightening moment of the joining conductors: 0.15Nm
- Section of the conductor: 1x0.5; 1x0.75; 1x1; 1x1.5; 1x2.5mm^2
- Plastic: UV rays wear resistance

Mounting:
- to a DIN-rail
- Altitude: up to 2000m



Type	Description	Rated current (A) at 400V	Type of the contact	Colour	Packing / Box (pcs)	Catalogue number
ELB - BL - DIN	button	<10	2NO+ 1 NC	black	12 / 240	**401505**
ELB - BL - DIN	button	<10	1NO+ 2 NC	black	12 / 240	**401506**
ELB - G - DIN	button	<10	2NO+ 1 NC	green	12 / 240	**401507**
ELB - G -DIN	button	<10	1NO+ 2 NC	green	12 / 240	**401508**
ELB - Y - DIN	button	<10	2NO+ 1 NC	yellow	12 / 240	**401509**
ELB - Y - DIN	button	<10	1NO+ 2 NC	yellow	12 / 240	**401510**
ELB - R - DIN	button	<10	2NO+ 1 NC	red	12 / 240	**401512**
ELB - R - DIN	button	<10	1NO+ 2 NC	red	12 / 240	**401513**



Type	Description	Voltage (V)	Rated current (A) at 400V	Colour	Packing / Box (pcs)	Catalogue number
ELD - G - DIN	lamp	230V	<20	green	12 / 240	**401500**
ELD - R - DIN	lamp	230V	<20	red	12 / 240	**401501**
ELD - Y - DIN	lamp	230V	<20	yellow	12 / 240	**401502**
ELD - B - DIN	lamp	230V	<20	blue	12 / 240	**401503**
ELD -W - DIN	lamp	230V	<20	white	12 / 240	**401504**



Type	Description	Voltage (V)	Rated current (A) at 400V	Type of the contact	Colour	Packing / Box (pcs)	Catalogue number
ELBD - G - DIN	button + lamp	230V	<20	2NO+ 1 NC	green	12 / 240	**401514**
ELBD -G - DIN	button + lamp	230V	<20	1NO+ 2 NC	green	12 / 240	**401515**
ELBD - R - DIN	button + lamp	230V	<20	2NO+ 1 NC	red	12 / 240	**401516**
ELBD - R - DIN	button + lamp	230V	<20	1NO+ 2 NC	red	12 / 240	**401517**
ELBD - Y - DIN	button + lamp	230V	<20	2NO+ 1 NC	yellow	12 / 240	**401518**
ELBD - Y - DIN	button + lamp	230V	<20	1NO+ 2 NC	yellow	12 / 240	**401519**

















Devices for telpher control MBP type

3 YEAR WARRANTY

They represent different combinations of START and STOP buttons mounted in plastic boxes in different sizes. They are connected to the operating circuits of cranes or telphers and serve as a remote control of their movement. They are connected directly to the operating cable of the telpher and send commands directly to the executive mechanisms. They are designed to provide protection from dust and moisture IP65.

Technical data:
- Supplying voltage: 230V; 50/60Hz
- Electrical wear resistance: $1x10^5$ cycles
- Operating temperature: -10 +65°C
- Humidity: 35 – 85% RH
- Number of contacts: according to the number of the buttons
- Commuting capacity: up to 6A
- Plastic: UV rays wear resistance
- IP code: IP65
- Weight: according to the number of the contacts

Mounting:
- directly to the control cable of the telpher (crane)

MBP-Axxxx
- stop button type
- button type – one-speed (x81) or two-speed (x91)
- number of buttons

Type	Number of buttons	Contact block and scheme		Packing / Box (pcs)	Catalogue number
		Emergency	For the directions		
MBP-A281	2	-	NO+NC	1 / 20	**46281**
MBP-A291 two speed	2	-	NO+NC	1 / 20	**46291**
MBP-A2813	2+1	emergency button	NO+NC	1 / 20	**46283**
MBP-A2813K	2+1	emergency button with switch	NO+NC	1 / 20	**46283K**
MBP-A2913 two speed	2+1	emergency button	NO+NC	1 / 20	**46294**
MBP-A2913K two speed	2+1	emergency button with switch	NO+NC	1/20	**46294K**
MBP-A481	4	-	NO+NC	1 / 20	**46481**
MBP-A491 two speed	4	-	NO+NC	1 / 20	**46491**
MBP-A4813	4+1	emergency button	NO+NC	1 / 20	**46483**
MBP-A4813K	4+1	emergency button with switch	NO+NC	1 / 20	**46483K**
MBP-A4913 two speed	4+1	emergency button	NO+NC	1 / 20	**46493**
MBP-A4913K two speed	4+1	emergency button with switch	NO+NC	1/20	**46493K**
MBP-A681	6	-	NO+NC	1 / 20	**46681**
MBP-A691 two speed	6	-	NO+NC	1 / 20	**46691**
MBP-A6813	6+1	emergency button	NO+NC	1 / 20	**46683**
MBP-A6813K	6+1	emergency button with switch	NO+NC	1 / 20	**46683K**
MBP-A6913 two speed	6+1	emergency button	NO+NC	1 / 20	**46693**
MBP-A6913K two speed	6+1	emergency button with switch	NO+NC	1/20	**46693K**
MBP-A881	8	-	NO+NC	1 / 20	**46881**
MBP-A891 two speed	8	-	NO+NC	1 / 20	**46891**
MBP-A8813	8+1	emergency button	NO+NC	1 / 20	**46883**
MBP-A8813K	8+1	emergency button with switch	NO+NC	1 / 20	**46883K**
MBP-A8913 two speed	8+1	emergency button	NO+NC	1 / 20	**46893**
MBP-8913K two speed	8+1	emergency button with switch	NO+NC	1/20	**46893K**

Warning lights and towers

3 YEAR WARRANTY









The revolving warning lights and towers are devices intended for use as status indicators in the human-machine control systems. They are suitable for installation on control cabinets and panels or directly on machines. They are manufactured in different colour combinations to attract attention of operators working in a given production sector. Warning lights and towers are widely used in almost any industrial branch. They can be mounted on movable components or such, creating potential danger and can warn all workers for a critical situation with their blinking light and siren. These devices are electrically connected through cables, protruding out of the lamp casing.

Technical Specification:

- Rated voltage: 12 VAC/230VAC; 50/60 Hz;
- Isolation voltage: 660V; 50/60 Hz;
- Impulse voltage stability: 6000V
- Rated power: see the tables below
- Short circuit protection: 1A gG external fuse
- Operating Temperature: - 20°C + 65°C
- Humidity: 35 – 85% RH
- Plastic cover: UV resistant polycarbonate not considered as being harmful to human health

Installation:

- Warning lights are fixed to the respective machine body with the studs protruding from the light plastic casing.

Type	Description	Voltage (VAC)	Rated Power (W)	Colour	Packing / Box (pcs)	Catalogue number
LTE1101 - R	Warning light	12	10	Red	1 / 30	**401525R**
LTE1101 - G	Warning light	12	10	Green	1 / 30	**401525G**
LTE1101 - Y	Warning light	12	10	Yellow	1 / 30	**401525Y**
LTE1101J - R	Warning light + siren	12	11	Red	1 / 30	**401526R**
LTE1101J - G	Warning light + siren	12	11	Green	1 / 30	**401526G**
LTE1101J - Y	Warning light + siren	12	11	Yellow	1 / 30	**401526Y**
LTE1101 - R	Warning light	230	8	Red	1 / 30	**402525R**
LTE1101 - G	Warning light	230	8	Green	1 / 30	**402525G**
LTE1101 - Y	Warning light	230	8	Yellow	1 / 30	**402525Y**
LTE1101J - R	Warning light + siren	230	9	Red	1 / 30	**402526R**
LTE1101J - G	Warning light + siren	230	9	Green	1 / 30	**402526G**
LTE1101J - Y	Warning light + siren	230	9	Yellow	1 / 30	**402526Y**
LTE1161 - R	Warning light	12	35	Red	1 / 8	**401527R**
LTE1161 - G	Warning light	12	35	Green	1 / 8	**401527G**
LTE1161 - Y	Warning light	12	35	Yellow	1 / 8	**401527Y**
LTE1161 - R	Warning light	230	28	Red	1 / 8	**402527R**
LTE1161 - G	Warning light	230	28	Green	1 / 8	**402527G**
LTE1161 - Y	Warning light	230	28	Yellow	1 / 8	**402527Y**
LTA205 - 1	Tower / flashing	12	4	1 - Red 2 - Red/Green 3 - Red/Yellow/ Green 3 - Red/Yellow/ Green 5 - Red/Yellow/ Green/ Blue/Transparent	1 / 20	**401528**
LTA205 - 2	Tower / flashing	12	8		1 / 20	**401529**
LTA205 - 3	Tower / flashing	12	12		1 / 20	**401530**
LTA205 - 3J	Tower / flashing + siren	12	12		1 / 20	**401531**
LTA205 - 5	Tower / flashing	12	18		1 / 20	**401532**
LTA205 - 1	Tower / flashing	230	6	1 - Red 2 - Red/Green 3 - Red/Yellow/ Green 3 - Red/Yellow/ Green 5 - Red/Yellow/ Green/ Blue/Transparent	1 / 20	**402528**
LTA205 - 2	Tower / flashing	230	8		1 / 20	**402529**
LTA205 - 3	Tower / flashing	230	10		1 / 20	**402530**
LTA205 - 3J	Tower / flashing + siren	230	11		1 / 20	**402531**
LTA205 - 5	Tower / flashing	230	14		1 / 20	**402532**



Type	Description	Voltage (V)	Rated Power (W)	Sound level (dB)	Packing / Box (pcs)	Catalogue number
MS-290A	metal siren	230	60	100	1 / 24	**401533**
MS-290B	plastic siren	230	60	100	1 / 10	**401541**



Type	Description	Voltage (V)	Rated Power (W)	Sound level (dB)	Packing / Box (pcs)	Catalogue number
MS-390	siren	230	160	120	1 / 50	**401534**



Type	Description	Voltage (V)	Rated Power (W)	Sound level (dB)	Packing / Box (pcs)	Catalogue number
CB-4	alarm bell	12	-	85	1 / 50	**401535**
CB-4	alarm bell	24	-	85	1 / 50	**401536**
CB-4	alarm bell	110	-	85	1 / 50	**401537**
CB-4	alarm bell	230	-	85	1 / 50	**401538**



Type	Description	Voltage (V)	Rated Power (W)	Sound level (dB)	Packing / Box (pcs)	Catalogue number
FA-01	fire alarm	230	-	-	1 / 50	**401540**

INDUSTRIAL PLUGS AND SOCKETS

INDUSTRIAL
PLUGS AND SOCKETS



ELMARK®

Industrial plugs | 138

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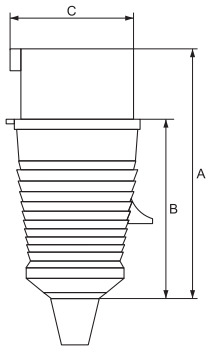
Documents corresponding to the product:
Standard EN 60309-1; EN 60309-2



Industrial plugs and sockets HT/HTN type

5 YEAR WARRANTY

Made of special high quality plastic with alloys against aging at sun light exposing and for increasing the mechanical strength. They are designed in accordance with standard EN 60309 and provide reliable connection and high protection level against electrical current. They provide IP protection not less than IP 44/67. They are designed for surface or flush mounting, movable or fixed type.

Technical data:
- Rated voltage: 500V
- Rated short circuit current: according to the mounted protection in the boards
- Impulse voltage wear resistance: 8kV
- Mechanical wear resistance: 3000 cycles
- IP code: IP 44/67
- Plastic: UV rays wear resistance
- Ambient temperature: -5 to +65°C
- Altitude: up to 2000m
- Plugs and sockets: 6h



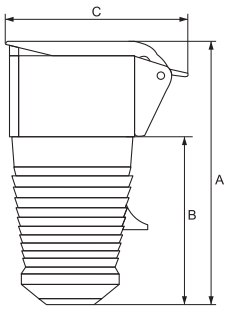
Model	In (A)		Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HT-013	16		1P+N+E	230	121 / 84 / 53	44	2 / 10 / 100	**37013**
HT-023	32		1P+N+E	230	138 / 92 / 63	44	2 / 10 / 60	**37023**



Model	In (A)		Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HT-014	16		3P+E	400	121 / 84 / 51	44	2 / 10 / 100	**37014**
HT-024	32		3P+E	400	138 / 92 / 63	44	2 / 10 / 60	**37024**
HT-034	63		3P+E	400	230 / 109 / 36	44	2 / 10	**37034**
HT-044	125		3P+E	400	295 / 124 / 50	44	2 / 10	**37044**



Model	In (A)		Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HT-015	16		3P+N+E	400	129 / 92 / 62	44	2 / 10 / 60	**37015**
HT-025	32		3P+N+E	400	149 / 97 / 70	44	2 / 10 / 60	**37025**
HT-035	63		3P+N+E	400	230 / 109 / 36	44	2 / 10	**37035**
HT-045	125		3P+N+E	400	295 / 124 / 50	44	2 / 10	**37045**



Movable industrial sockets for surface mounting HT type ip44

5 YEAR WARRANTY



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-213	16	1P+N+E	230	130 / 96	44	2 / 10 / 100	**37213**
HT-223	32	1P+N+E	230	149 / 90	44	2 / 10 / 60	**37223**



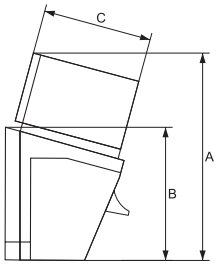
Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-214	16	3P+E	400	131 / 96	44	2 / 10 / 100	**37214**
HT-224	32	3P+E	400	149 / 90	44	2 / 10 / 60	**37224**
HT-234	63	3P+E	400	230/109	44	2 / 10	**37234**
HT-244	125	3P+E	400	290/124	44	2 / 10	**37244**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-215	16	3P+N+E	400	139 / 90	44	2 / 10 / 60	**37215**
HT-225	32	3P+N+E	400	154 / 100	44	2 / 10 / 60	**37225**
HT-235	63	3P+N+E	400	230/100	44	2 / 10	**37235**
HT-245	125	3P+N+E	400	290/124	44	2 / 10	**37245**

Fixed industrial plugs HT type ip44

5 YEAR WARRANTY





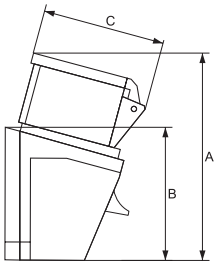
Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-513	16	1P+N+E	230	121/79	44	2 / 10 / 60	**37513**
HT-523	32	1P+N+E	230	131/83	44	2 / 10 / 60	**37523**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT 514	16	3P+E	400	121/76	44	2 / 10 / 60	**37514**
HT 524	32	3P+E	400	131/83	44	2 / 10 / 60	**37524**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT 515	16	3P+N+E	400	123/79	44	2 / 10 / 60	**37515**
HT 525	32	3P+N+E	400	132/84	44	2 / 10 / 60	**37525**



Fixed industrial sockets HT type ip44

5 YEAR WARRANTY



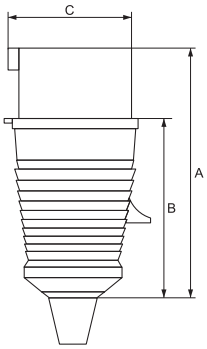
Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-113	16	1P+N+E	230	126 / 86	44	2 / 10 / 60	**37113**
HT-123	32	1P+N+E	230	141 / 97	44	2 / 10 / 60	**37123**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-114	16	3P+E	400	132 / 91	44	2 / 10 / 60	**37114**
HT-124	32	3P+E	400	141 / 96	44	2 / 10 / 60	**37124**
HT-134	63	3P+E	400	193 / 122	44	2 / 10	**37134**
HT-144	125	3P+E	400	220 / 140	44	2 / 10	**37144**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-115	16	3P+N+E	400	129 / 96	44	2 / 10 / 60	**37115**
HT-125	32	3P+N+E	400	141 / 98	44	2 / 10 / 60	**37125**
HT-135	63	3P+N+E	400	193 / 122	44	2 / 10	**37135**
HT-145	125	3P+N+E	400	220 / 140	44	2 / 10	**37145**



Industrial plugs HTN type IP67

5 YEAR WARRANTY



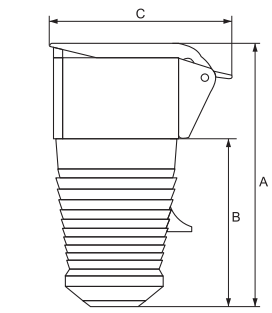
Model	In (A)	Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HTN 0131	16	1P+N+E	230	120/71/12	67	1 / 60	**37131**
HTN 0231	32	1P+N+E	230	150/93/17	67	1 / 40	**37231**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HTN 0141	16	3P+E	400	125/79/12	67	2 / 60	**37141**
HTN 0241	32	3P+E	400	150/93/17	67	2 / 40	**37241**
HTN 0341	63	3P+E	400	230/109/36	67	10	**37341**
HTN 0441	125	3P+E	400	230/109/36	67	10	**37441**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HTN 0151	16	3P+N+E	400	133/87/12	67	2 / 60	**37151**
HTN 0251	32	3P+N+E	400	155/99.5/17	67	2 / 40	**37251**
HTN 0351	63	3P+N+E	400	230/109/36	67	10	**37351**
HTN 0451	125	3P+N+E	400	295/124/50	67	10	**37451**



Movable Industrial socket HNT type ip67

5 YEAR WARRANTY



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HTN 2131	16	1P+N+E	230	131/90	67	2 / 60	**37831**
HTN 2231	32	1P+N+E	230	149/90	67	2 / 40	**37931**



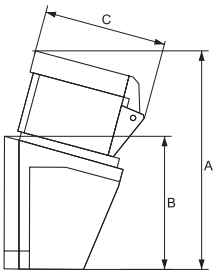
Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HTN 2141	16	3P+E	400	131/76	67	2 / 60	**37841**
HTN 2241	32	3P+E	400	149/90	67	2 / 40	**37941**
HTN 2341	63	3P+E	400	271/115	67	10	**37942**
HTN 2441	125	3P+E	400	295/137	67	6	**37943**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HTN 2151	16	3P+N+E	400	139/90	67	2 / 60	**37851**
HTN 2251	32	3P+N+E	400	154/100	67	2 / 40	**37951**
HTN 2351	63	3P+N+E	400	240/112	67	10	**37952**
HTN 2451	125	3P+N+E	400	300/126	67	6	**37953**

Fixed Industrial socket HTN type ip67

5 YEAR WARRANTY





Model	In (A)	Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HTN 1131	16	1P+N+E	230	101/150/93.5	67	2 / 40	**37731**
HTN 1231	32	1P+N+E	230	114/162/93.5	67	2 / 40	**37631**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HTN 1141	16	3P+E	400	104/150/93.5	67	2 / 40	**37741**
HTN 1241	32	3P+E	400	116/162/93.5	67	2 / 40	**37641**
HTN 1341	63	3P+E	400	171/170/230	67	1 / 10	**37842**
HTN 1441	125	3P+E	400	171/170/230	67	1 / 6	**37844**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A /B /C	IP code:	Packing/Box	Catalogue number
HTN 1151	16	3P+N+E	400	107/150/93.5	67	2 / 40	**37751**
HTN 1251	32	3P+N+E	400	116/162/93.5	67	2 / 40	**37651**
HTN 1351	63	3P+N+E	400	171/170/230	67	10	**37852**
HTN 1451	125	3P+N+E	400	171/170/230	67	6	**37854**

Industrial sockets for flush mouting HT type ip44

5 YEAR WARRANTY



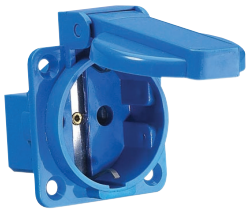
Model	In (A)		Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-413	16		1P+N+E	230	70/85	44	2 / 10 / 60	**37413**
HT-423	32		1P+N+E	230	80/97	44	2 / 10 / 60	**37423**



Model	In (A)		Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-414	16		3P+E	400	70/85	44	2 / 10 / 60	**37414**
HT-424	32		3P+E	400	80/97	44	2 / 10 / 60	**37424**



Model	In (A)		Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-415	16		3P+N+E	400	70/85	44	2 / 10 / 60	**37415**
HT-425	32		3P+N+E	400	80/97	44	2 / 10 / 60	**37425**



Model	In (A)	Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
HT-105SR	16	German type	230	70/70	44	500	**37105**



Model	In (A)		Poles	Un (V)	Dimensions (mm) A/C	IP code:	Packing/Box	Catalogue number
213L-2P-W	16		1P+N+E	230	450	44	48	**37003**

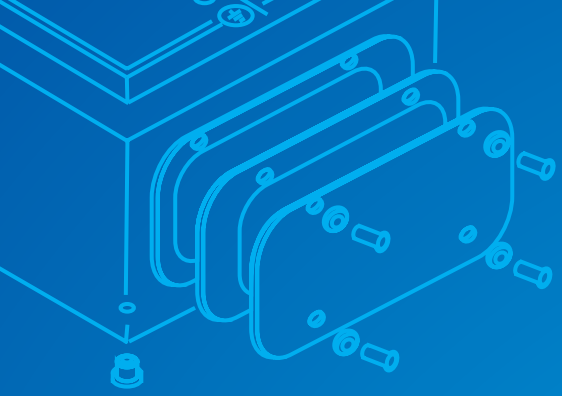


German type socket for DIN rail mounting
It provides plug presence in electric boards and easy cabling.
* Supply voltage: 230V
* Computing option: up to 16A

* Operation temperature: from -10 up to +65°C
* Humidity: up to 85%RH

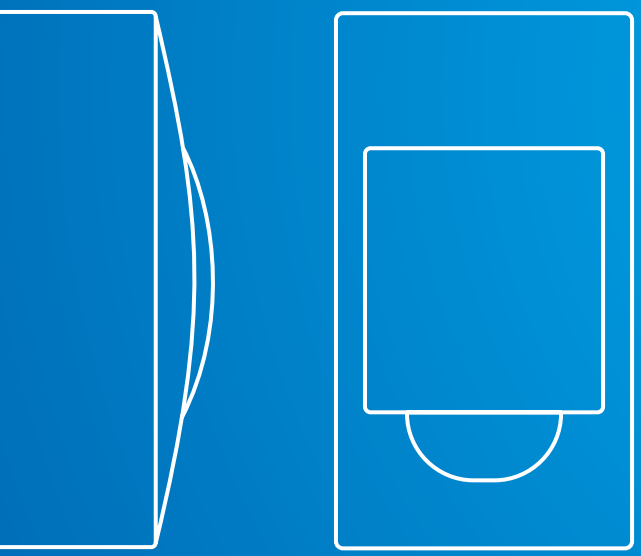
Mounting method:
* DIN rail

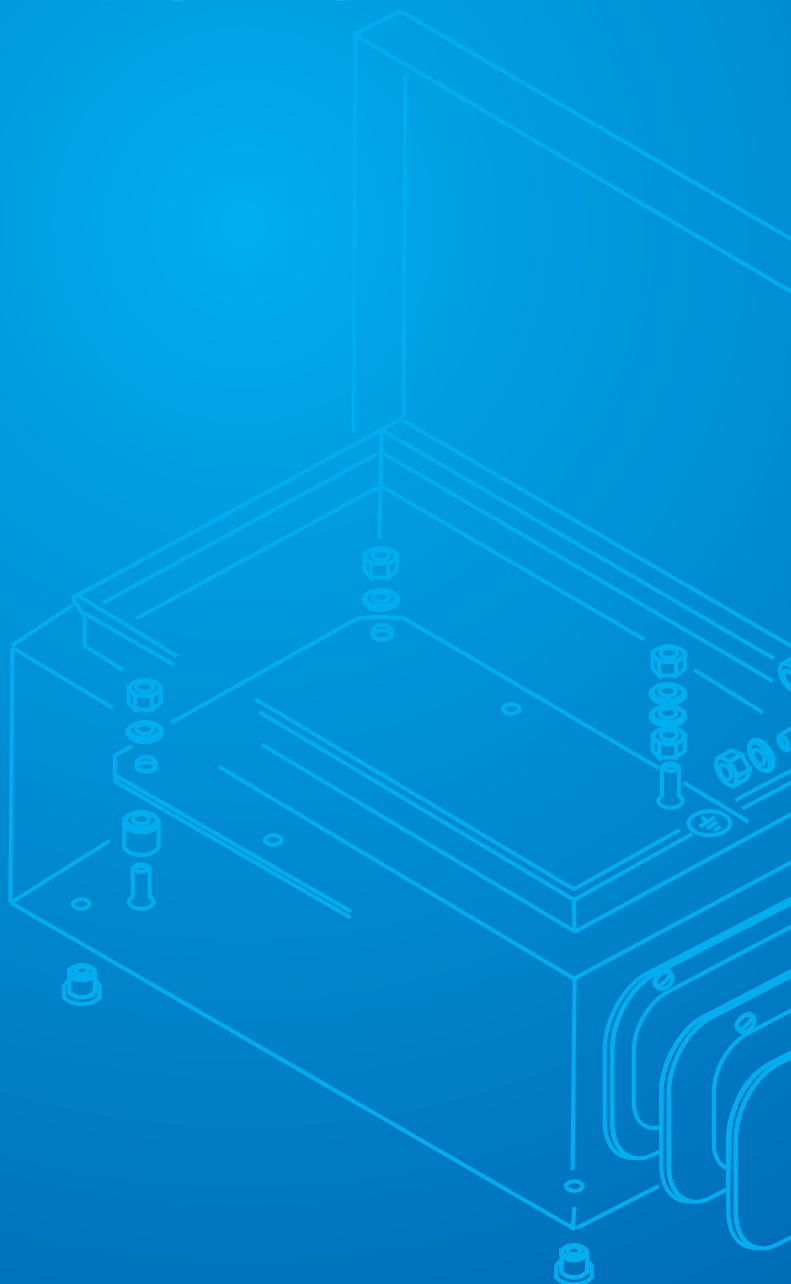
Type	Packing / Box (pcs)	Catalogue number
German type socket for DIN rail	5 / 100	**37004**

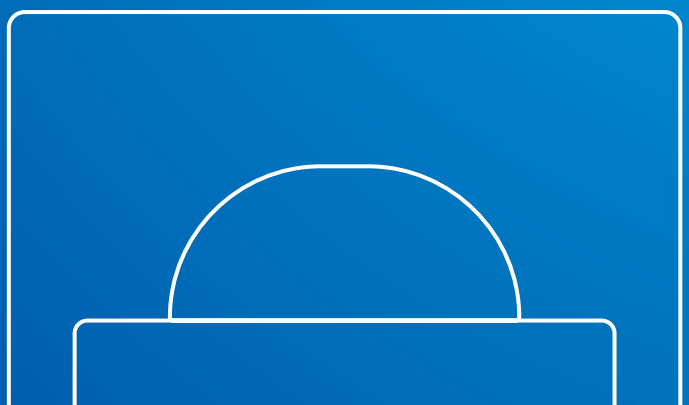


DISTRIBUTION BOXES

DISTRIBUTION
BOXES







ELMARK

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Documents corresponding to the product:
Standard EN 62 208;
EN 60439-1; EN 60 439-3

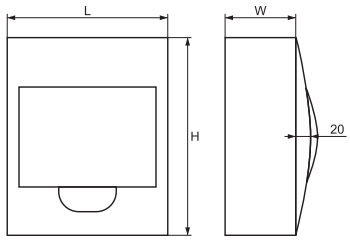


Plastic distribution boxes for surface and flush mounting IP40

3 YEAR WARRANTY

The distribution boxes are designed for mounting in newly built buildings or buildings in reconstruction. They are a module box with mounted protective devices of the given flats electrical current circuit circles. They are supplied with transparent door for each row opening upwards to 90°. They are made of white self-extinguishing plastic, resistant to heat and high temperature with IP code: IP 40. The mounted device in the box is protected from direct contact to the current leading parts. They are offered with DIN-rail for device mounting and terminal strips for the neutral and earthing conductor joining. Mounted directly on the walls with screws.

Technical data:
- Maximum insulation voltage: 690V; 50Hz
- fire resistance rate: UL 94
- IP code: IP 40
- Class of current limiting: 2



Boxes for surface mounting

Number of rows	Module capacity (number of devices)	Dimensions (mm) L	H	W	Packing / Box	Catalogue number
1	4	110	205	75	1 / 20	**60040**
1	6	150	205	75	1 / 20	**60060**
1	8	190	205	75	1 / 20	**60080**



Boxes for flush mounting

Number of rows	Module capacity (number of devices)	Dimensions (mm) L	H	W	Packing / Box	Catalogue number
1	4	110	205	75	1 / 20	**60041**
1	6	150	205	75	1 / 20	**60061**
1	8	190	205	75	1 / 20	**60081**

Documents corresponding to the product:
Standard EN 62 208;
EN 60439-1; EN 60 439-3

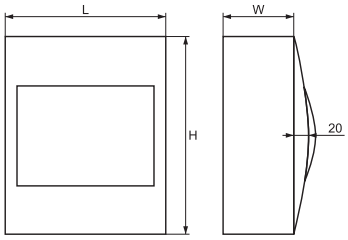


Plastic distribution boxes for surface and flush mounting IP40

3 YEAR WARRANTY

The distribution boxes are designed for mounting in newly built buildings or buildings in reconstruction. They are a module box with mounted protective devices of the given flats electrical current circuit circles. They are supplied with transparent door for each row opening upwards to 90°. They are made of white self-extinguishing plastic, resistant to heat and high temperature with IP code: IP 40. The mounted device in the box is protected from direct contact to the current leading parts. They are offered with DIN-rail for device mounting and terminal strips for the neutral and earthing conductor joining. Mounted directly on the walls with screws.

Technical data:
- Door colour: Transparent blue
- Mounting type: Surface;Flush
- Modules (№): 12; 18; 24; 28; 36
- IP code: IP30
- Row: Single row for 12 and 18 modules
- Double rows for 24; 28 and 36 modules
- Material: ABS for body and PC for door
- Fire resistance: 650°C/30s
- Ambient temperature(°C): -5 +65°C, max. 95% humidity
- Colour: White RAL 9003
- Storage temperature(°C): -40 +75°C



Boxes for surface mounting

Number of rows	Module capacity (number of devices)	Dimensions (mm)			Packing / Box	Catalogue number
		L	H	W		
1	12	300	204	102	1/10	**60122**
1	18	410	204	102	1/10	**60182**
2	24	300	294	109	1/5	**60242**
2	28	310	354	109	1/5	**60282**
2	36	410	294	109	1/5	**60362**



Boxes for flush mounting

Number of rows	Module capacity (number of devices)	Dimensions (mm)			Packing / Box	Catalogue number
		L	H	W		
1	12	317	220	102	1/10	**60123**
1	18	426	220	102	1/10	**60183**
2	24	317	310	109	1/5	**60243**
2	28	294	338	109	1/5	**60283**
2	36	426	310	109	1/5	**60363**



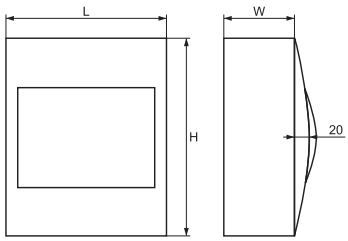
Documents corresponding to the product:
Standard EN 62 208;
EN 60439-1; EN 60 439-3

Moisture-proof distribution boxes for surface mounting - IP 55; IP65

3 YEAR WARRANTY

The distribution boxes are designed for mounting in newly built buildings or buildings in reconstruction. They are a module box with mounted protective devices of the given flats electrical installation current circles. They are supplied with transparent door for each row opening upwards to 90°. They are made of white non-self-extinguishing plastic, resistant to heat and high temperature. The special design of the lids and gaskets provides IP code: IP55; IP65. The mounted device in the box is protected from indirect contact to the current leading parts. They are offered with DIN-rail for device mounting and terminal strips for the neutral and earthing conductor joining. For direct wall moutining with screws.

Technical data:
- Maximum insulation voltage: 690V; 50Hz
- Flame retardance: UL94 V-O
- IP code: IP55; IP65
- Door colour: Transparent
- Mounting type: Surface



Moisture-proof distribution boxes for surface mounting - IP 55

Type	Number of rows	Module capacity (number of devices)	IP	Dimensions (mm)			Packing / Box	Catalogue number
				L	H	W		
WP4	1	4	55	127	214	93	1 / 20	**60100**
WP6	1	6	55	162	214	93	1 / 20	**60101**
WP8	1	8	55	216	214	93	1 / 20	**60102**
WP12	1	12	55	270	214	93	1 / 12	**60103**
WP18	1	18	55	378	233	93	1 / 8	**60104**
WP24	2	24	55	340	288	93	1 / 8	**60105**



Moisture-proof distribution boxes for surface mounting - IP 65

Type	Number of rows	Module capacity (number of devices)	IP	Dimensions (mm)			Packing / Box	Catalogue number
				L	H	W		
WPDB 04	1	4	65	140	210	100	1/30	**60004**
WPDB 08	1	8	65	215	210	100	1/20	**60008**
WPDB 12	1	12	65	300	260	140	1/10	**60012**
WPDB 18	1	18	65	410	285	140	1/5	**60018**
WPDB 24	2	24	65	415	300	140	1/5	**60024**

Metal distribution boxes for flush and surface mounting

3 YEAR WARRANTY

Technical data:
- Maximum insulation voltage: 690V; 50Hz
- Flame retardance: V-0
- IP code: IP40
- Colour: Gray
- Mounting type: Surface and flush

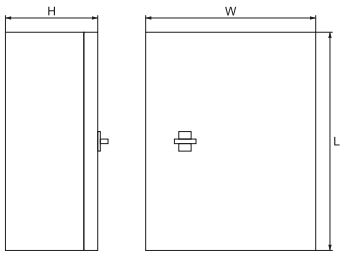


Type	Number of poles	Module capacity (number of devices)	Dimensions (mm)			Packing / Box	Catalogue number
			H	L	W		
MDB 1/4	1	4	251	190	90	1/10	**600104**
MDB 1/8	1	8	251	262	90	1/10	**600108**
MDB 1/12	1	12	251	334	90	1/10	**600112**
MDB 1/16	1	16	251	406	90	1/10	**600116**



Type	Number of poles	Module capacity (number of devices)	Dimensions (mm)			Packing / Box	Catalogue number
			H	L	W		
MDB 3/4	3	4	454	406	114	1/2	**600304**
MDB 3/6	3	6	508	406	114	1/2	**600306**
MDB 3/8	3	8	562	406	114	1/2	**600308**
MDB 3/10	3	10	616	406	114	1/2	**600310**
MDB 3/12	3	12	670	406	114	1/2	**600312**

Documents corresponding to the product:
Standard EN 62 208;
EN 60439-1; EN 60 439-3



Stainless steel metal boards

3 YEAR WARRANTY

Supplied with a special lock, metal plate for fixing of electrical devices, lid for the input-output conductors, grounded dowel pin, gaskets, etc. Option to change the opening direction. Made of single stainless steel sheet. The mouting plate is treated with anti-corrosion and decorative powder coating. They are used in case of special requirements regarding the exposure of corrosion.

Technical data:
- Rated voltage: up to 1000V
- Maximum current: up to 800A
- Material: stainless steel
- IP code: IP 65

Mounting:
- vertically on flat surface



Type	Thickness of metal sheet (mm)	Metal box dimensions (mm)			Packing / Box	Catalogue number
		L (height)	W (width)	H (depth)		
SXF 25/25/15	1.0	250	250	150	1	**54025**
SXF 30/25/15	1.0	300	250	150	1	**54030**
SXF 40/30/20	1.0	400	300	200	1	**54040**
SXF 50/40/20	1.2	500	400	200	1	**54050**
SXF 60/40/20	1.2	600	400	200	1	**54060**
SXF 70/50/20	1.2	700	500	200	1	**54070**
SXF 80/60/25	1.5	800	600	250	1	**54080**
SXF 100/80/30	1.5	1000	800	300	1	**54100**
SXF 120/80/30	1.5	1200	800	300	1	**54120**

Documents corresponding to the product:
Standard EN 62208;
EN 60439-1; EN 60 439-3







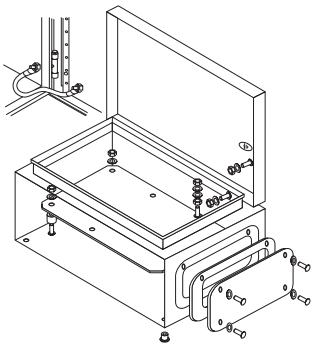
Metal distribution boards

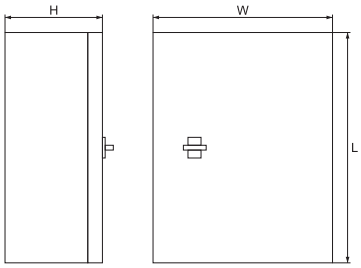
3 YEAR WARRANTY

Supplied with a special lock, metal plate for fixing of electrical devices, lid for the input-output conductors, grounded dowel pin, gaskets, etc. Option to change the opening direction. Made of single steel sheet, treated with decorative powder coating.

Technical data:
- Rated voltage: up to 1000V
- Maximum current: up to 1250A
- Material: steel
- RAL 7032
- Coating: powder style painting
- IP code: IP 65

Mounting:
- vertically on flat surface





Type	Thickness of metal sheet (mm)	Metal box dimensions (mm)			Nominal working current In (A)	Packing / Box	Catalogue number
		L (height)	W (width)	H (depth)			
JXF 25/25/15	1.0	250	250	150	80	1	**53025**
JXF 25/30/15	1.0	250	300	150	100	1	**53026**
JXF 30/25/15	1.0	300	250	150	100	1	**53030**
JXF 30/40/20	1.0	300	400	200	160	1	**53031**
JXF 40/30/20	1.0	400	300	200	160	1	**53040**
JXF 40/50/20	1.2	400	500	200	250	1	**53041**
JXF 40/40/20	1.2	400	400	200	250	1	**53044**
JXF 50/40/20	1.2	500	400	200	250	1	**53050**
JXF 40/60/20	1.2	400	600	200	250	1	**53051**
JXF 60/40/20	1.2	600	400	200	250	1	**53060**
JXF 60/60/20	1.2	600	600	200	250	1	**53066**
JXF 70/50/20	1.2	700	500	200	350	1	**53070**
JXF 80/60/25	1.5	800	600	250	400	1	**53080**
JXF 100/80/30	1.5	1000	800	300	630	1	**53100**
JXF 120/80/30	1.5	1200	800	300	630	1	**53120**
JXF 140/80/30	1.5	1400	800	300	800	1	**53140**
JXF 180/80/30	1.5	1800	800	300	1000	1	**53188**
JXF 180/100/30*	1.5	1800	1000	300	1250	1	**53180**

Note: *Metal boxes with double door

Documents corresponding to the product:
Standard EN 60439-1;
EN 60 439-3

Electric Switchboards with Type-Approval Certificates

The company has produced and successfully passed the type-approval procedures for the following metal and plastic electric control boxes and boards with ELMARK automation:

- Tower Mounted Switchgear
- Low Voltage Meter Box
- Low Voltage Main Switchboard
- Distribution Switchboard
- Power Compensation System



Low Voltage Meter Box Type TEPO



CENTER FOR TESTING AND EUROPEAN CERTIFICATION
27"Hristo Ivanov", Stara Zagora, Bulgaria
tel. + 359 42/ 620368; fax + 359 42/ 602 377; ctec@etec-sz.com
Authorization № 036-ОС/31.03.2006 by SANTS

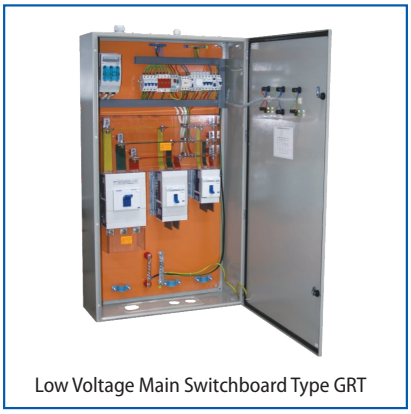
EXPERT REPORT
No LVDb-08-014-149

Applicant: "ELMARK HOLDING " S.C., ZPZ 10 "Perla" str., Varna, BULGARIA
Manufacturer: "ELMARK INDUSTRIES" S.C., 2 "Dobrudja" blvd., Dobrich, BULGARIA
Electrical device: Switchgear and controlgear assemblies
TEPO -10 - 20
Grounds: Application form No LVDb-08-014
Technical file expertise
Conformity assessment of electrical device test report
No LVDb-08-014-014
Leading auditor's assessment report

Hereby report CTEC Ltd. verifies that the Switchgear and controlgear assemblies, TEPO-10-20 is in compliance with the applicable essential requirements of Directive 2006/95/EC (ex 73/23/EEC) Low Voltage Directives (LVD).

Date: 13th January 2009
Stara Zagora
CTEC manager:
/dipl. eng. Blagovesta Shterev/

Integrated part of that document is the leading auditor's assessment report.



Low Voltage Main Switchboard Type GRT



Tower Mounted Switchgear Type MTT



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Authorization № 036-ОС/31.03.2006 by SANTS

EXPERT REPORT
No LVDb-08-016-151

Applicant: "ELMARK HOLDING " S.C., ZPZ 10 "Perla" str., Varna, BULGARIA
Manufacturer: "ELMARK INDUSTRIES" S.C., 2 "Dobrudja" blvd., Dobrich, BULGARIA
Electrical device: Low Voltage SWITCHGEAR / CONTROLGEAR
MTT-630
Grounds: Application form No LVDb-08-016
Technical file expertise
Conformity assessment of electrical device test report
No LVDb-08-016-016
Leading auditor's assessment report

Hereby report CTEC Ltd. verifies that the Low Voltage SWITCHGEAR / CONTROLGEAR, MTT-630 is in compliance with the applicable essential requirements of Directive 2006/95/EC (ex 73/23/EEC) Low Voltage Directives (LVD).

Date: 20th January 2009
Stara Zagora
CTEC manager:
/dipl. eng. Blagovesta Shterev/

Integrated part of that document is the leading auditor's assessment report.



Power Compensation System Type CCU



Distribution Switchboard Type KRSH



CENTER FOR TESTING AND EUROPEAN CERTIFICATION
27"Hristo Ivanov", Stara Zagora, Bulgaria
tel. + 359 42/ 620368; fax + 359 42/ 602 377; ctec@etec-sz.com
Authorization № 036-ОС/31.03.2006 by SANTS

EXPERT REPORT
No LVDb-08-021-021-149

Applicant: "ELMARK HOLDING " S.C., ZPZ 10 "Perla" str., Varna, BULGARIA
Manufacturer: "ELMARK INDUSTRIES" S.C., 2 "Dobrudja" blvd., Dobrich, BULGARIA
Electrical device: Low Voltage SWITCHGEAR / CONTROLGEAR
KRSh-7
Grounds: Application form No LVDb-08-021
Technical file expertise
Conformity assessment of electrical device test report
No LVDb-08-021-021
Leading auditor's assessment report

Hereby report CTEC Ltd. verifies that the Low Voltage SWITCHGEAR / CONTROLGEAR, KRSh-7 is in compliance with the applicable essential requirements of Directive 2006/95/EC (ex 73/23/EEC) Low Voltage Directives (LVD).

Date: 20th January 2009
Stara Zagora
CTEC manager:
/dipl. eng. Blagovesta Shterev/

Integrated part of that document is the leading auditor's assessment report.



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tel. + 359 42/ 620368; fax + 359 42/ 602 377; ctec@etec-sz.com
Authorization № 036-ОС/31.03.2006 by SANTS

EXPERT REPORT
No LVDb-08-015-150

Applicant: "ELMARK HOLDING " S.C., ZPZ 10 "Perla" str., Varna, BULGARIA
Manufacturer: "ELMARK INDUSTRIES" S.C., 2 "Dobrudja" blvd., Dobrich, BULGARIA
Electrical device: Switchgear and controlgear assemblies
GRT-800
Grounds: Application form No LVDb-08-015
Technical file expertise
Conformity assessment of electrical device test report
No LVDb-08-015-015
Leading auditor's assessment report

Hereby report CTEC Ltd. verifies that the Switchgear and controlgear assemblies, GRT-800 is in compliance with the applicable essential requirements of Directive 2006/95/EC (ex 73/23/EEC) Low Voltage Directives (LVD).

Date: 12th January 2009
Stara Zagora
CTEC manager:
/dipl. eng. Blagovesta Shterev/

Integrated part of that document is the leading auditor's assessment report.



Documents corresponding to the product:
Standard EN 60439 -1
EN 60439 -5

Plastic distribution boards - ABS IP65

3 YEAR WARRANTY

Plastic distribution boards of various sizes. Intended for extension or distribution of cable lines. They can also be used as meter boxes. They are resistant to chemical agents, thermal and UV rays.

Technical Specifications:
- Resistance: chemical agents, weak acids, alkali, oils, salts, etc.
- Rated Voltage: up to 690V
- Maximum Current: up to 800A
- Thermal Deformation: over 240°C
- Operating Temperature: -35°C + 65°C
- Material: ABS
- IP code: IP65
- Colour: RAL7035 grey
- Recyclable
- adjustable mounting plate position

Mounting:
- Vertically on flat surface



ABS halogen free distribution boards - gray door

Board Type	Material Type	L (mm)	W (mm)	H (mm)	Packing / Box	Catalogue number
PP 3001	ABS	200	300	130	1	**5312030130**
PP 3002	ABS	250	350	150	1	**5312535150**
PP 3004	ABS	300	400	170	1	**5313040170**
PP 3005	ABS	300	400	220	1	**5313040220**
PP 3006	ABS	350	500	190	1	**5313550190**
PP 3007	ABS	400	500	240	1	**5314050240**
PP 3008	ABS	400	600	200	1	**5314060190**

Note: Open door angle 180°



ABS halogen free distribution boards - transparent door

Board Type	Material Type	L (mm)	W (mm)	H (mm)	Packing / Box	Catalogue number
PP 3011	ABS	200	300	130	1	**5342030130**
PP 3012	ABS	250	350	150	1	**5342535150**
PP 3014	ABS	300	400	170	1	**5343040170**
PP 3015	ABS	300	400	220	1	**5343040220**
PP 3016	ABS	350	500	190	1	**5343550190**
PP 3017	ABS	400	500	240	1	**5344050240**
PP 3018	ABS	400	600	200	1	**5344060190**
PP 3020	ABS	500	700	250	1	**5345070250**



ABS halogen free distribution module boards - transparent door

Board Type	Material Type	L (mm)	W (mm)	H (mm)	Packing / Box	Catalogue number
PP 3112-18modules	ABS	250	330	130	1	**5322535150**
PP 3114-24modules	ABS	300	350	150	1	**5323040170**
PP 3116-45modules	ABS	350	500	190	1	**5323550190**
PP 3118-60modules	ABS	400	600	200	1	**5324060190**

Note: Transperent door

Surface mounting polyester boards EC - IP65

3 YEAR WARRANTY

Technical Specifications:

- Colour: grey RAL 7035.
- IP65 protection degree.
- Material: made of halogen free reinforced fiberglass polyester, self-extinguishing V0 degree according to UL94.
- Double insulation, shock resistance: IK10, 20j, according to EN 62262.
- Application temperature: minimum –25°, maximum +65°.
- Resistance to abnormal heat (GWT)- board with blank door up to 960°C - board with transparent window up to 650°C.
- Application voltage 1000V, suitable for photovoltaic plants.
- Right or left reversible door with stainless steel pins – it can be opened more than 180°.
- Plain and smooth headboards for easy opening and conduit inlet.
- Removable frame ready to install slotted trunkings in the back.
- Back plates made up of metal or insulating material can be fixed directly to the board back, also if the frame is used, or can be adjusted to different heights through the kit EC625REG.
- Possibility to mount 48-75mm high switches or 102mm high switches starting from the board with dimensions 435x505x215.
- One-Screw-System: only one type of screws is used for the different accessories in order to permit a simple and easy assembly.
- Left or right reversible counter door with stainless steel pins, ergonomic handle, triangle lock, adjustable at two different heights with reference grid for the fixing of the devices.
- Fixing of the single/double blank or windowed panels through a ¼ turn screws.



Halogen free polyester boards EC- blank door

Type	Material	L (mm)	W (mm)	H (mm)	Packing / Box	Catalogue number
PBBD 5001	Polyester	270	305	170	1	**5332730170**
PBBD 5002	Polyester	325	430	185	1	**5333243185**
PBBD 5003	Polyester	435	505	215	1	**5334350215**
PBBD 5004	Polyester	435	655	215	1	**5334365215**
PBBD 5005	Polyester	545	655	265	1	**5335465265**
PBBD 5006	Polyester	620	810	320	1	**5336281320**

*Detailed installation instructions and information about the functions and applications of all additional accessories for polyester boxes, you can find on: www.elmarkholding.eu



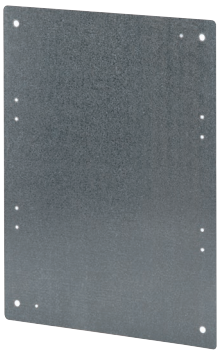
Halogen free polyester boards EC - transparent door

Type	Material	L (mm)	W (mm)	H (mm)	Packing / Box	Catalogue number
PBTD 5001	Polyester	270	305	170	1	**5362730170**
PBTD 5002	Polyester	325	430	185	1	**5363243185**
PBTD 5003	Polyester	435	505	215	1	**5364350215**
PBTD 5004	Polyester	435	655	215	1	**5364365215**
PBTD 5005	Polyester	545	655	265	1	**5365465265**
PBTD 5006	Polyester	620	810	320	1	**5366281320**



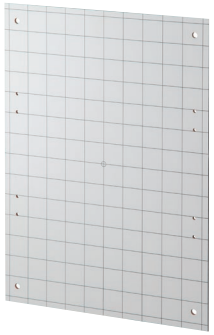
Polyester hinger counterdoor EC

Type	Material	Used for type boards	Packing / Box	Catalogue number
CD 5002	Polyester	PBTD/PBBD 5002	1	**53502CD**
CD 5003	Polyester	PBTD/PBBD 5003	1	**53503CD**
CD 5004	Polyester	PBTD/PBBD 5004	1	**53504CD**
CD 5005	Polyester	PBTD/PBBD 5005	1	**53505CD**
CD 5006	Polyester	PBTD/PBBD 5006	1	**53505CD**



Metal back plate EC

Type	Dimensions	Used for type boards	Packing / Box	Catalogue number
MP 5001	207x239	PBTD/PBBD 5001	1	**53501MP**
MP 5002	264x364	PBTD/PBBD 5002	1	**53502MP**
MP 5003	372x439	PBTD/PBBD 5003	1	**53503MP**
MP 5004	372x589	PBTD/PBBD 5004	1	**53504MP**
MP 5005	482x589	PBTD/PBBD 5005	1	**53505MP**
MP 5006	556x739	PBTD/PBBD 5006	1	**53506MP**



Insulanting plastic back plate EC

Type	Dimensions	Used for type boards	Packing / Box	Catalogue number
IBP 5001	207x239	PBTD/PBBD 5001	1	**53501IBP**
IBP5002	264x364	PBTD/PBBD 5002	1	**53502IBP**
IBP5003	372x439	PBTD/PBBD 5003	1	**53503IBP**
IBP 5004	372x589	PBTD/PBBD 5004	1	**53504IBP**
IBP 5005	482x589	PBTD/PBBD 5005	1	**53505IBP**
IBP 5006	556x739	PBTD/PBBD 5006	1	**53506IBP**

*Detailed installation instructions and information about the functions and applications of all additional accessories for polyester boxes, you can find on: www.elmarkholding.eu



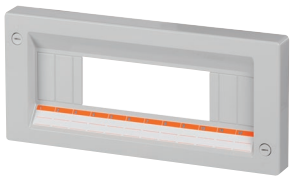
Pair of uprights for rail DIN and panels EC

Type	Used for type boards	Packing / Box	Catalogue number
DP 5002	PBTD/PBBD 5002	1 pair	**53502DP**
DP 5003	PBTD/PBBD 5003	1 pair	**53503DP**
DP 5004	PBTD/PBBD 5004/5005	1 pair	**53504DP**
DP 5006	PBTD/PBBD 5006	1 pair	**53506DP**



DIN rail with support EC

Type	Module capacity	Used for type boards	Packing / Box	Catalogue number
DS 5002	12	PBTD/PBBD 5002	1	**53502DS**
DS 5003	18	PBTD/PBBD 5003/5004	1	**53503DS**
DS 5004	24	PBTD/PBBD 5005	1	**53504DS**
DS 5005	28	PBTD/PBBD 5006	1	**53505DS**



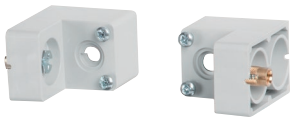
Cover module with window EC

Type	Module capacity	Used for type boards	Packing / Box	Catalogue number
CMW 5002	12	PBTD/PBBD 5002	1	**53502CMW**
CMW 5003	18	PBTD/PBBD 5003/5004	1	**53503CMW**
CMW 5004	24	PBTD/PBBD 5005	1	**53504CMW**
CMW 5005	28	PBTD/PBBD 5006	1	**53505CMW**



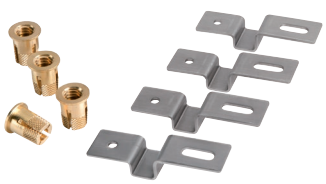
Blank cover module EC

Type	Heigth of single/double cover (mm)	Used for type boards	Packing /Box	Catalogue number single cover	Catalogue number double cover
Blank cover module	125/250	PBTD/PBBD 5002	1	**53502S**	**53502D**
	150/300	PBTD/PBBD 5003/5004	1	**53503S**	**53503D**
	150/300	PBTD/PBBD 5005	1	**53505S**	**53505D**
	150/300	PBTD/PBBD 5006	1	**53506S**	**53506D**



Deep adjusment back plate kit EC

Type	Used for type boards	Need kits	Packing /Box	Catalogue number
Deep adjusment back plate kit	PBTD/PBBD 5002/5003	2kit	1 kit (2 pcs)	**53507**
	PBTD/PBBD 5004/5005	3kit	1 kit (2 pcs)	**57508**
	PBTD/PBBD 5006	4kit	1 kit (2 pcs)	**53509**



Spare brass and brackets for fixing- galvanized EC

Type	Used for type boards	Packing /Box	Catalogue number
Galvanized brackets	All type	1 kit (4 pcs)	**53510**
Spare brass insert kit	All type	1 kit (10 pcs)	**53512**



Safety lock EC

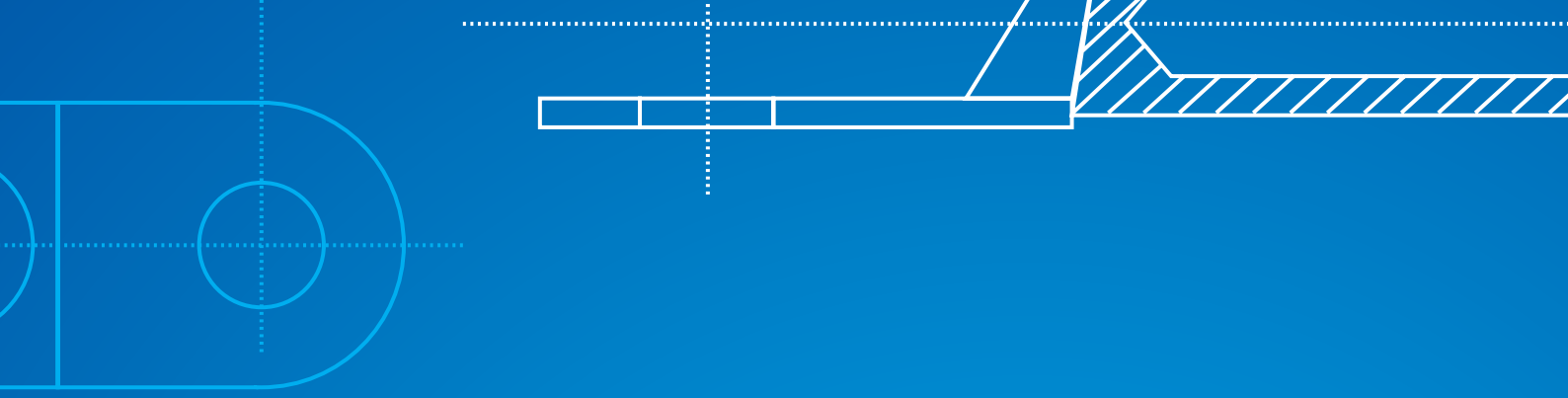
Type	Used for type boards	Packing /Box	Catalogue number
Safety lock	All type	1	**53511**

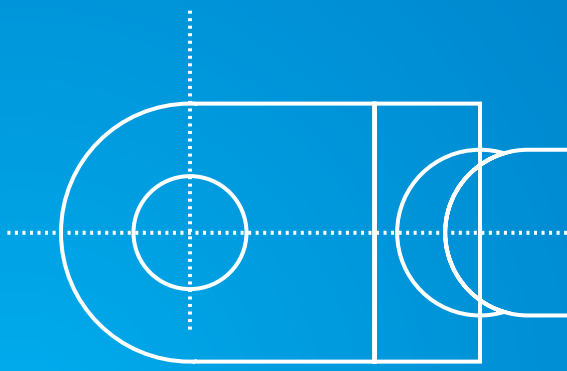
Note: Lock supplied with two unified keys. The keys are inified and open all the locks

CABLE TERMINALS

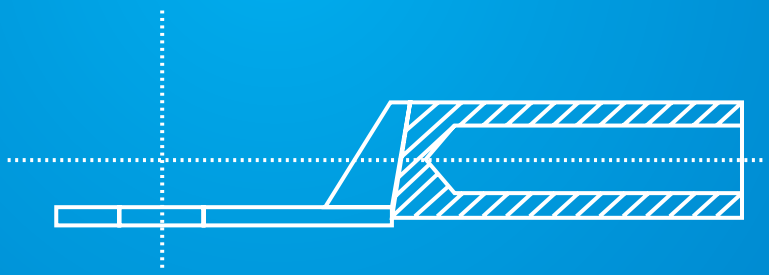
CABLE

TERMINALS













ELMARK

Connection tubes | 160

Isolated cable terminals | 163





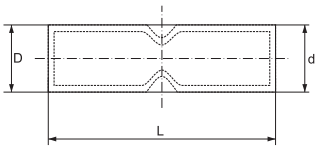
Connection tubes - GTY type

3 YEAR WARRANTY

Copper pipes with galvanic tin coating, used for joining of copper rigid or multicore conductors with different sections. The assembling is made by mechanical pressing with crimping tool.

Technical data:
- Material: copper alloy
- Coating: tin
- Application: general

Standard: EN 61 238-1



Type	Length L (mm)	Outer diameter D (mm)	Inner diameter d (mm)	Cable (mm^2)	Packing / Box (pcs)	Catalogue number
GTY-4	20	5	3	4	1000 / 16000	**59213**
GTY-6	25	5.3	3.7	6	500 / 1500 / 12000	**59201**
GTY-10	30	6.3	4.5	10	500 / 1500 / 12000	**59202**
GTY-16	35	7.5	5.7	16	100 / 200 / 4800	**59203**
GTY-25	40	9	7.2	25	100 / 500 / 2000	**59204**
GTY-35	45	10.8	8.5	35	100 / 200 / 1600	**59205**
GTY-50	50	12.5	9.8	50	20 / 200 / 1600	**59206**
GTY-70	55	14.5	11.5	70	10 / 100 / 800	**59207**
GTY-95	60	17	13.7	95	10 / 80 / 640	**59208**
GTY-120	65	19	15	120	10 / 60 / 480	**59209**
GTY-150	70	21	16.7	150	10 / 50 / 400	**59210**
GTY-185	75	23	18.5	185	10 / 40 / 320	**59211**
GTY-240	80	26	21	240	10 / 30 / 240	**59212**



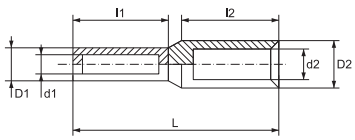
Bimetallic connection tube - GTL type

3 YEAR WARRANTY

Pipes made of two metals – copper and aluminum without galvanic coating. They are designed for joining copper and aluminum conductors – rigid or multicore conductors with different section. The connection is accomplished through crimping pliers, through mechanical pressing of the butt terminals and the conductor. They are used for protection against electrochemical corrosion got at two metals contact with different chemical properties and conductivity at electrical current feed. They are manufactured under modern technology and have high quality and long exploitation period.

Technical data:
- Material: copper aluminum alloy
- Coating: none
- Application: general for joining of two types of conductors

Standard: EN 61 238-1



Butt terminal type	d1	D1	d2	D2	l1	l2	L	Packing / Box (pcs)	Catalogue number
GTL - 16	5	9	6	10	30	30	75	20 / 200 / 1200	**59214**
GTL - 25	6	10	7	12	30	33	82	20 / 400 / 1500	**59215**
GTL - 35	7	11	8.5	14	30	40	90	20 / 300 / 1000	**59216**
GTL - 50	8.5	13	9.8	16	32	42	95	20 / 800	**59217**
GTL - 70	9.5	15	11.5	18	38	50	105	10 / 600	**59218**
GTL - 95	11.5	17	13.5	21	40	50	110	10 / 500	**59219**
GTL - 120	13.5	19	15	23	42	55	112	10 / 400	**59220**
GTL - 150	15	21	17	25	44	55	118	10 / 350	**59221**
GTL - 185	17	23	18.5	27	46	60	125	10 / 300	**59222**
GTL - 240	19	26	21	30	54	60	130	10 / 200	**59223**

Cable terminals without isolation - JM type

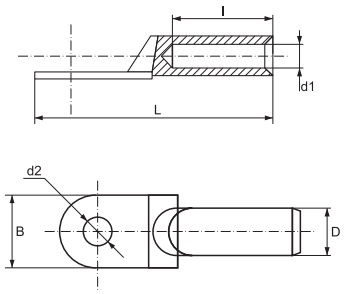
3 YEAR WARRANTY



They are used for joining copper conductors - multicore conductors with different section to electrical devices or connections to combine all cores of the conductor, to provide safe connection at tightening in terminals and safe connection at the base of the terminal. Thus the connection stability against vibrations is increased and the possibility for short circuit is decreased. They are made of copper alloy with galvanic tin coating. The connection is realized through crimping pliers, through mechanic pressing of the terminal and conductor. Two types are offered with standard length SC and extended base JM. They are manufactured under modern technology and have high quality and long exploitation period.

Technical data:
- Material: copper alloy
- Coating: tin
- Application: general for joining conductors to electrical devices.

Standard: EN 61 238-1



Shoe type	d1 (mm)	D (mm)	d2 (mm)	L (mm)	Packing / Box (pcs)	Catalogue number
JM - 2.5/6	2.2	4.5	6	24	1000 / 3000 / 24000	**59240**
JM - 4/6	3.0	4.8	6	24	1000 / 2000 / 16000	**59241**
JM - 6/6	3.8	5.5	6	24	500 / 2000 / 16000	**59035**
JM - 6/8	3.8	5.5	8	2 4	500 / 2000 / 16000	**59059**
JM - 10/6	4.8	6.8	6	25.5	500 / 1500 / 12000	**59036**
JM - 10/8	4.8	6.8	8	25.5	500 / 1500 / 12000	**59037**
JM - 16/6	5.5	7.5	6	30.5	400 / 800 / 6400	**59038**
JM - 16/8	5.5	7.5	8	30.5	400 / 800 / 6400	**59039**
JM - 16/10	5.5	7.5	10	30.5	400 / 800 / 6400	**59040**
JM - 25/8	7	9	8	34	250 / 500 / 4000	**59041**
JM - 25/10	7	9	10	34	250 / 500 / 4000	**59042**
JM - 35/8	8.2	10.5	8	38	200 / 400 / 3200	**59043**
JM - 35/10	8.2	10.5	10	38	200 / 400 / 3200	**59044**
JM - 35/12	8.2	10.5	12	38	200 / 400 / 3200	**59045**
JM - 50/8	9.8	12.5	8	45	100 / 200 / 1600	**59046**
JM - 50/10	9.8	12.5	10	45	100 / 100 / 1600	**59047**
JM - 50/12	9.8	12.5	12	45	100 / 200 / 1600	**59048**
JM - 70/10	11.5	14.5	10	50	80 / 100 / 1280	**59049**
JM - 70/12	11.5	14.5	12	50	80 / 100 / 1280	**59050**
JM - 95/10	13.8	17.5	10	55.5	50 / 200 / 800	**59051**
JM - 95/12	13.8	17.5	12	55.5	50 / 200 / 800	**59052**
JM - 120/10	15.5	19.5	10	63	30 / 60 / 480	**59053**
JM - 120/12	15.5	19.5	12	63	30 / 60 / 480	**59054**
JM - 150/12	16.5	21	12	71	10 / 50 / 400	**59055**
JM - 185/12	18.8	23.5	12	78	10 / 40 / 320	**59056**
JM - 185/16	18.8	23.5	16	78	10 / 40 / 320	**59057**
JM - 240/16	21.3	26.5	16	92	10 / 30 / 240	**59058**



Bimetalic non-isolated cable terminals for crimping DTL

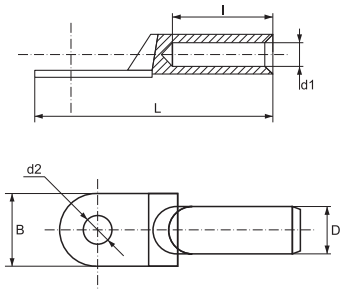
3 YEAR WARRANTY

They are used for joining aluminum conductors - multicore conductors with different section to electrical devices or connections to combine all cores of the conductor, to provide safe connection at tightening in terminals and safe connection at the base of the terminal. Thus the connection stability against vibrations is increased and the possibility for short circuit is decreased. They are made of copper and aluminum alloys as in the aluminum billet is made under special technology the copper terminal formed like an ear. The connection is realized through crimping pliers, through mechanic pressing of the terminal and conductor. They are manufactured under modern technology and have high quality and long exploitation period.

Technical data:

- Material: copper aluminum
- Application: general for joining conductors to electrical devices.

Standard: EN 61 238-1



Shoe type	d1 (mm)	D (mm)	d2 (mm)	L (mm)	l (mm)	B (mm)	Packing / Box (pcs)	Catalogue number
DTL - 1 - 16	6	11	8	70	30	16	20 / 200 / 1440	**59224**
DTL - 1 - 25	7	12	8	75	34	18	20 / 180 / 1080	**59225**
DTL - 1 - 35	8.5	14	10	85	38	20.5	20 / 100 / 600	**59226**
DTL - 1 - 50	9.8	16	10	90	40	23	20 / 70 / 420	**59227**
DTL - 1 - 70	11.5	18	12	102	48	26	10 / 60 / 360	**59228**
DTL - 1 - 95	13.5	21	12	112	50	28	10 / 40 / 180	**59229**
DTL - 1 - 120	15	23	14	120	53	30	10 / 30 / 120	**59230**
DTL - 1 - 150	16.5	25	14	126	56	34	5 / 25 / 120	**59231**
DTL - 1 - 185	18.5	27	16	133	58	37	5 / 20 / 120	**59232**
DTL - 1 - 240	21	30	16	140	60	40	4 / 12 / 72	**59233**



Copper cable wire fork terminal connector

3 YEAR WARRANTY

Type	Length (mm)	Colour	Conductor (mm2)	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
SVS1.25-4	21.2	Red	0.5-1.5	100	10 / 240	**59080**
SVS1.25-5	21.2	Red	0.5-1.5	100	15 / 180	**59081**
SVS1.25-6	21.2	Red	0.5-1.5	100	15 / 180	**59082**
SVS 2-4	21.0	Blue	1.5-2.5	100	15 / 180	**59083**
SVS 2-5	22.5	Blue	1.5-2.5	100	15 / 180	**59084**
SVS 2-6	27,6	Blue	1.5-2.5	100	10 / 120	**59085**
SVS 5,5-4	24.5	Yellow	4-6	100	5 / 60	**59086**
SVS 5,5-5	27,9	Yellow	4-6	100	5 / 60	**59087**
SVS 5,5-6	27,9	Yellow	4-6	100	5 / 60	**59088**



Isolated cable joints

3 YEAR WARRANTY

Metal pipes with outside PVC insulation. They are used for joining/extending multicore conductors with section up to 6mm2. It increases the connection stability against vibrations and decreases the possibility for short circuit. The connection is realized through crimping pliers, through mechanic pressing of the terminal and conductor. The different insulation colour corresponds to different conductor sections.

Technical data:
- Material: copper alloy
- Coating: polyvinylchloride
- Application: general for joining of copper conductors

Standard: EN 61 238-1

Type	Length (mm)	Colour	Conductor (mm2)	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
PVT 1.25	16	red	1	100	10 / 120	**59015**
BV 1.25	25	red	1	100	10 / 120	**59001**
PVT 2	16	blue	1.5-2.5	100	10 / 120	**59034**
BV 2	25	blue	1.5-2.5	100	10 / 60	**59002**
PVT 5.5	20	yellow	4-6	100	5 / 60	**59014**
BV 5.5	25	yellow	4-6	100	5 / 60	**59003**



Isolated cable terminals - MDD/FDD types

3 YEAR WARRANTY

They represent a cable terminal made of brass alloy with galvanic tin coating and insulated with polyvinylchloride. They are used as non-insulated terminals, as the insulated part protects the cores from bending and breaking in the joining point and at the same time it protects the staff from direct contact to the current - carrying parts. They are used for conductors with section up to 6 mm. The connection is realized through crimping pliers, through mechanic pressing of the terminal and cable. The different insulation colour corresponds to different conductor sections. They are manufactured under modern technology and have high quality and long exploitation period.
All insulated cable terminals are being offered in 100 pcs. packing

Technical data:
- Material: copper alloy
- Coating: polyvinylchloride
- Application: general for joining copper conductors
- Ambient temperature: -10 to +75°C

Type	Shape	Colour	Conductor (mm2)	Shoe width	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
MDD 1.25 - 187	male	red	1	187	100	10 / 240	**59012**
MDD 1.25 - 250	male	red	1	250	100	10 / 240	**59009**
MDD 2 - 187	male	blue	1.5-2.5	187	100	10 / 240	**59013**
MDD 2 - 250	male	blue	1.5-2.5	250	100	10 / 180	**59011**
MDD 5.5 - 250	male	yellow	4-6	250	100	10 / 120	**59010**
FDD 1.25 - 187	female	red	1	187	100	20 / 240	**59008**
FDD 1.25 - 187	female	red	1	250	100	15 / 180	**59006**
FDD 2 - 187	female	blue	1.5-2.5	187	100	20 / 240	**59007**
FDD 2 - 250	female	blue	1.5-2.5	250	100	10 / 180	**59004**
FDD 5.5 - 250	female	yellow	4-6	250	100	10 / 120	**59005**



Isolated cable terminals - E type

3 YEAR WARRANTY

Type	Colour	Terminal length (mm)	Conductor (mm2)	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
E0508	white	8	0.5	100	50 / 600	**59023**
E7508	blue	8	0.75	100	50 / 600	**59024**
E1008	red	8	1.0	100	50 / 600	**59025**
E1510	black	10	1.5	100	30 / 360	**59026**
E2512	grey	12	2.5	100	30 / 300	**59027**
E4012	orange	12	4.0	100	20 / 240	**59028**
E6018	green	18	6.0	100	5 / 120	**59029**
E10-18	dark green	18	10	100	8 / 96	**59030**
E16-18	milky yellow	18	16	100	6 / 60	**59031**
E25-16	black	16	25	100	5 / 36	**59032**
E35-25	grey-yellow	25	35	100	2 / 24	**59033**



Isolated cable terminals - PTV type

3 YEAR WARRANTY

Type	Shape	Colour	Conductor (mm2)	Shoe width	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
PTV 1.25 - 10	male	red	0.25-1.5	1.9	100	20 / 240	**59101**
PTV 1.25 - 12	male	red	0.25-1.5	1.9	100	20 / 240	**59102**
PTV 2 - 10	male	blue	1.5-2.5	1.9	100	20 / 240	**59103**
PTV 2 - 12	male	blue	1.5-2.5	1.9	100	15 / 180	**59104**
PTV 5.5 - 13	male	yellow	4-6	2.9	100	8 / 96	**59105**



Isolated cable terminals - RVL type

3 YEAR WARRANTY

Type	Size of the opening (mm)	Colour	Conductor (mm2)	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
RVL 1.25-4	4	red	1	100	20 / 240	**59021**
RVL 1.25-5	5	red	1	100	15 / 180	**59022**
RVL 2-4	4	blue	1.5-2.5	100	15 / 180	**59018**
RVL 2-5	5	blue	1.5-2.5	100	10 / 120	**59019**
RVL 5.5-4	4	yellow	4-6	100	8 / 96	**59020**
RV 5.5-5	5	yellow	4-6	100	8 / 96	**59016**
RV 5.5-6	6	yellow	4-6	100	8 / 96	**59017**



Isolated cable terminals - PBDD type

3 YEAR WARRANTY

Type	Shape	Colour	Conductor (mm2)	Shoe width	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
PBDD 1.25 - 250	male	red	0.25-1.5	6.3	100	5 / 60	**59106**
PBDD 2 - 250	male	blue	1.5-2.5	6.3	100	5 / 60	**59107**
PBDD 5.5 - 250	male	yellow	4-6	6.3	100	5 / 60	**59108**



Isolated cable terminals - MPD type

3 YEAR WARRANTY

Type	Shape	Colour	Conductor (mm2)	Shoe width	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
MPD 1.25 - 156	male	red	0.25-1.5	6.3	100	10 / 240	**59109**
MPD 2 - 195	male	blue	1.5-2.5	6.3	100	10 / 120	**59110**
MPD 5.5 - 195	male	yellow	4-6	6.3	100	10 / 120	**59111**



Isolated cable terminals - MDFN type

3 YEAR WARRANTY

Type	Shape	Colour	Conductor (mm2)	Shoe width	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
MDFN 1.25 - 250	male	red	0.25-1.5	4	100	5 / 60	**59112**
MDFN 2 - 250	male	blue	1.5-2.5	4	100	5 / 60	**59113**
MDFN 5 - 250	male	yellow	4-6	5	100	4 / 48	**59114**



Isolated cable terminals - FDFNY type

3 YEAR WARRANTY

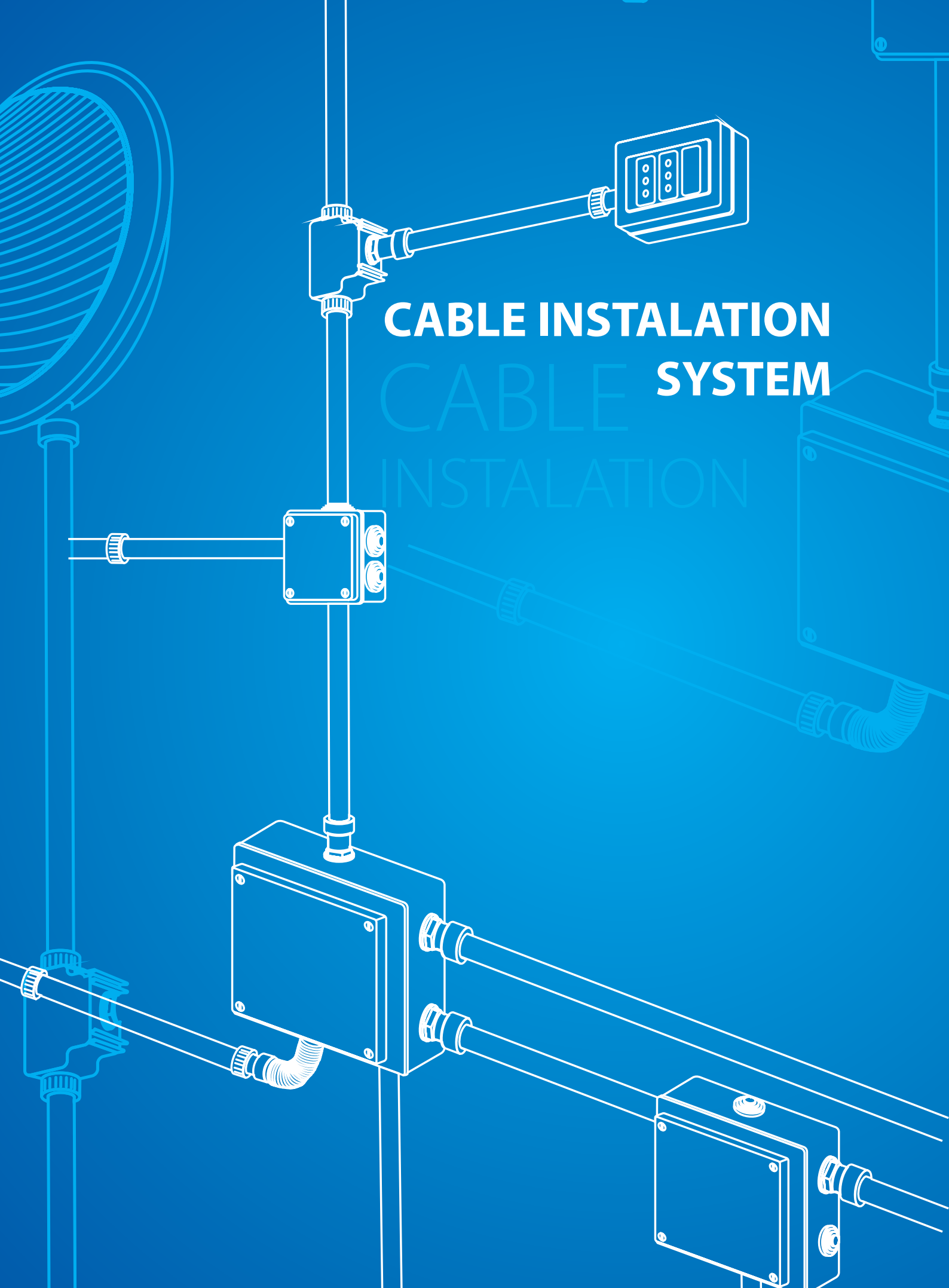
Type	Length (mm)	Conductor (mm2)	Colour	Packing (pcs.)	Packing / Box (pcs.)	Catalogue number
FDFNY	250	1,25	red	100	10 / 60	**59242**
FDFNY	250	2	blue	100	10 / 60	**59243**
FDFNY	250	5,5	yellow	100	10 / 60	**59244**



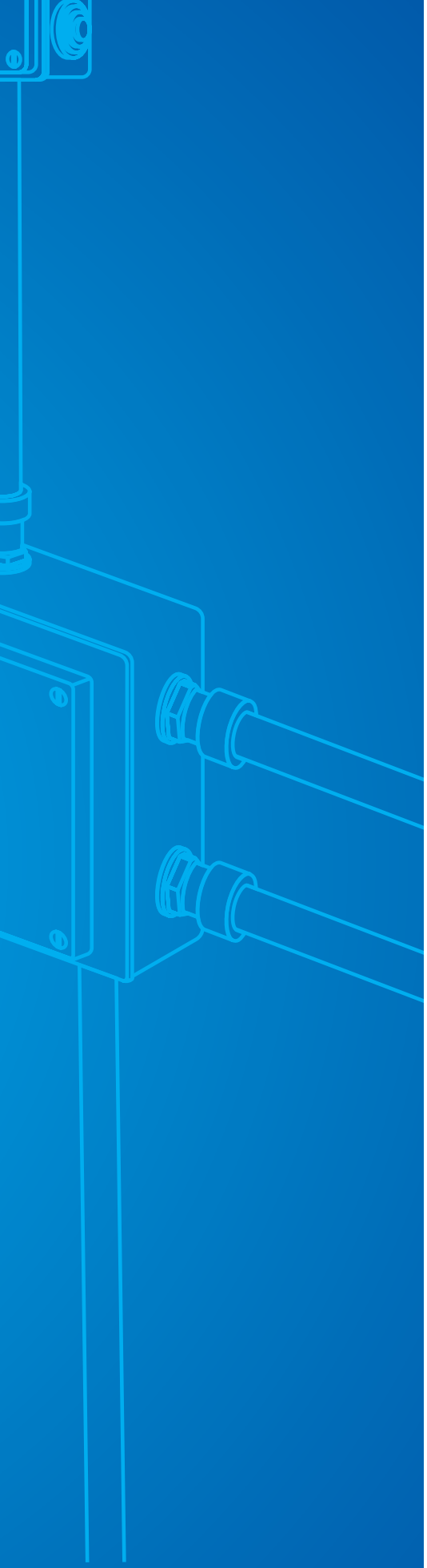
Isolated cable terminals - CHS type

3 YEAR WARRANTY

Type	Length (mm)	Conductor (mm2)	Packing / Box (pcs.)	Packing / Box (pcs.)	Catalogue number
CHS3	18.1	0.25-1.5	100	250	**59115**
CHS4	20.1	1.5-2.5	100	200	**59116**
CHS5	25.5	4-6	100	200	**59117**
CHS6	27.3	8	100	100	**59118**



CABLE INSTALATION SYSTEM



ELMARK®

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Waterproof junction boxes | 182



Plastic cable trunking CT2

3 YEAR WARRANTY

Cable trunkings are practical solution of organizing power and communication cables in office and residential buildings. They increase the reliability in operation of the electrical systems and allow quick adaptation if necessary to rearrange the interior. Fast and simple installation. In combination with a wide range of accessories, building irregularities are quickly overcome. Non- flammable material, easy to cut and paint.

Type	Size(mm)	Length	Colour	Packing (pcs)	Catalogue number
PLASTIC CABLE TRUNKING CT2	12x12	2m	white	100	**5621212**
PLASTIC CABLE TRUNKING CT2	15X10	2m	white	100	**5621510**
PLASTIC CABLE TRUNKING CT2	16X16	2m	white	100	**5621616**
PLASTIC CABLE TRUNKING CT2	25X16	2m	white	80	**5622516**
PLASTIC CABLE TRUNKING CT2	25X25	2m	white	50	**5622525**
PLASTIC CABLE TRUNKING CT2	40X16	2m	white	50	**5624016**
PLASTIC CABLE TRUNKING CT2	40X25	2m	white	50	**5624025**
PLASTIC CABLE TRUNKING CT2	40X40	2m	white	40	**5624040**
PLASTIC CABLE TRUNKING CT2	60X40	2m	white	30	**5626040**
PLASTIC CABLE TRUNKING CT2	60X60	2m	white	32	**5626060**
PLASTIC CABLE TRUNKING CT2	80X40	2m	white	18	**5628040**
PLASTIC CABLE TRUNKING CT2	80X60	2m	white	24	**5628060**
PLASTIC CABLE TRUNKING CT2	100X40	2m	white	16	**56210040**
PLASTIC CABLE TRUNKING CT2	100X60	2m	white	16	**56210060**



Switches and sockets frames for cable trunking

3 YEAR WARRANTY

Cable trunking frames are decorative solution for installation of switches and sockets on places where their normal mounting is not possible. The assembly set includes subframe and main white frame. Universal sizes, suitable for mounting of switches and sockets from different manufacturers. Single, double and triple frames are offered.

Type	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
SINGLE FRAME	100X40/100X60	White	20	**562100441**
DOUBLE FRAME	100X40/100X60	White	14	**562100442**
TRIPLE FRAME	100X40/100X60	White	5	**562100443**



Outside corner

3 YEAR WARRANTY

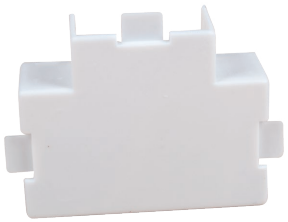
Type	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
Outside corner	12x12	white	50	**56212121**
Outside corner	15X10	white	50	**56215101**
Outside corner	16X16	white	50	**56216161**
Outside corner	25X16	white	30	**56225161**
Outside corner	25X25	white	30	**56225251**
Outside corner	40X16	white	30	**56240161**
Outside corner	40X25	white	30	**56240251**
Outside corner	40X40	white	30	**56240401**
Outside corner	60X40	white	10	**56260401**
Outside corner	60X60	white	10	**56260601**
Outside corner	80X40	white	8	**56280401**
Outside corner	80X60	white	8	**56280601**
Outside corner	100X40	white	6	**562100401**
Outside corner	100X60	white	6	**562100601**



Inside corner

3 YEAR WARRANTY

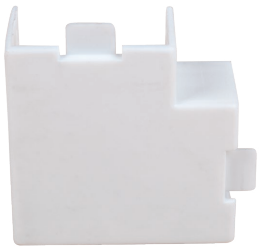
Type	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
Inside corner	12x12	white	50	**56212122**
Inside corner	15X10	white	50	**56215102**
Inside corner	16X16	white	50	**56216162**
Inside corner	25X16	white	30	**56225162**
Inside corner	25X25	white	30	**56225252**
Inside corner	40X16	white	30	**56240162**
Inside corner	40X25	white	30	**56240252**
Inside corner	40X40	white	30	**56240402**
Inside corner	60X40	white	10	**56260402**
Inside corner	60X60	white	10	**56260602**
Inside corner	80X40	white	8	**56280402**
Inside corner	80X60	white	8	**56280602**
Inside corner	100X40	white	6	**562100402**
Inside corner	100X60	white	6	**562100602**



T- corner

3 YEAR WARRANTY

Type	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
T- corner	12x12	white	50	**56212123**
T- corner	15X10	white	50	**56215103**
T- corner	16X16	white	50	**56216163**
T- corner	25X16	white	20	**56225163**
T- corner	25X25	white	20	**56225253**
T- corner	40X16	white	30	**56240163**
T- corner	40X25	white	30	**56240253**
T- corner	40X40	white	30	**56240403**
T- corner	60X40	white	16	**56260403**
T- corner	60X60	white	16	**56260603**
T- corner	80X40	white	8	**56280403**
T- corner	80X60	white	8	**56280603**
T- corner	100X40	white	8	**562100403**
T- corner	100X60	white	8	**562100603**



L- corner

3 YEAR WARRANTY

Type	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
L- corner	12x12	white	50	**56212124**
L- corner	15X10	white	50	**56215104**
L- corner	16X16	white	50	**56216164**
L- corner	25X16	white	30	**56225164**
L- corner	25X25	white	30	**56225254**
L- corner	40X16	white	30	**56240164**
L- corner	40X25	white	30	**56240254**
L- corner	40X40	white	30	**56240404**
L- corner	60X40	white	16	**56260404**
L- corner	60X60	white	16	**56260604**
L- corner	80X40	white	12	**56280404**
L- corner	80X60	white	12	**56280604**
L- corner	100X40	white	8	**562100404**
L- corner	100X60	white	8	**562100604**



Connector

3 YEAR WARRANTY

Type	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
Connector	12x12	white	50	**56212125**
Connector	15X10	white	50	**56215105**
Connector	16X16	white	50	**56216165**
Connector	25X16	white	30	**56225165**
Connector	25X25	white	30	**56225255**
Connector	40X16	white	30	**56240165**
Connector	40X25	white	30	**56240255**
Connector	40X40	white	30	**56240405**
Connector	60X40	white	25	**56260405**
Connector	60X60	white	25	**56260605**
Connector	80X40	white	50	**56280405**
Connector	80X60	white	50	**56280605**
Connector	100X40	white	50	**562100405**
Connector	100X60	white	30	**562100605**



End cap

3 YEAR WARRANTY

Type	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
End cap	12x12	white	50	**56212126**
End cap	15X10	white	50	**56215106**
End cap	16X16	white	50	**56216166**
End cap	25X16	white	50	**56225166**
End cap	25X25	white	50	**56225256**
End cap	40X16	white	30	**56240166**
End cap	40X25	white	30	**56240256**
End cap	40X40	white	30	**56240406**
End cap	60X40	white	50	**56260406**
End cap	60X60	white	50	**56260606**
End cap	80X40	white	60	**56280406**
End cap	80X60	white	60	**56280606**
End cap	100X40	white	50	**562100406**
End cap	100X60	white	50	**562100606**

Separator

3 YEAR WARRANTY



Type	Length (m)	Used for cable trunking	Colour	Packing (pcs)	Catalogue number
SEPARATOR 40	2	60x40, 80x40, 100x40	white	40	**56261111**
SEPARATOR 60	2	60x40, 80x40, 100x40	white	40	**56261112**



Plastic cable trunking self-adhesive

3 YEAR WARRANTY

Type	Size(mm)	Length	Colour	Packing m/pcs	Catalogue number
Plastic cable trunking self-adhesive	12x12	2m	White	250/125	**5621212A**
	15x10	2m	White	250/125	**5621510A**
	16x16	2m	White	250/125	**5621616A**
	25x16	2m	White	100/50	**5622516A**
	25x25	2m	white	100/50	**5622525A**
	40x16	2m	white	50/25	**5624016A**
	40x25	2m	White	80/40	**5624025A**
	40x40	2m	White	80/40	**5624040A**



Plastic cable trunking - Dark Walnut

3 YEAR WARRANTY

Type	Size(mm)	Length	Colour	Packing m/pcs	Catalogue number
Plastic cable trunking dark walnut	12x12	2m	Dark walnut	250/125	**5621212DW**
	15x10	2m	Dark walnut	250/125	**5621510DW**
	16x16	2m	Dark walnut	250/125	**5621616DW**
	25x16	2m	Dark walnut	150/75	**5622516DW**
	25x25	2m	Dark walnut	100/50	**5622525DW**
	40x25	2m	Dark walnut	80/40	**5624025DW**



Plastic cable trunking - Light Beech

3 YEAR WARRANTY

Type	Size(mm)	Length	Colour	Packing m/pcs	Catalogue number
Plastic cable trunking light beech	12x12	2m	Light Beech	250/125	**5621212LB**
	15x10	2m	Light Beech	250/125	**5621510LB**
	16x16	2m	Light Beech	250/125	**5621616LB**
	25x16	2m	Light Beech	150/75	**5622516LB**
	25x25	2m	Light Beech	100/50	**5622525LB**
	40x25	2m	Light Beech	80/40	**5624025LB**



Plastic cable trunking - Pear

3 YEAR WARRANTY

Type	Size(mm)	Length	Colour	Packing m/pcs	Catalogue number
Plastic cable trunking pear	12x12	2m	Pear	250/125	**5621212P**
	15x10	2m	Pear	250/125	**5621510P**
	16x16	2m	Pear	250/125	**5621616P**
	25x16	2m	Pear	150/75	**5622516P**
	25x25	2m	Pear	100/50	**5622525P**
	40x25	2m	Pear	80/40	**5624025P**



Floor type plastic cable trunking CT2

3 YEAR WARRANTY

Type	Size(mm)	Length	Colour	Packing (pcs)	Catalogue number
Floor type plastic cable trunking CT2	50x12	2m	grey	60	**5625012F**
	75x20	2m	grey	40	**5627520F**
	90x20	2m	grey	20	**5629020F**



Slotted plastic cable trunking CT2

2 YEAR WARRANTY

Type	Size(mm)	Length	Colour	Packing (pcs)	Catalogue number
Slotted plastic cable trunking CT2	25x25	2m	grey	196	**5622525S**
	25x40	2m	grey	64	**5622540S**
	40x40	2m	grey	64	**5624040S**
	40x60	2m	grey	60	**5624060S**
	60x40	2m	grey	60	**5626040S**
	60x60	2m	grey	48	**5626060S**
	80x40	2m	grey	40	**5628040S**
	80x60	2m	grey	40	**5628060S**
	100x40	2m	grey	32	**56210040S**
	100x60	2m	grey	32	**56210060S**

Self-extinguishing pliable conduits with draw tape EC

3 YEAR WARRANTY

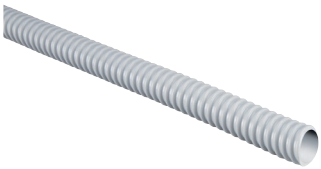


Technical data:
Material- technopolymer on PVC base, Self extinguishing V0 degree to UL94
Compresion resistance- 320N
Standard- EN 61386-1; EN61386-22
RAL- 7035

Type	Inner Diameter Φ (mm)	Outer Diameter Φ (mm)	Packing (m)	Catalogue number
Self-extinguishing pliable conduits with draw tape	10,7	16	100	**500N16**
	14,1	20	100	**500N20**
	18,2	25	50	**500N25**
	24,3	32	25	**500N32**
	32,3	40	25	**500N40**

Spiral flexible PVC conduits- UV rays resistant EC

3 YEAR WARRANTY



Technical data:
Material (spiral+cover)- shock resistance technopolymer on PVC base
Self extinguishing V0 degree to UL94
Compresion resistance- 320N
Instalation temperature: -15/+70
Operating temperature: -5/+65
Type: UV rays resistance

Type	Inner Diameter Φ (mm)	Outer Diameter Φ (mm)	Packing (m)	Catalogue number
UV flexible pvc conduit	12	16,2	30	**500UV12**
	16	20,2	30	**500UV16**
	20	24,2	30	**500UV20**
	25	29,6	30	**500UV25**
	32	37,2	30	**500UV32**

Nylon cable draw tape EC

2 YEAR WARRANTY



Type	Diameter Φ (mm)	Lenght (m)	Colour	Packing (pcs)	Catalogue number
Nylon cable draw tape	3	3	Transparent	1/340	**500305**
	3	5	Transparent	1/120	**500315**



PVC insulated steel spirals

3 YEAR WARRANTY

Technical data:
Material - Galvanized steel, helically wound, flexible steel conduit with PVC coating
PVC-resistance against corrosion
Colour- black
Operating temperature: -5/+65

Type	Inner Diameter Φ (mm)	Outer Diameter Φ (mm)	Packing (m)	Catalogue number
PVC insulated steel spirals	11	15,2	50	**500P11**
	14	18,4	50	**500P14**
	16	20,4	50	**500P16**
	18	22,4	50	**500P18**
	26	30,4	25	**500P26**
	37	42,4	25	**500P37**



PVC self-extiguishing rigid insulating conduit EC

3 YEAR WARRANTY

Rigid insulating conduit are practical solution of organizing power and communication cables in office and residential buildings. They increase the reliability in operation of the electrical systems. Fast and simple installation. In combination with a wide range of accessories, building irregularities are quickly overcome. Non- flammable material, easy to cut and paint.

Technical data:
Material - shock resistance technopolymer on rigid PVC base
Self extinguishing V0 degree to UL94
Compresion resistance- 320N
Standard- EN 61386-1; EN 61386-21

Type	External diameter Ø (mm)	Length (m)	Colour	IP code	Packing (pcs)	Catalogue number
Plastic cable conduit, with sleeve	16	3	GREY	40	34	**50016**
	20	3	GREY	40	34	**50020**
	25	3	GREY	40	20	**50025**
	32	3	GREY	40	10	**50032**
	40	3	GREY	40	10	**50040**

Accessories for PVC self-extiguishing rigid insulating conduits and flexible spiral conduits, IP 65 EC

3 YEAR WARRANTY

Technical data:
Material- shock resistant technopolymer on PVC base
Self-extinguishing V0 degree to UL94
Glow wire test: up to 960°C
O-ring to compensate the conduit tolerances
Standard- EN 61386-1; EN61386-21
RAL- 7035



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
PVC bend flexible	16	65	GREY	50/200	**500FB16**
	20	65	GREY	50/200	**500FB20**
	25	65	GREY	35/140	**500FB25**
	32	65	GREY	20/80	**500FB32**



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
PVC bend 90°	16	65	GREY	100/1000	**500BB16**
	20	65	GREY	50/600	**500BB20**
	25	65	GREY	25/300	**500BB25**
	32	65	GREY	100	**500BB32**
	40	65	GREY	100	**500BB40**



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
Conduit-conduit PVC joint	16	65	GREY	10/350	**500CM16**
	20	65	GREY	10/350	**500CM20**
	25	65	GREY	10/200	**500CM25**
	32	65	GREY	10/100	**500CM32**
	40	65	GREY	5/80	**500CM40**



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
Conduit-box PVC joint	16	65	GREY	10/350	**500CB16**
	20	65	GREY	10/350	**500CB20**
	25	65	GREY	10/200	**500CB25**
	32	65	GREY	10/100	**500CB32**
	40	65	GREY	5/80	**500CB40**



Type	Conduit diameter (mm)	Flexible spiral diameter (mm)	IP code	Colour	Packing/ Box (pcs)	Catalogue number
PVC rigid conduit - flexible spiral conduits joint	16	12	65	GREY	10/350	**500DD16**
	20	16	65	GREY	10/350	**500DD20**
	25	20	65	GREY	10/200	**500DD25**
	32	25	65	GREY	10/100	**500DD32**
	40	32	65	GREY	5/100	**500DD40**



Accessories for PVC self-extiguishing rigid insulating conduits and flexible spiral conduits, IP 40 EC

3 YEAR WARRANTY

Technical data:
Material- shock resistant technopolymer on PVC base
Self-extinguishing V0 degree to UL94
Glow wire test: up to 960°C
Standard- EN 61386-1; EN61386-21
RAL- 7035

Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
PVC bend flexible	16	44	GREY	50/200	**500FK16**
	20	44	GREY	50/200	**500FK20**
	25	44	GREY	35/140	**500FK25**
	32	44	GREY	20/80	**500FK32**



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
PVC bend 90°	16	40	GREY	100/1000	**500BK16**
	20	40	GREY	50/600	**500BK20**
	25	40	GREY	25/300	**500BK25**
	32	40	GREY	100	**500BK32**
	40	40	GREY	100	**500BK40**



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
Plastic bend small 90°	16	40	GREY	100/400	**500SK16**
	20	40	GREY	100/300	**500SK20**
	25	40	GREY	100/200	**500SK25**
	32	40	GREY	50/150	**500SK32**



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
PVC T-joint	16	40	GREY	100/300	**500T16**
	20	40	GREY	100/200	**500T20**
	25	40	GREY	50/100	**500T25**
	32	40	GREY	50/100	**500T32**



Type	Used for cable conduit ϕ (mm)	IP code	Colour	Packing/Box (pcs)	Catalogue number
PVC coupling	16	40	GREY	100/1200	**500C16**
	20	40	GREY	100/800	**500C20**
	25	40	GREY	50/500	**500C25**
	32	40	GREY	25/250	**500C32**
	40	40	GREY	25/150	**500C40**



Type	Used for cable conduit ϕ (mm)	Colour	Packing/Box (pcs)	Catalogue number
PVC conduit clips	16	GREY	100/1500	**500CC16**
	20	GREY	100/1000	**500CC20**
	25	GREY	100/1000	**500CC25**
	32	GREY	100/800	**500CC32**
	40	GREY	50/400	**500CC40**



Type	Used for cable conduit ϕ (mm)	Colour	Packing/Box (pcs)	Catalogue number
PVC conduit clips with plug and steel screw	16	GREY	100/1000	**500CS16**
	20	GREY	100/1000	**500CS20**
	25	GREY	100/800	**500CS25**
	32	GREY	50/400	**500CS32**



Type	Used for cable conduit ϕ (mm)	Colour	Packing/Box (pcs)	Catalogue number
PVC collar conduit clips	16	GREY	100/1000	**500CO16**
	20	GREY	100/1000	**500CO20**
	25	GREY	100/800	**500CO25**
	32	GREY	50/500	**500CO32**



Type	Length (mm)	Colour	Packing	Catalogue number
PVC modular fixing guide for clips	200	GREY	400	**500BC**

Cable trays and accessories

2 YEAR WARRANTY

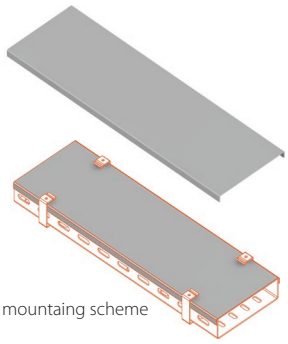
The universal cable support systems are used for construction of cable link in closed production premises for direct mounting on even vertical surfaces. They are perforated metal grates and accessories with standard lengths and sizes. They allow quick construction of cable systems with many angles and derivations.



Type	Size (mm)	Tickness	Length (mm)	Catalogue number
CT1 UT CABLE TRAY	40x50	0,8	2500	**56050825U**
CT1 UT CABLE TRAY	40x100	0,8	2500	**56100825U**
CT1 UT CABLE TRAY	40x150	0,8	2500	**56150825U**
CT1 UT CABLE TRAY	40x200	0,8	2500	**56200825U**
CT1 UT CABLE TRAY	40x300	0,8	2500	**56300825U**
CT1 UT CABLE TRAY	40x400	0,8	2500	**56400825U**

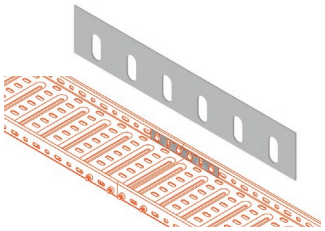


Type	Size (mm)	Tickness	Length (mm)	Catalogue number
CT1 UT CABLE TRAY	60x100	0,8	2500	**56100826U**
CT1 UT CABLE TRAY	60x200	0,8	2500	**56200826U**
CT1 UT CABLE TRAY	60x300	0,8	2500	**56300826U**



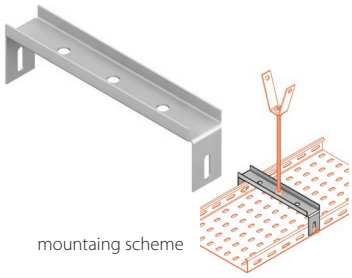
mountaing scheme

Type	Size (mm)	Tickness	Length (mm)	Catalogue number
CT1 CABLE TRAY COVER	10x50	0,8	2500	**56050825C**
CT1 CABLE TRAY COVER	10x100	0,8	2500	**56100825C**
CT1 CABLE TRAY COVER	10x150	0,8	2500	**56150825C**
CT1 CABLE TRAY COVER	10x200	0,8	2500	**56200825C**
CT1 CABLE TRAY COVER	10x300	0,8	2500	**56300825C**



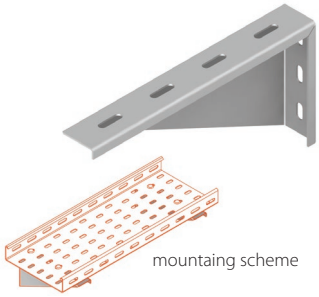
mountaing scheme

Type	Size (mm)	Length (mm)	Catalogue number
CT1 COUPLER FOR TRAYS WITH THE SAME SIZE	40	250	**56250C**



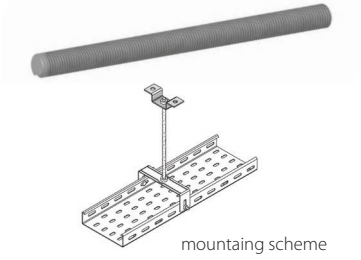
mountaing scheme

Type	Tickness	Length (mm)	Catalogue number
CT1 U-HANGING SUPPORT	1,5	100	**56100HSW**
CT1 U-HANGING SUPPORT	1,5	150	**56150HSW**
CT1 U-HANGING SUPPORT	1,5	200	**56200HSW**
CT1 U-HANGING SUPPORT	1,5	300	**56300HSW**
CT1 U-HANGING SUPPORT	1,5	400	**56400HSW**



mountaing scheme

Type	Tickness	Length (mm)	Catalogue number
CT1 HOLDER	1,5	100	**56100HOL**
CT1 HOLDER	1,5	150	**56150HOL**
CT1 HOLDER	1,5	200	**56200HOL**
CT1 HOLDER	1,5	300	**56300HOL**



mountaing scheme

Type	Metric bolt diameters	Length (mm)	Catalogue number
CT1 THREADED HANGING ROD	8	2000	**56082**
CT1 THREADED HANGING ROD	10	2000	**56102**



Universal console box for plasterboard

2 YEAR WARRANTY

Type	d (mm)	Packing (pcs)	Catalogue number
console box for plasterboard- Φ65	65	240	**19273**



Universal console box-flush mounting

2 YEAR WARRANTY

Type	d (mm)	Packing (pcs)	Catalogue number
console box- Φ65	65	300	**1927302**



Console box multi

2 YEAR WARRANTY

Type	d (mm)	Packing (pcs)	Catalogue number
Console box multi- Φ65	65	250	**1927301**



Distribution boxes-square type

2 YEAR WARRANTY

Type	Size			Packing (pcs)	Catalogue number
	L	W	H		
Distribution Box 80/80/50	80	80	50	100	**1927402**
Distribution Box 100/100/50	100	100	50	100	**1927401**



Distribution boxes for plasterboard-square type

2 YEAR WARRANTY

Type	Size L	Size W	Size H	Packing (pcs)	Catalogue number
Distribution Box 80/80/45	80	80	45	100	**1927405**
Distribution Box 100/100/45	100	100	45	100	**1927404**



Distribution boxes for plasterboard-round type

2 YEAR WARRANTY

Type	d (mm)	Packing (pcs)	Catalogue number
Distribution Box Φ65	65	240	**1927403**
Distribution Box Φ70	70	200	**1927407**
Distribution Box Φ80	80	100	**1927409**



Distribution boxes - round type

2 YEAR WARRANTY

Type	d (mm)	Packing (pcs)	Catalogue number
Distribution Box Φ70	70	300	**1927406**
Distribution Box Φ80	80	200	**1927408**

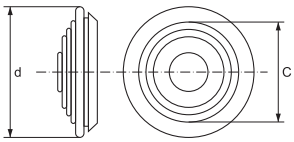
Waterproof junction boxes IP44

2 YEAR WARRANTY

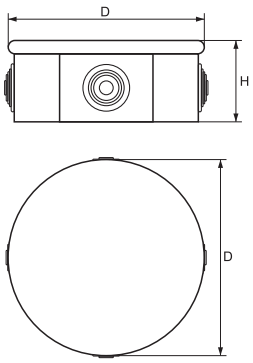


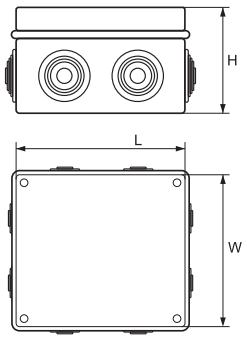
Plastic junction boxes with different shapes and dimensions. Designed for cable lines extension or tapping at cable installations laying. Made of ABS material with openings for input - output conductors, with rubber gasket to provide the corresponding IP code. Resistant to chemical, thermal and UV rays. Direct wall mounting with screws.
Documentation corresponding to the product:
Standard: EN 60670-1

Technical data:
* Rated voltage: up to 1000V
* Material: ABS
* IP code: IP 44









Box type	Box dimensions (mm)				Gasket dimensions (mm)		IP code	Packing / Box	Catalogue number
	D	L	W	H	d	C			
WB50/50	50	-	-	50	22.5	17	44	320	**8070**
WB80/50	80	-	-	50	22.5	17	44	240	**8071**
WB85/85/50	-	85	85	50	22.5	18.5	44	200	**8072**



Waterproof junction boxes IP65

2 YEAR WARRANTY

Box type	Box dimensions (mm)				Hole/pcs	IP code	Packing / Box	Catalogue number
	L	W	H	d				
WBG 100/100/70	100	100	70	27	7	65	100	**8001**
WBG 150/110/70	150	110	70	27	10	65	60	**8002**
WBG 150/150/70	150	150	70	27	7	65	60	**8003**
WBG 200/100/70	200	100	70	27	8	65	50	**8004**
WBG 200/155/80	200	155	80	35	10	65	30	**8005**
WBG 200/200/80	200	200	80	35	12	65	30	**8006**
WBG 255/200/80	255	200	80	35	12	65	30	**8007**
WBG 300/250/120	300	250	120	35	12	65	20	**8008**
WBG 400/350/120	400	350	120	35	16	65	5	**8009**



Waterproof junction boxes IP66 with transparent cover

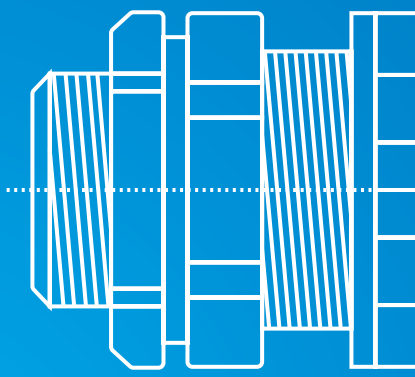
2 YEAR WARRANTY

Box type	Box dimensions (mm)			IP code	Packing / Box	Catalogue number
	L	W	H			
WBT 65/95/55	65	95	55	66	200	**8010**
WBT 100/100/50	100	100	50	66	150	**8011**
WBT 80/110/70	80	110	70	66	100	**8012**
WBT 80/130/85	80	130	85	66	100	**8013**
WBT 80/180/70	80	180	70	66	86	**8014**
WBT 80/250/85	80	250	85	66	60	**8015**
WBT 125/125/75	125	125	75	66	48	**8016**
WBT 125/175/100	125	175	100	66	40	**8017**
WBT 150/200/100	150	200	100	66	24	**8018**
WBT 150/250/130	150	250	130	66	18	**8019**
WBT 200/200/130	200	200	130	66	27	**8020**
WBT 280/190/130	280	190	130	66	18	**8021**

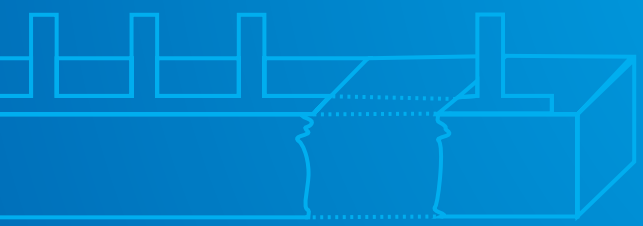
ACCESSORIES

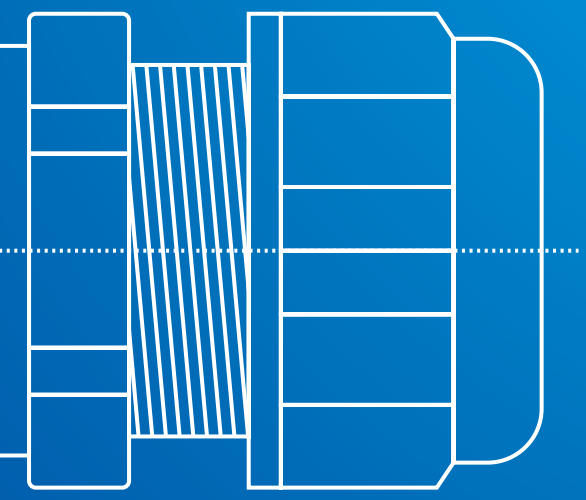
ACCESSORIES



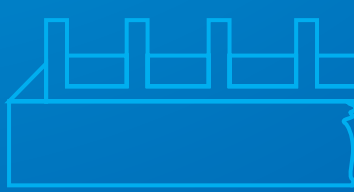












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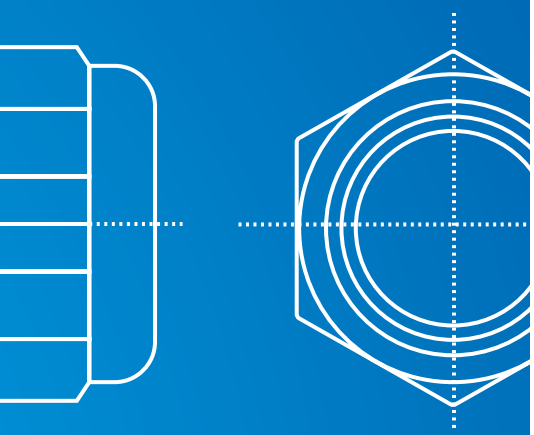
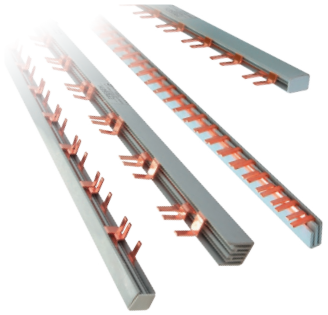
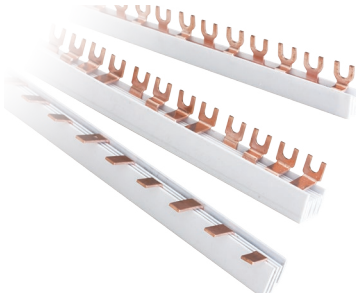
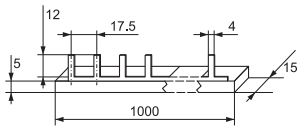
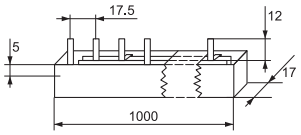












Supply busbar

3 YEAR WARRANTY

Functions:
- enables the supply of a group of conductors
- provides simultaneous supply
- conducting section – electrotechnical copper
- insulation of the conducting section

Technical data:
- Rated operating voltage: 230/400V
- Isolating voltage: 500V
- Abnormal heating wear resistance and fire of the outer parts: 960°C/3sec.
- Rated current (phase): 63/100A

Connecting:
- to the joining terminal of the breaker

Type (copper busbar)	Length (m)	Poles (number)	In with one point of power supply	In with two points of power supply	Packing / Box (pcs)	Catalogue number
1P 63	1	54	63A	90A	20 / 100	**14163**
1P 100	1	54	100A	120A	20 / 100	**14190**
2P 63	1	28	63A	90A	10 / 50	**14263**
3P 63	1	18	63A	90A	6 / 30	**14363**
3P 100	1	18	100A	120A	5 / 50	**14390**
DP 1N	1	56	63A	90A	10 / 50	**14463**
C100 1P	1	-	125A	150A	20 / 100	**14190T**
C100 2P	1	-	125A	150A	10 / 50	**14290T**
C100 3P	1	-	125A	159A	5 / 20	**14390T**
U 1P 63	1	54	63A	90A	20 / 100	**14163U**
U 2P 63	1	28	63A	90A	10 / 50	**14263U**
U 3P 63	1	18	63A	90A	6 / 30	**14363U**
U 4P 63	1	13	63A	90A	5 / 20	**14463U**



Zero rails

3 YEAR WARRANTY

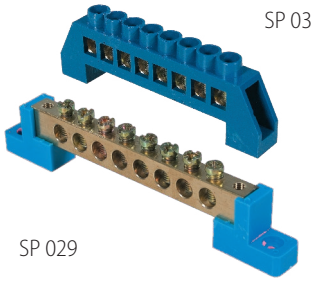
They represent a brass rail with rectangular section with factory made openings for the conductors and bolts for clamping of the conductor. They are offered in types with insulated and non-insulated rail. They are used in the electrical distribution boxes for zeroing and earthing.

Technical data:
- Material: brass for the current leading elements
- Insulation material: plastic
- Colour: gray/blue
- Application: general
- Ambient temperature: -40 to +65°C

Rail type	Length L (mm)	Height H (mm)	Width W (mm)	Ø D (mm)	Bolt	Number of terminals	Packing / Box (pcs)	Catalogue number
BRASS	1000	7.8	6	5	M4	54	100	**14002**
ZERO insulated	250	-	-	5	M4	16	200	**14012**

Zero terminals

3 YEAR WARRANTY

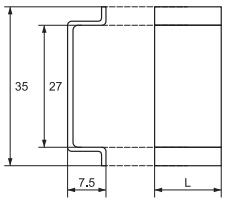


Rail type	L (mm)	H (mm)	W (mm)	M	Packing / Box (pcs)	Catalogue number
SP 029-4	82.9.4	21.5	12	5x10	10 / 500	**14204**
SP 029-6	100.9	21.5	12	5x10	10 / 800	**14206**
SP 029-8	118.9	21.5	12	5x10	20 / 300	**14208**
SP 029-10	136.9	21.5	12	5x10	20 / 300	**14210**
SP 029-12	182.4	21.5	12	5x10	20 / 250	**14212**
SP 031-4	59.5	31.5	12.4	5x10	5 / 400	**14304**
SP 031-6	76.5	31.5	12.4	5x10	5 / 400	**14306**
SP 031-8	93	31.5	12.4	5x10	5 / 400	**14308**
SP 031-10	111	31.5	12.4	5x10	5 / 400	**14310**
SP 031-12	128	31.5	12.4	5x10	5 / 300	**14312**

Mounting (DIN) rail

3 YEAR WARRANTY





Functions:
- serves for mounting breakers, residual current devices, contactors and other elements
- provides a firm fixation of the elements

Technical data:
- brass alloy with galvanic cover
- factory drilled mounting openings
- length up to 1m

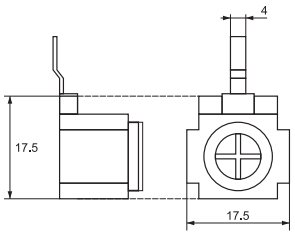
Connecting:
- with bolts or other fixing elements to the mounting surface

Length (m)	Packing / Box (pcs)	Catalogue number
1m	20 / 100	**14001**

Insulating mounting terminal - TB25

3 YEAR WARRANTY



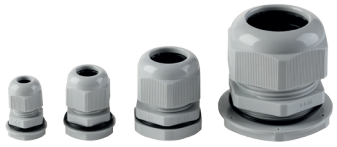


Functions:
- provides a firm joining of rigid or flexible conductors up to 35mm2 to power supply busbar
- provides a firm joining of the power supply conductor to the breaker
- provides enough contact surface of the conductor

Technical data:
- Brass alloy with galvanic cover
- Fabric isolated with plastic cover
- Appropriate for joining to copper or aluminum cables
- Rated voltage: 230V
- Rated current: up to 63A
- Isolating voltage: ≥500V
- IP code: IP>20
- Section of power supply conductor: up to 35mm2

Connecting:
- to the joining terminal of the breaker

Type	Section of the conductor (mm2)	Rated current In (A)	Packing / Box (pcs)	Catalogue number
TB 25	2.5 to 35	63	20 / 2000	**31025**



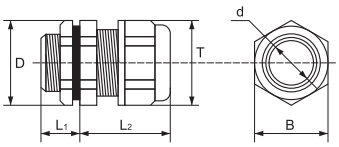
Cable glands PG type

3 YEAR WARRANTY

Plastic pipes supplied with the corresponding gaskets and nuts. Designed to provide necessary IP code on the points where conductors pass through the walls of the electric distribution boxes. All cable gland elements are made of high quality plastic (PE) and rubber.

Technical data:
- Material: polyethylene (PE)
- Colour: gray
- Application: general
- Ambient temperature: -40 to +65°C
- IP code: IP 55

Standard: EN 60 423; 48580-81



Type	Overlapping field	T (mm)	B (mm)	d (mm)	D (mm)	L1 (mm)	L2 (mm)	Packing / Box (pcs)	Catalogue number
PG-7	3.5-6.8	16.3	18	12	6.6	10	22	100 / 4000	**500070**
PG-9	5-8	18.9	21.7	15.5	8.5	10	25	100 / 4000	**500090**
PG-11	6-10	21.7	23.5	18.5	10.4	8.5	29	100 / 3000	**500110**
PG-13.5	7-12	23.6	26.5	20	13	10	29	100 / 2000	**500135**
PG-16	8-14	26.5	29.3	21.5	14	9	29	100 / 2000	**500160**
PG-19	9-17	29	32	23	17	12	29	100 / 2000	**500190**
PG-21	10-18	32.3	35.6	28	19	12	35	100 / 1000	**500210**
PG-25	15-22	32.6	32.6	29.8	24	13	31	100 / 1000	**500250**
PG-29	16-24	41.1	45.4	36	26	12.5	40	50 / 500	**500290**
PG-36	18-28	52	58	46	31.5	12.5	45	50 / 350	**500360**
PG-42	26-36	57.4	61.9	51	37.6	17.5	47	20 / 200	**500420**
PG-48	32-39	65.2	70.7	58	43	21	50	20 / 200	**500480**

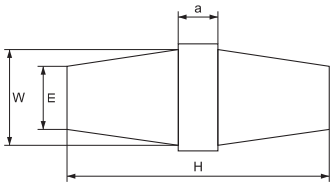


Support insulator for low voltage

3 YEAR WARRANTY

Support insulators are used in control and distribution cabinets mounting when bars isolation is required. Provides reliable insulation of live parts.

Technical Specification:
- Rated voltage: 1000V
- Insulating voltage: 5000 V
- Ambient temperature : -40 to +65°C



Type	Impulse voltage kV	Strength	Fasting strength	Bolt	Dimmensions (mm)				Packing (pcs.)	Catalogue number
					H	W	a	ø		
SM 25	6	500	6	6	25	30	13	23	10 / 600	**31725**
SM 30	8	550	8	8	30	32	10	27	10 / 500	**31730**
SM 35	10	600	10	8	35	32	10	28	10 / 400	**31735**
SM 40	12	650	12	8	40	40	10	33	10 / 240	**31740**
SM 51	15	1000	20	8	51	50	12	28	10 / 240	**31751**
SM 76	25	1500	40	10	76	45	16	34	10 / 120	**31776**



Cable fixing clips

2 YEAR WARRANTY

Support insulators are used in control and distribution cabinets mounting when bars isolation is required. Provides reliable insulation of live parts.

Technical Specification:
- Rated voltage: 1000V
- Insulating voltage: 5000 V
- Ambient temperature : -40 to +65°C

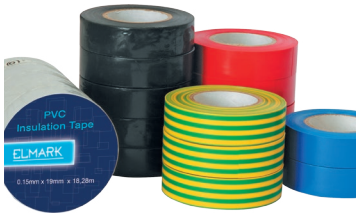
Type	Diameter Ø (mm)	Packing (pcs)	Packing / Box (pcs)	Catalogue number
CHR-4	4	100	500	**500004**
CHR-5	5	100	500	**500005**
CHR-6	6	100	300	**500006**
CHR-7	7	100	300	**500007**
CHR-8	8	100	250	**500008**
CHR-9	9	100	200	**500009**
CHR-10	10	100	200	**500010**
CHR-12	12	100	100	**500012**
CHR-14	14	100	50	**500014**
CHR-16	16	100	50	**500016**



Cable tie mounts-adhesive

2 YEAR WARRANTY

Type	colour	Dimmensions (mm)				Packing (pcs.)	Catalogue number
		L	W	H	T		
MT-25	white	25	25	7,5	6,2	100	**500041**
MT-25	black	25	25	7,5	6,2	100	**500042**
MT-30	white	30	30	8,7	6,4	100	**500043**
MT-30	black	30	30	8,7	6,4	100	**500039**



PVC insulating tape

2 YEAR WARRANTY

Colour	Thickness (mm)	Width (mm)	Length (m)	Packing / Box (pcs)	Catalogue number
Black	0.15	19	18,28	10 / 200	**51001**
Red	0.15	19	18,28	10 / 200	**51002**
Yellow / Green	0.15	19	18,28	10 / 200	**51004**
White	0.15	19	18,28	10 / 200	**51005**
Blue	0.15	19	18,28	10 / 200	**51006**



Cable tags – sets

2 YEAR WARRANTY

Type	Section (mm)	Number in a roller	Packing / Box (pcs)	Catalogue number
EC-0-0	1.5 - 3.2	1000	100	**318000**
EC-0-1	1.5 - 3.2	1000	100	**318001**
EC-0-2	1.5 - 3.2	1000	100	**318002**
EC-0-3	1.5 - 3.2	1000	100	**318003**
EC-0-4	1.5 - 3.2	1000	100	**318004**
EC-0-5	1.5 - 3.2	1000	100	**318005**
EC-0-6	1.5 - 3.2	1000	100	**318006**
EC-0-7	1.5 - 3.2	1000	100	**318007**
EC-0-8	1.5 - 3.2	1000	100	**318008**
EC-0-9	1.5 - 3.2	1000	100	**318009**
EC-0-a	1.5 - 3.2	1000	100	**31800a**
EC-0-b	1.5 - 3.2	1000	100	**31800b**
EC-0-R	1.5 - 3.2	1000	100	**31800R**
EC-0-S	1.5 - 3.2	1000	100	**31800S**
EC-0-T	1.5 - 3.2	1000	100	**31800T**
EC-0-N	1.5 - 3.2	1000	100	**31800N**
EC-0-P	1.5 - 3.2	1000	100	**31800P**
EC-0-E	1.5 - 3.2	1000	100	**31800E**
EC-0-A	1.5 - 3.2	1000	100	**31800A**
EC-0-B	1.5 - 3.2	1000	100	**31800B**
EC-0-C	1.5 - 3.2	1000	100	**31800C**
EC-0-Q	1.5 - 3.2	1000	100	**31800Q**

Type	Section (mm)	Number in a roller	Packing / Box (pcs)	Catalogue number
EC-1-0	2.6 - 4.2	1000	150	**318010**
EC-1-1	2.6 - 4.2	1000	150	**318011**
EC-1-2	2.6 - 4.2	1000	150	**318012**
EC-1-3	2.6 - 4.2	1000	150	**318013**
EC-1-4	2.6 - 4.2	1000	150	**318014**
EC-1-5	2.6 - 4.2	1000	150	**318015**
EC-1-6	2.6 - 4.2	1000	150	**318016**
EC-1-7	2.6 - 4.2	1000	150	**318017**
EC-1-8	2.6 - 4.2	1000	150	**318018**
EC-1-9	2.6 - 4.2	1000	150	**318019**
EC-1-a	2.6 - 4.2	1000	150	**31801a**
EC-1-b	2.6 - 4.2	1000	150	**31801b**
EC-1-R	2.6 - 4.2	1000	150	**31801R**
EC-1-S	2.6 - 4.2	1000	150	**31801S**
EC-1-T	2.6 - 4.2	1000	150	**31801T**
EC-1-N	2.6 - 4.2	1000	150	**31801N**
EC-1-P	2.6 - 4.2	1000	150	**31801P**
EC-1-E	2.6 - 4.2	1000	150	**31801E**
EC-1-A	2.6 - 4.2	1000	150	**31801A**
EC-1-B	2.6 - 4.2	1000	150	**31801B**
EC-1-C	2.6 - 4.2	1000	150	**31801C**
EC-1-Q	2.6 - 4.2	1000	150	**31801Q**

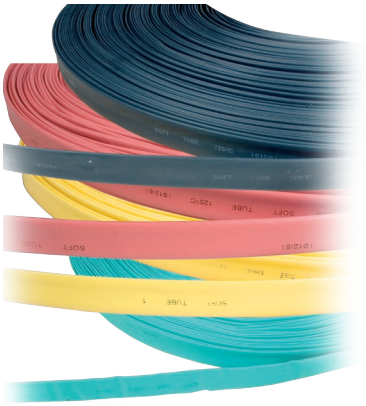
ACCESSORIES

Consummative

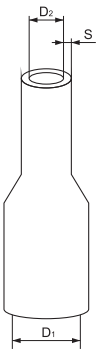


Type	Section (mm)	Number in a roller	Packing / Box (pcs)	Catalogue number
EC-2-0	3.6 - 5.2	500	150	**318020**
EC-2-1	3.6 - 5.2	500	150	**318021**
EC-2-2	3.6 - 5.2	500	150	**318022**
EC-2-3	3.6 - 5.2	500	150	**318023**
EC-2-4	3.6 - 5.2	500	150	**318024**
EC-2-5	3.6 - 5.2	500	150	**318025**
EC-2-6	3.6 - 5.2	500	150	**318026**
EC-2-7	3.6 - 5.2	500	150	**318027**
EC-2-8	3.6 - 5.2	500	150	**318028**
EC-2-9	3.6 - 5.2	500	150	**318029**
EC-2-a	3.6 - 5.2	500	150	**31802a**
EC-2-b	3.6 - 5.2	500	150	**31802b**
EC-2-R	3.6 - 5.2	500	150	**31802R**
EC-2-S	3.6 - 5.2	500	150	**31802S**
EC-2-T	3.6 - 5.2	500	150	**31802T**
EC-2-N	3.6 - 5.2	500	150	**31802N**
EC-2-P	3.6 - 5.2	500	150	**31802P**
EC-2-E	3.6 - 5.2	500	150	**31802E**
EC-2-A	3.6 - 5.2	500	150	**31802A**
EC-2-B	3.6 - 5.2	500	150	**31802B**
EC-2-C	3.6 - 5.2	500	150	**31802C**
EC-2-Q	3.6 - 5.2	500	150	**31802Q**

Type	Section (mm)	Number in a roller	Packing / Box (pcs)	Catalogue number
EC-3-0	5 - 7.2	250	150	**318030**
EC-3-1	5 - 7.2	250	150	**318031**
EC-3-2	5 - 7.2	250	150	**318032**
EC-3-3	5 - 7.2	250	150	**318033**
EC-3-4	5 - 7.2	250	150	**318034**
EC-3-5	5 - 7.2	250	150	**318035**
EC-3-6	5 - 7.2	250	150	**318036**
EC-3-7	5 - 7.2	250	150	**318037**
EC-3-8	5 - 7.2	250	150	**318038**
EC-3-9	5 - 7.2	250	150	**318039**
EC-3-a	5 - 7.2	250	150	**31803a**
EC-3-b	5 - 7.2	250	150	**31803b**
EC-3-R	5 - 7.2	250	150	**31803R**
EC-3-S	5 - 7.2	250	150	**31803S**
EC-3-T	5 - 7.2	250	150	**31803T**
EC-3-N	5 - 7.2	250	150	**31803N**
EC-3-P	5 - 7.2	250	150	**31803P**
EC-3-E	5 - 7.2	250	150	**31803E**
EC-3-A	5 - 7.2	250	150	**31803A**
EC-3-B	5 - 7.2	250	150	**31803B**
EC-3-C	5 - 7.2	250	150	**31803C**
EC-3-Q	5 - 7.2	250	150	**31803Q**



Standard: EN 60 684



Heat shrinkage tubes ZDG type

2 YEAR WARRANTY

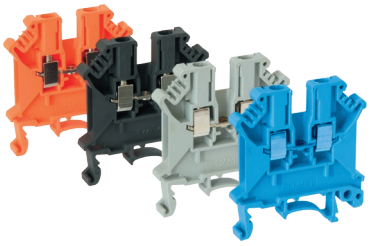
Thin-wall heat shrinkage tubes are used for insulation of cable connection, at conductors repair to protect the cable head from corrosion, for protection of the cable insulation from water and moisture, for restoring the cable insulation integrity, etc. It is a plastic thin wall pipe which at temperature higher than 120°C shrinks its initial diameter to a certain degree. The material has high temperature and UV rays wear resistance. The material represents the so called permanently netted plastic. This material is obtained as the plastic billet is processed with the help of high energy electron rays so that inner molecular bonds between adjacent molecules are formed. After that the pipe is heated to the boiling point, the pipe inflates, so do the inner molecular bonds. Then the pipe is sharply refrigerated and the molecules stay in the condition of inflated bonds for indefinite long time. Heating the pipe repeatedly (after being mounted to the given cable) the crystals melt again but due to the net structure, they resume the initial pipe diameter and take the form of the cable, pressing it and not allowing the moisture to get under the pipe.

Technical data:

- Material: triple cross - linked polyolefin
- Colours: blue, black, red, yellow, yellow-green, green, white
- Shrinkage ratio: min 2 : 1
- Ambient temperature: -40 to + 100°C
- Shrinkage temperature: min 120°C
- Condition of the material during fire exposure: slight burning
- The material does not emit hazardous substances
- Insulation resistance: 1x 10 12 Ω/cm
- Application: general
- Insulating voltage 1000 V

Type	D1 (mm)	D2 (mm)	S (mm)	Packing / Box (m)	Catalogue number *
ZDG	1	0.5	0.04	200 / 4000	**301001x**
ZDG	1.5	0.75	0.04	200 / 4000	**301115x**
ZDG	2	1.0	0.05	200 / 4000	**301002x**
ZDG	3	1.5	0.05	200 / 2000	**301003x**
ZDG	4	2.0	0.08	100 / 1700	**301004x**
ZDG	5	2.5	0.08	100 / 1200	**301005x**
ZDG	6	3.0	0.08	100 / 1000	**301006x**
ZDG	7	3.5	0.08	100 / 1000	**301007x**
ZDG	8	4.0	0.08	100 / 1500	**301008x**
ZDG	9	4.5	0.08	100 / 1500	**301009x**
ZDG	10	5.0	0.08	100 / 1500	**301010x**
ZDG	11	5.5	0.08	100 / 1500	**301011x**
ZDG	12	6.0	0.08	100 / 1200	**301012x**
ZDG	13	6.5	0.08	100 / 1200	**301013x**
ZDG	14	7.0	0.08	100 / 1200	**301014x**
ZDG	15	7.5	0.08	100 / 1200	**301015x**
ZDG	16	8.0	0.08	100 / 1200	**301016x**
ZDG	18	9.0	0.08	50 / 600	**301018x**
ZDG	20	10	0.08	50 / 500	**301020x**
ZDG	22	11	0.08	50 / 500	**301022x**
ZDG	25	12.5	0.08	25 / 600	**301025x**
ZDG	28	14	0.08	25 / 300	**301028x**
ZDG	30	15	0.08	25 / 300	**301030x**
ZDG	35	17.5	0.08	25 / 300	**301035x**
ZDG	40	20	0.08	25 / 250	**301040x**
ZDG	50	25	0.08	25 / 200	**301050x**
ZDG	60	30	0.08	25 / 300	**301060x**
ZDG	70	35	0.08	25 / 250	**301070x**
ZDG	80	40	0.08	25 / 100	**301080x**
ZDG	90	45	0.08	25 / 150	**301090x**
ZDG	100	50	0.08	25 / 100	**301100x**
ZDG	120	60	0.08	25 / 200	**301120x**
ZDG	150	75	0.08	25 / 100	**301150x**

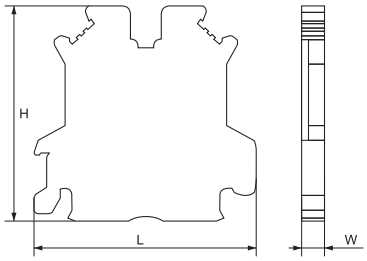
Note: * At orders after the catalogue number of the corresponding diameter a letter showing the colour must be added: B – blue; R – red; K - black; G - green; Y – yellow;



Fixed terminal blocks - LTU2 UK series

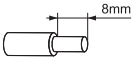
3 YEAR WARRANTY

Fixed terminal blocks with universal application into electrical distribution boxes. For DIN-rail mounting. Variety of sizes for optimum using of available space by selection of appropriate terminals for the corresponding conductors. Made of non-flammable insulation polymeric material.



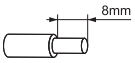
Type	Section of the conductor (mm2)		Size of the terminal (mm)			In (A)	Un (V)	Colour	Packing / Box (pcs)	Catalogue number
	single-core	multicore	L	H	W					
LTU2UK 3N	0.2-4	0.2-2.5	42.5	47	5.2	32	800	grey	50 / 3000	**31033**
LTU2UK 3N	0.2-4	0.2-2.5	42.5	47	5.2	32	800	red	50 / 3000	**31032**
LTU2UK 3N	0.2-4	0.2-2.5	42.5	47	5.2	32	800	black	50 / 3000	**31031**
LTU2UK 3N	0.2-4	0.2-2.5	42.5	47	5.2	32	800	blue	50 / 3000	**31035**





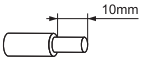
Type	Section of the conductor (mm2)		Size of the terminal (mm)			In (A)	Un (V)	Colour	Packing / Box (pcs)	Catalogue number
	single-core	multicore	L	H	W					
LTU2UK 5N	0.2-6	0.2-4	42.5	47	6.2	41	800	grey	50 / 2000	**31053**
LTU2UK 5N	0.2-6	0.2-4	42.5	47	6.2	41	800	red	50 / 2000	**31052**
LTU2UK 5N	0.2-6	0.2-4	42.5	47	6.2	41	800	black	50 / 2000	**31051**
LTU2UK 5N	0.2-6	0.2-4	42.5	47	6.2	41	800	blue	50 / 2000	**31055**





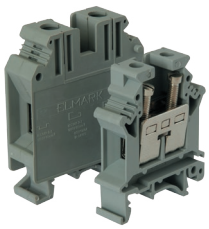
Type	Section of the conductor (mm2)		Size of the terminal (mm)			In (A)	Un (V)	Colour	Packing / Box (pcs)	Catalogue number
	single-core	multicore	L	H	W					
LTU2UK 6N	0.2-10	0.2-6	42.5	47	8.2	57	800	grey	50 / 1000	**31063**
LTU2UK 6N	0.2-10	0.2-6	42.5	47	8.2	57	800	red	50 / 1000	**31062**
LTU2UK 6N	0.2-10	0.2-6	42.5	47	8.2	57	800	black	50 / 1000	**31061**
LTU2UK 6N	0.2-10	0.2-6	42.5	47	8.2	57	800	blue	50 / 1000	**31065**





Type	Section of the conductor (mm2)		Size of the terminal (mm)			In (A)	Un (V)	Colour	Packing / Box (pcs)	Catalogue number
	single-core	multicore	L	H	W					
LTU2UK 10N	0.5-16	0.5-10	42.5	47	10.2	76	800	grey	50 / 1000	**31103**
LTU2UK 10N	0.5-16	0.5-10	42.5	47	10.2	76	800	red	50 / 1000	**31102**
LTU2UK 10N	0.5-16	0.5-10	42.5	47	10.2	76	800	black	50 / 1000	**31101**
LTU2UK 10N	0.5-16	0.5-10	42.5	47	10.2	76	800	blue	50 / 1000	**31105**





Type	Section of the conductor (mm2)		Size of the terminal (mm)			In (A)	Un (V)	Colour	Packing / Box (pcs)	Catalogue number
	single-core	multicore	L	H	W					
LTU2UIK 16	2.5-25	4-16	42.5	47	12.2	101	800	grey	50 / 1000	**31163**
LTU2UIK 35	10-35	10-35	55	62	15.2	125	800	grey	20 / 400	**31353**





Fixed terminal blocks - JD series

3 YEAR WARRANTY

Two-sided insulated fixed terminal blocks designed to connect groundes conductors.
Made of non-flammable insulation polymeric material.

Type	Section of the conductor (mm2)		Size of the terminal (mm)			In (A)	Un (V)	Colour	Packing / Box (pcs)	Catalogue number
	single-core	multicore	L	H	W					
5JD	0.2-4	0.2-4	42.5	47	6.2	34	800	yellow-green	50 / 1000	**31054**
6JD	0.2-10	0.2-6	42.5	47	8.2	37	800	yellow-green	50 / 1000	**31064**
10JD	0.5-10	0.5-6	42.5	47	8.2	61	800	yellow-green	50 / 1000	**31104**
16JD	2.5-25	2.5-16	42.5	47	12.2	108	800	yellow-green	50 / 600	**31164**
35JD	2.5-35	2.5-35	42.5	47	15	135	800	yellow-green	20 / 400	**31354**





Marking tags - ZB type

2 YEAR WARRANTY

Accessories for marking and separation of different electrical circuits, different voltages and fixing of elements for DIN-rail mounting.

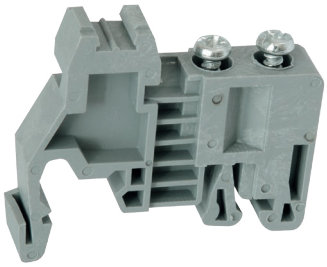
Type	Pieces in a strip	Colour	Size (mm)	Packing / Box (pcs)	Catalogue number
ZB6	20	white	6	100 / 1200	**31906**
ZB8	10	white	8	100 / 1200	**31908**



End cover

3 YEAR WARRANTY

Type	Colour	Thickness (mm)	Packing / Box (pcs)	Catalogue number
EC	grey	8	200 / 6000	**31901**



Universal end fixed pieces E/UK type

3 YEAR WARRANTY

Type	Colour	Thickness (mm)	Packing / Box (pcs)	Catalogue number
E/UK	grey	5	200 / 2400	**31902**

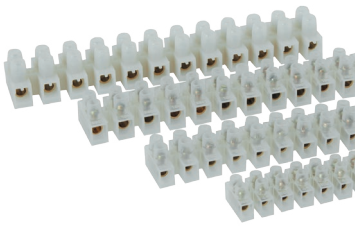


Expanding block (connectors) for DIN rail

3 YEAR WARRANTY

They are used for cable power supplies branches from one main conductor to several smaller conductors. Designed for DIN - rail mounting. Presented in different colours according to their usage (blue - null conductor, grey - phase conductor, yellow - green - earthing conductor). Easy to mount, reliable way of connection.

Type	Main Terminal		Secondary Terminal		Colour	Packing / Box (pcs)	Catalogue number
	Current (A)	Section (mm2)	Number of terminals	Section (mm2)			
FVK35	125	35	4	10	blue		**3193541**
FVK35	125	35	4	10	grey		**3193542**
FVK35	125	35	4	10	yellow-green		**3193543**
FVK50/4	150	50	4	16	blue		**3195041**
FVK50/4	150	50	4	16	grey		**3195042**
FVK50/4	150	50	4	16	yellow-green		**3195043**
FVK 50/6	150	50	6	10	blue		**3195061**
FVK 50/6	150	50	6	10	grey		**3195062**
FVK 50/6	150	50	6	10	yellow-green		**3195063**
FVK 70/6	192	70	6	2x25+4x10	blue		**3197061**
FVK 70/6	192	70	6	2x25+4x10	grey		**3197062**
FVK 70/6	192	70	6	2x25+4x10	yellow-green		**3197063**
FVK70/8	192	70	8	10	blue		**3197081**
FVK70/8	192	70	8	10	grey		**3197082**
FVK70/8	192	70	8	10	yellow-green		**3197083**

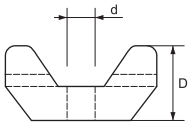


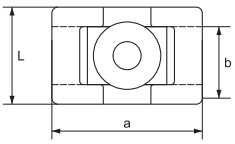
Terminal blocks TBH type

2 YEAR WARRANTY

Type	Pieces in a strip	In (A)	Un (V)	Colour	Section of the conductor (mm2)	Packing / Box (pcs)	Catalogue number
TBH 3A	10	3	660	semitransparent	to 1.5	100 / 1000	**31003**
TBH 6A	10	6	660	semitransparent	to 4	100 / 1000	**31006**
TBH 10A	10	10	660	semitransparent	to 6	100 / 500	**31010**
TBH 15A	10	15	660	white	to 6	100 / 500	**31015**
TBH 20A	10	20	660	white	to 10	100 / 400	**31020**



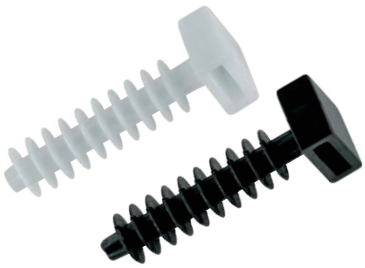


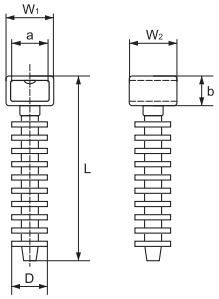


Cable tie bases fixed with screws

2 YEAR WARRANTY

Type	Color	a (mm)	b (mm)	L (mm)	d (mm)	D (mm)	Packing/(pcs)	Catalogue number
CTH-2C	white	22	16,5	9	5,8	9,5	100	**500048**
CTH-2C	black	22	16,5	9	5,8	9,5	100	**500038**





Cable tie holder

2 YEAR WARRANTY

Type	colour	Bore di-ameter (mm)	a	b	D	W1	W2	L	Packing/ (pcs)	Catalogue number
MT-6	black	ϕ6	9,7	6,2	7,2	12,7	11,9	37	100	**500044**
MT-6	white	ϕ6	9,7	6,2	7,2	12,7	11,9	37	100	**500045**
MT-8	black	ϕ8	9,7	6,3	9,9	12,7	12,6	43	100	**500046**
MT-8	white	ϕ8	9,7	6,3	9,9	12,7	12,6	43	100	**500047**



Cable ties - white

2 YEAR WARRANTY

Type	Length (mm)	Colour	Width (mm)	Packing (pcs)	Packing / Box (pcs)	Catalogue number
Cable ties	100	white	2.5	100	10 / 800	**500100**
Cable ties	150	white	2.5	100	10 / 500	**500152**
Cable ties	160	white	2.5	100	10 / 500	**500162**
Cable ties	200	white	2.5	100	10 / 400	**500202**
Cable ties	250	white	3.5	100	10 / 250	**500253**
Cable ties	280	white	3.5	100	10 / 200	**500283**
Cable ties	300	white	3.5	100	10 / 200	**500303**
Cable ties	300	white	4.8	100	10 / 120	**500304**
Cable ties	370	white	3.5	100	10 / 120	**500373**
Cable ties	380	white	4.8	100	10 / 100	**500384**
Cable ties	450	white	4.8	100	10 / 70	**500454**
Cable ties	500	white	7.9	100	5 / 40	**500507**



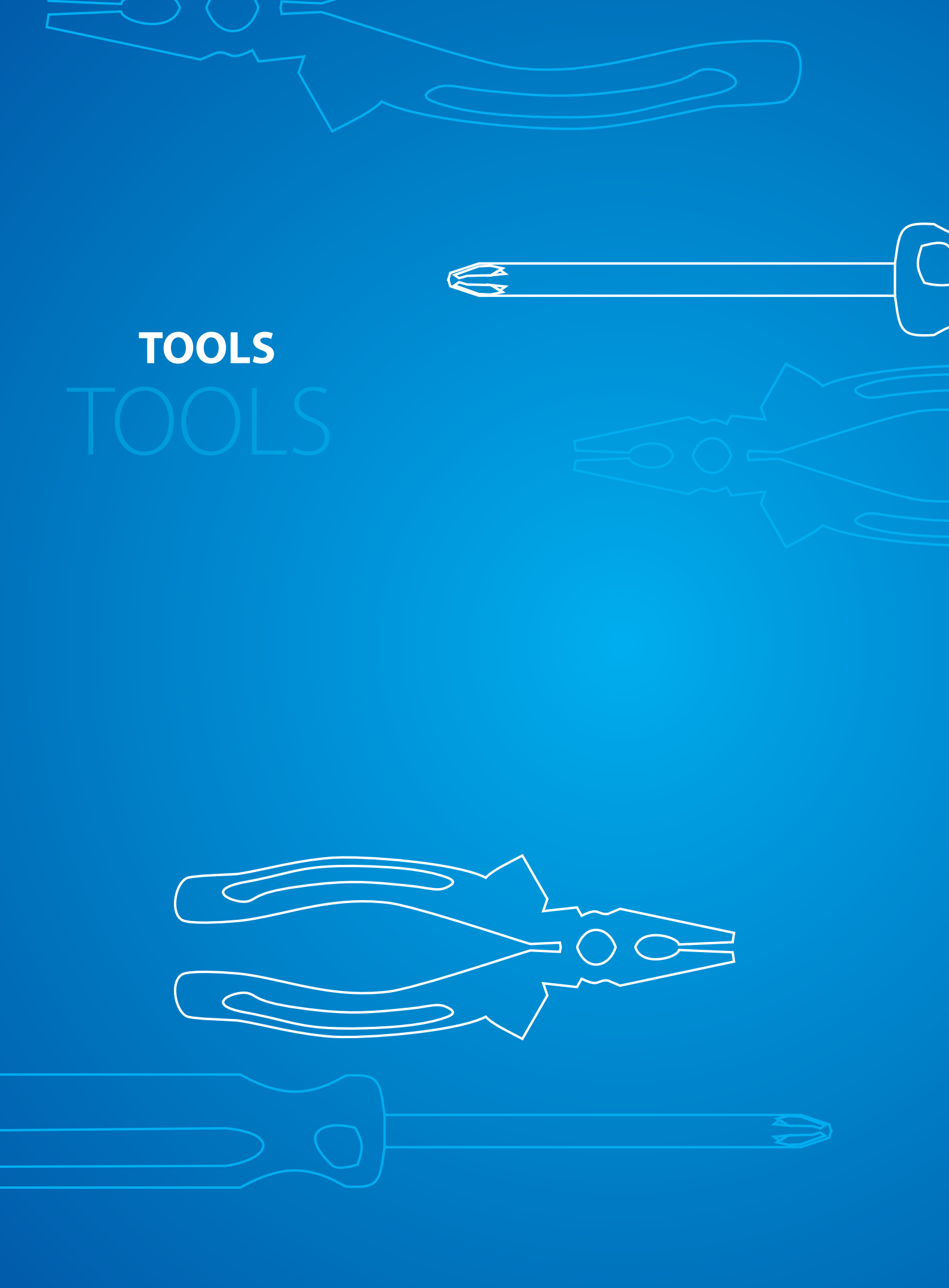
Cable ties - black

2 YEAR WARRANTY

Type	Length (mm)	Colour	Width (mm)	Packing (pcs)	Packing / Box (pcs)	Catalogue number
Cable ties	150	black	2.5	100	10 / 500	**500151**
Cable ties	160	black	2.5	100	10 / 500	**500161**
Cable ties	250	black	3.5	100	10 / 250	**500251**
Cable ties	280	black	3.5	100	10 / 200	**500281**
Cable ties	300	black	3.5	100	10 / 200	**500301**
Cable ties	500	black	7.9	100	40	**500501**

TOOLS

TOOLS



ELMARK®

Manual meters | 200

Crimping tools | 206

Mechanical cutting tools | 211

Isolated VDE tools | 212





Digital multimeter EM5510

3 YEAR WARRANTY

This is a digital device for measuring of humidity, illumination, temperature and all electric values. It features automatic range adjustment, manual value selection. It has an LCD display showing the measured value in digits with the size of 3 ¾ . It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences. It has an automatic switch off.

Technical features:

- DC voltage: 0.4 / 4 / 40 / 400 / 600 V
- AC voltage : 4 / 40 / 400 / 600V
- DC current: 400µ / 4000µ / 40m / 400m / 10A
- AC current: 400µ / 4000µ / 40m / 400m / 10A
- Resistance: 400 / 4K / 40K / 400K / 4M / 40MΩ
- Capacitors: 4ŋ / 40ŋ / 400ŋ / 4µ / 40µ / 100µF
- Frequency: 10 / 100 / 1k / 10k / 100k / 200kHz
- Loading cycles: from 0.1% to 99.9%
- Temperature: -20° up to 1000°C
- Humidity: 30% to 95%
- Illumination: 4000 Lux / 40000 Lux
- Noise level: 35 to 100dB
- Circuit control: yes
- Diodes control: yes
- Weight: 310 g (including battery)
- Battery: 1x9V
- Dimensions: 83 x 162 x 47mm

Type	Packing (pcs) / carton	Catalogue number
EM5510	24	**5195510**



Digital multimeter EM420C

3 YEAR WARRANTY

This is a digital device for measuring of humidity, illumination, temperature and all electric values. It features automatic range adjustment, manual value selection. It has an LCD display showing the measured value in 4 digits with the size of 16 mm. It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences. It has an automatic switch off.

Technical features:

- DC voltage: 200m/ 2 / 20 / 200 / 600 V
- AC voltage : 2 / 20 / 200 / 600V
- DC current: 200µ / 2000µ / 20m / 200m / 2 / 10A
- AC current: 00µ / 2000µ / 20m / 200m / 2 / 10A
- Resistance: 200 / 2K / 20K / 200K / 2M / 20MΩ
- Temperature: -20° up to 1000°C
- Battery test: 1.5 / 3 / 9 / 12 V
- Circuit control: yes
- Diodes control: yes
- Weight: 200 g (including battery)
- battery: 3x1.5 V
- dimensions: 75 x 158 x 35mm

Type	Packing (pcs) / carton	Catalogue number
EM420C	44	**519420**



Digital multimeter EM3055

3 YEAR WARRANTY

This is a digital device for measuring of all electric values. It features manual range adjustment. It has an LCD display showing the measured value in 4 digits with the size of 3 ½ . It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences.

Technical features:
- DC voltage: 200m/ 2 / 20 / 200 / 1000 V
- AC voltage: 2 / 20 / 200 / 750V
- DC current: 2m / 20m / 200m / 10A
- AC current: 200m / 10A
- Resistance: 200 / 2K / 20K / 200K / 2M / 20M / 200MΩ
- Capacity: 2000p / 20η / 200η / 20μF
- Temperature: 0° up to 1000°C
- Battery test: 1.5 / 3 / 9 / 12 V
- Transistor test: Vce≈3V , Ib≈10μF
- Circuit control: yes
- Diodes control: yes
- Weight: 495 g (including battery)
- battery: 1x9V
- dimensions: 97 x 200 x 48mm

Type	Packing (pcs) / carton	Catalogue number
EM3055	20	**5193055**



Digital multimeter EM3058

3 YEAR WARRANTY

This is a digital device for measuring of temperature and all electric values. It features manual range adjustment, manual value selection. It has an LCD display showing the measured value in digits with the size of 3 ¾ . It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences. It has an automatic switch off.

Technical features:
- DC voltage: 200m/ 2 / 20 / 200 / 1000 V
- AC voltage: 200 m / 2 / 20 / 200 / 750V
- DC current: 20μ / 200 μ / 2m / 200m / 10A
- AC current: 20μ / 200μ / 2m / 200m / 2 / 10A
- Resistance: 200 / 2K / 20K / 200K / 2M / 20M / 200MΩ
- Capacitors: 2η / 20η / 200η / 2μ / 20μF
- Frequency: 20kHz to 2000kHz
- Loading cycles: 0.1% to 99.9%
- Temperature: 0° up to 1000°C
- Logical level: High > 2.0 V; Low < 0.8 V
- Circuit control: yes
- Diodes control: yes
- Weight: 495 g (including battery)
- battery: 1x9V
- dimensions: 97 x 200 x 47 mm

Type	Packing (pcs) / carton	Catalogue number
EM3058	20	**5193058**



Digital multimeter EM31

3 YEAR WARRANTY

This is a digital device for measuring of electric values. It features automatic range adjustment, manual value selection. It has an LCD display showing the measured value in 4 digits with the size of 16 mm. It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences. It has an automatic switch off and low battery indication.

Technical features:

- DC voltage: 240m/ 2400m / 24 / 240 / 600 V
- AC voltage: 240m/ 2400m / 24 / 240 / 600 V
- DC current: 240µ / 2400µ / 24m / 240m / 10A
- AC current: 240µ / 2400µ / 24m / 240m / 10A
- Resistance: 240 / 2400 / 24K / 240K / 2400K / 24MΩ
- Capacity: 25η to 252µF
- Frequency: 50 / 500 / 5000 / 50k / 0.5 MHz
- Circuit control: yes
- Diodes control: yes
- Weight: 137 g (including battery)
- battery: 2x1.5 V
- dimensions: 70 x 126 x 28mm

Type	Packing (pcs) / carton	Catalogue number
EM31	56	**519031**



Digital multimeter / pen EM3215

3 YEAR WARRANTY

This is a digital device for measuring of electric values in the form of a pen. It features automatic range adjustment, manual value selection. It has an LCD display, data retain function, automatic reset, polarity selection, range overload indication. It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences. It has an automatic switch off and low battery indication and a torch.

Technical features:

- DC voltage: 200m/ 2 / 20 / 200 / 600 V
- AC voltage: 2 / 20 / 200 / 600V
- DC current: 20m to 200mA
- AC current: 20m to 200mA
- Resistance: 200 / 2K / 20K / 200K / 2M / 20MΩ
- Logical level: High > 2.3V; Low < 0.8 V
- Circuit control: yes
- Diodes control: yes
- Weight: 182 g (including battery)
- battery: 1x9V
- dimensions: 57 x 230 x 30mm

Type	Packing (pcs) / carton	Catalogue number
EM3215	42	**5193215**



Digital clamp meter EM202

3 YEAR WARRANTY

This is a digital clamp meter for measuring of electric values. It features manual range adjustment, manual value selection. It has an LCD display showing the measured value in digits with the size of 3½ mm. It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences. It has an automatic switch off.

Technical features:
- DC voltage: 1000 V
- AC voltage: 750V
- AC current: 20 / 200 / 1000A
- Resistance: 200 kΩ
- Temperature: -40° up to 1400°C
- Circuit control: yes
- Diodes control: yes
- Weight: 400 g (including battery)
- battery: 1x9V
- dimensions: 99 x 250 x 43mm

Type	Packing (pcs) / carton	Catalogue number
EM202	18	**519202**



Digital clamp meter EM204

3 YEAR WARRANTY

This is a digital clamp meter for measuring of electric values. It features automatic range adjustment, manual value selection. It has an LCD display, low battery indication, overload protection. It is of high accuracy of analogue-digital conversion, precision in measuring and resistance to electro-magnetic interferences. It has an automatic switch off.

Technical features:
- DC voltage: 1000 V
- AC voltage: 750V
- DC current: 200 / 1000A
- AC current: 200 / 1000A
- Resistance: 200 kΩ
- Frequency: 2 kHz
- Circuit control: yes
- Weight: 400 g (including battery)
- battery: 1x9V
- dimensions: 99 x 258 x 43mm

Type	Packing (pcs) / carton	Catalogue number
EM204	18	**519204**



Digital clamp meter EM266

3 YEAR WARRANTY

This is a digital clamp meter for measuring of electric values. It features manual range adjustment. It has an LCD display and retain function option, low battery indication and overload protection.

Technical features:
- DC voltage: 1000 V
- AC voltage: 750V
- AC current: 200 / 1000A
- Resistance: 200 / 20 kΩ
- Circuit control: yes
- Diodes control: yes
- Weight: 310 g (including battery)
- battery: 1x9V
- dimensions: 69 x 229 x 38mm

Type	Packing (pcs) / carton	Catalogue number
EM266	20	**519266**



Infrared temperature meter EM520A

3 YEAR WARRANTY

This is a digital device for measuring of temperature.The temperature is measured with no contact. It has a laser counter for precision measuring, suitable large LCD display, battery low indication and overload protection.

Technical features:
- Temperature: -20° up to 320°C / -4° to 608 °F
- Distance to point size: 6:1
- Precision: ±2° C or 2% in reading
- battery: 1x9V
- dimensions: 90 x 155 x 45mm

Type	Packing (pcs) / carton	Catalogue number
EM520A	20	**519520**



Voltage Tester

2 YEAR WARRANTY

The voltage tester screwdriver is used for detecting the presence of electrical voltage. Existence of voltage is shown via lighting signal indicator located in the handle of the screwdriver. It can detect voltage in the range from 100V to 250V. The screwdriver has a flat tip.

Technical features:
- Length-3.5*140mm
- Voltage range 100-250V~
- GS, CE certifycates

Type	Packing (pcs) / carton	Catalogue number
DN-8203	1/480	**519203**

Phase meter Gk7

3 YEAR WARRANTY



A device indicating phase availability in the system. No contact phase indicator featuring sound and light indication of phase availability.

Technical features:
- Voltage range: from 50 to 1000V
- Frequency range: from 50 Hz to 500 Hz
- dimensions: length – 62mm

Type	Packing (pcs) / carton	Catalogue number
GK7	60	**519GK7**

Digital detector 4 in 1 series TS530

3 YEAR WARRANTY



This is a device for detecting metals, voltage and live conductors, wooden struts, or piping sections. The device has a 2-meter measuring tape. It features light and sound indication. When an object is located, the display light blinks and marks with increasing position. Once the exact position is located, a light point is marked on the wall through a button.

Technical features:
- 2-meter measuring tape
- Pen: marking the located detail
- Piping section: metal pipe up to 25mm
- Wooden struts: 30x30mm
- Live conductors detection: 50mm for 90 ~ 250V; 50/60Hz
- Weight: 213 g (including battery)
- battery: 1x9 V
- dimensions: 73 x 180 x 32mm

Type	Packing (pcs) / carton	Catalogue number
TS530	30	**519530**

Industrial repair kit ETK06A

3 YEAR WARRANTY



A finely packaged repair kit containing four elements in a metal briefcase, sealed with special plastic foam and struts for each instrument.

The kit includes:
- Digital multimeter EM420
- Digital clamp-on ammeter EM465
- Phase meter GK7
- Infrared temperature meter EM520A

Type	Packing (pcs) / carton	Catalogue number
ETK06A	6	**51906A**





Hydraulic crimping pliers HT - 300 type

2 YEAR WARRANTY

Functions:
- Crimping of aluminum or copper conductors with cable terminals or bush in the corresponding size

Technical data:
- Crimping head turning at 360° which facilitates the crimping of static conductors
- Device for automatic following of the effort at crimping completion
- Form of the crimping element: hexahedral
- Size of the crimping element: 16, 25, 35, 50, 70, 95, 120, 150, 185, 240, 300 mm2
- Section of the crimping conductors:
  - - Al conductors - from 16 to 300 mm2
  - - Cu conductors – from 16 to 240 mm2
- Element pressing power: 60kN
- Width of the element: 17mm
- Weight of the instrument: 3.3 kg
- Length: 460mm
- Used hydraulic oil: #15 (hydraulic oil with viscosity 15)
- Metal box for the instrument
- A set of congestion hoops for the hydraulic cylinder

Type	Packing (pcs) / carton	Catalogue number
HT - 300	2	**59300**





Hydraulic crimping pliers KYQ-300B type

2 YEAR WARRANTY

Functions:
- Crimping of aluminum or copper conductors with cable terminals or bush in the corresponding size

Technical data:
- Device for automatic following of the effort at crimping completion
- Form of the crimping element: hexahedral
- Size of the crimping element: 16, 25, 35, 50, 70, 95, 120, 150, 185, 240, 300 mm^2
- Section of the crimping conductors:
  - - Al conductors - from 16 to 300 mm^2
  - - Cu conductors – from 16 to 240 mm^2
- Element pressing power: 100kN
- Width of the element: 22mm
- Weight of the instrument: 6.8 kg
- Length: 500mm
- Used hydraulic oil: #23 (hydraulic oil with viscosity 23)
- Metal box for the instrument
- A set of congestion hoops for the hydraulic cylinder

Type	Packing (pcs) / carton	Catalogue number
KYQ-300B	2	**59302**





Hydraulic crimping pliers YQK-300 type

2 YEAR WARRANTY

Functions:
- Crimping of aluminum or copper conductors with cable terminals or bush in the corresponding size

Technical data:
- Form of the crimping element: hexahedral
- Size of the crimping element: 10, 16, 25, 35, 50, 70, 95, 120, 150, 185, 240, 300 mm2
- Section of the crimping conductors:
  - - Al conductors - from 10 to 300 mm2
  - - Cu conductors – from 10 to 240 mm2
- Element pressing power: 100kN
- Width of the element: 22mm
- Weight of the instrument: 6.3 kg
- Length: 500mm
- Used hydraulic oil: #15 (hydraulic oil with viscosity 15)
- Metal box for the instrument
- A set of congestion hoops for the hydraulic cylinder

Type	Packing (pcs) / carton	Catalogue number
YQK-300	4	**59301**





Hydraulic crimping pliers YQK – 50 type

2 YEAR WARRANTY

Functions:
Crimping of aluminum or copper conductors with cable terminals or bush in the corresponding size

Technical data:
- Form of the crimping element: hexahedral
- Size of the crimping element: 4, 6, 10, 16, 25, 35, 50 mm2
- Section of the crimping conductors:
  - - Al conductors - from 4 to 50mm2
  - - Cu conductors – from 4 to 50 mm2
- Element pressing power: 8T
- Width of the element: 10mm
- Weight of the instrument: 2.8 kg
- Length: 310mm
- Used hydraulic oil: #15 (hydraulic oil with viscosity 15)
- Metal box for the instrument
- A set of congestion hoops for the hydraulic cylinder

Type	Packing (pcs) / carton	Catalogue number
YQK – 50	5	**59303**



Hydraulic punching pliers WK - 8 type

2 YEAR WARRANTY

Functions:
- Cutting through openings in sheet metal with gauge up to 3mm without rotary motion

Technical data:
- Piercing head turning at 360°
- Form of the cutting element: round
- Size of the cutting element: Ø 22, 27.5, 34.3, 40, 49, 60.8mm
- Piercing capacity:
  - - sheet metal 3mm – openings up to Ø 30mm
  - - sheet metal 2mm – openings up to Ø 60mm
- Element pressing power: 80kN
- Thickness of the element: 25mm
- Weight of the instrument: 3.5 kg
- Used hydraulic oil: #15 (hydraulic oil with viscosity 15)
- Metal box for the instrument
- A set of congestion hoops for the hydraulic cylinder
- Additional set of cutting elements for cable glands – Ø16, 20, 26.2, 32.5, 39, 51, 63 and a square for display devices 46.5x46.5, 68x68 (ordered additionally); Catalogue number 54002

Type	Packing (pcs) / carton	Catalogue number
WK - 8	2	**54000**
Additional set	2	**54002**



Hydraulic punching press SYK – 15 type

2 YEAR WARRANTY

Functions:
- Cutting through openings in sheet metal with gauge up to 3mm without rotary motion

Technical data:
- Protracting piercing head supplied with a hose for the hydraulic oil that gives possibility for piercing openings everywhere on the metal surface
- Form of the cutting element:
  - - round
  - - square
- Size of the cutting element:
  - - square: 32x32mm
  - - round openings: Ø 22, 27.5, 34.3, 40, 49, 60.8mm
- Piercing capacity:
  - - sheet metal 3mm – openings up to Ø 60.8mm
  - - sheet metal 2mm – openings up to Ø 115.5mm
  - - square opening up to 110x110mm
- Element pressing power: 15T
- Thickness of the element: 25mm
- Weight of the instrument: 11.5 kg
- Used hydraulic oil: #15 (hydraulic oil with viscosity 15)
- Metal box for the instrument
- A set of congestion hoops for the hydraulic cylinder
- Additional set of cutting elements for cable glands – Ø16, 20, 26.2, 32.5, 39, 51, 63 and a square for display devices 46.5x46.5, 68x68 (ordered additionally); Catalogue number 54002

Type	Packing (pcs) / carton	Catalogue number
SYK – 15	2	**54001**
Additional set	2	**54002**



Combined scissors HS – 2103 type

2 YEAR WARRANTY

Functions:
- Cleaning of the plastic insulation of conductors and conductors
- Cutting of aluminum or copper cable conductors up to 6mm2
- Cutting of bearing steel plated wires up to 2mm2
- Crimping of cable terminals

Technical data:
- Possibility for crimping of automobile high voltage conductors
- Possibility for crimping of cable conductors up to 6mm2
- Maximum section of the cable: up to 6mm2
- Weight of the instrument: 0.21kg
- Length of the instrument: 213mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
HS – 2103	50	**59310**



Combined scissors HS – 2603 type

2 YEAR WARRANTY

Functions:
- Cleaning of the plastic insulation of conductors and conductors
- Cutting of aluminum or copper cable conductors up to 6mm2
- Cutting of bearing steel plated wires up to 2mm2
- Crimping of cable terminals

Technical data:
- Possibility for crimping of cable conductors up to 6mm2
- Maximum section of the cable:
  - - cleaning of a rigid conductor: from 0.5 to 6mm2
  - - cleaning of a flexible conductor: from 0.75 to 6mm2
- Presence of openings for cutting of bolts: from M2.5 to M5
- Weight of the instrument: 0.32kg
- Length of the instrument: 240mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
HS – 2603	50	**59311**



Instrument for manual crimping of conductors HD – 005 type

2 YEAR WARRANTY

Functions:
- Crimping of naked cable terminals

Technical data:
- Possibility for crimping of cable conductors up to 10mm2
- Form of the crimping head: hexahedral
- Weight of the instrument: 0.49kg
- Length of the instrument: 220mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
HD – 005	20	**59308**



Instrument for manual crimping of conductors G – 301H type

2 YEAR WARRANTY

Functions:
- Crimping of isolated cable terminals

Technical data:
- Possibility for crimping of cable conductors up to 6mm2
- Form of the crimping head: hexahedral
- Weight of the instrument: 0.49kg
- Length of the instrument: 220mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
G – 301H	20	**59307**



Crimping pliers SN – 003 type

2 YEAR WARRANTY

Functions:
- Crimping of naked cable terminals and joining bushes

Technical data:
- Possibility for crimping of cable conductors from 6 to 16mm2
- Form of the crimping head: hexahedral
- Weight of the instrument: 0.39kg
- Length of the instrument: 190mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
SN – 003	10 / 20	**59309**



Mechanical cable cutting pliers CC – 325 type

2 YEAR WARRANTY

Functions:
- Cutting of aluminum or copper cable conductors
- Cutting of conductors with metal bearing core

Technical data:
- Maximum section of the cable:
  - - for aluminum conductors up to 150mm2
  - - for copper conductors up to 150mm2
- Cutting power: 15T
- Presence of cutting mechanism type ratchet
- Presence of brake of the cutting mechanism
- Weight of the instrument: 0.58kg
- Length of the instrument: 260mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
CC – 325	5 / 10	**59305**



Mechanical cable cutting pliers CC – 400 type

2 YEAR WARRANTY

Functions:
- Cutting of aluminum or copper cable conductors
- Cutting of conductors with metal bearing core

Technical data:
- Maximum section of the cable:
  - - for aluminum conductors up to 400mm2
  - - for copper conductors up to 350mm2
- Cutting power: 15T
- Presence of cutting mechanism type ratchet
- Presence of brake of the cutting mechanism
- Weight of the instrument: 1.25kg
- Length of the instrument: 360mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
CC – 400	5	**59304**



Mechanical cable cutting pliers HS – 250 type

2 YEAR WARRANTY

Functions:
- Cutting of aluminum or copper cable conductors
- Cutting of conductors with metal bearing core

Technical data:
- Maximum section of the cable:
  - - for aluminum conductors up to 240mm2
  - - for copper conductors up to 185mm2
- Weight of the instrument: 1.43kg
- Length of the instrument: 540mm
- Packing: blister

Type	Packing (pcs) / carton	Catalogue number
HS – 250	10	**59306**

1000V vde pliers

5 YEAR WARRANTY

- Manufactured to exact standarts.
- Chrome Vanadium Steel
- Induction hardened cutting edges.
- Bi-material TPR soft-grip handle.
- Ergonomic design for comfortable, firm grip.
- GS/TUV approved.



VDE Combination Pliers

Type	Size (mm)	Packing (pcs) hanging card / box / carton	Catalogue number
VDE Combination Pliers	180	1 / 6 / 60	**599100180**



VDE Long Nose Pliers

Type	Size (mm)	Packing (pcs) hanging card / box / carton	Catalogue number
VDE Long Nose Pliers	180	1 / 6 / 60	**599300180**



VDE Side Cutting Pliers

Type	Size (mm)	Packing (pcs) hanging card / box / carton	Catalogue number
VDE Side Cutting Pliers	160	1 / 6 / 60	**599200160**



VDE Cable Cutting Pliers

Type	Size (mm)	Packing (pcs) hanging card / box / carton	Catalogue number
VDE Cable Cutting Pliers	160	1 / 6 / 60	**599600180**

1000V vde screwdriver

5 YEAR WARRANTY

- Designer for great performance with thumb pressure points.
- Extra torque and comfort.
- Chrome vanadium steel.
- Magnetic tip.
- Ergonomic comfort-grip handle



VDE Screwdriver, Slotted

Type	Size (mm)	L (mm)	Packing (pcs) hanging card / box / carton	Catalogue number
VDE Screwdriver, Slotted	3	100	1 / 12 / 240	**599030100**
VDE Screwdriver, Slotted	4	100	1 / 12 / 240	**599040100**

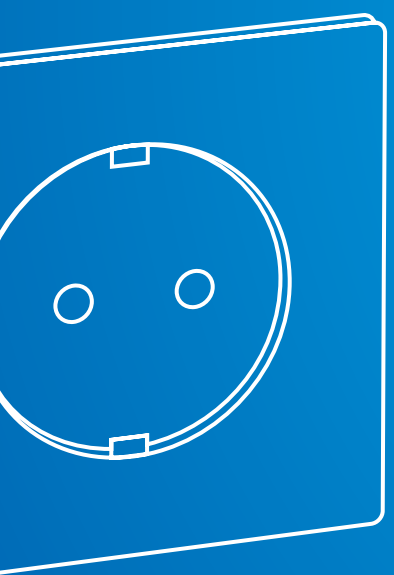


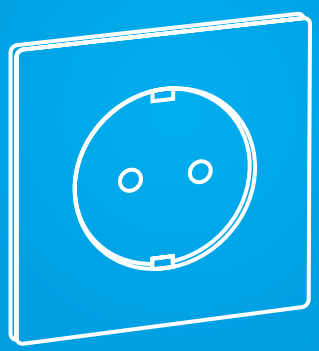
VDE Screwdriver

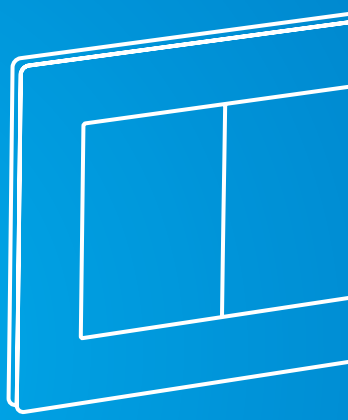
Type	Size (mm)	L (mm)	Packing (pcs) hanging card / box / carton	Catalogue number
VDE Screwdriver	PH0	60	1 / 12 / 240	**599000060**
VDE Screwdriver	PH1	80	1 / 12 / 240	**599001080**
VDE Screwdriver	PH2	100	1 / 12 / 120	**599020100**

ELECTRICAL SWITCHES AND SOCKETS

ELECTRICAL













ELMARK®

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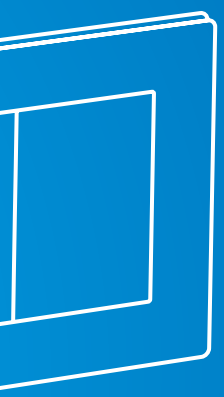






RHYME

5 YEAR WARRANTY



White metallic



Champagne metallic



Grey metallic



Graphite metallic



Coffee metallic



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
1 button 1 way switch	White metallic	10	10/100	**11011**
	Champagne metallic			**11012**
	Grey metallic			**11014**
	Graphite metallic			**11015**
	Coffee metallic			**11016**
1 button 2 way switch	White metallic	10	10/100	**11021**
	Champagne metallic			**11022**
	Grey metallic			**11024**
	Graphite metallic			**11025**
	Coffee metallic			**11026**
1 button cross switch	White metallic	10	10/100	**11341**
	Champagne metallic			**11342**
	Grey metallic			**11344**
	Graphite metallic			**11345**
	Coffee metallic			**11346**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
2 buttons 1 way switch	White metallic	10	10/100	**11041**
	Champagne metallic			**11042**
	Grey metallic			**11044**
	Graphite metallic			**11045**
	Coffee metallic			**11046**
2 buttons 2 way switch	White metallic	10	10/100	**11051**
	Champagne metallic			**11052**
	Grey metallic			**11054**
	Graphite metallic			**11055**
	Coffee metallic			**11056**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
3 buttons 1 way switch	White metallic	10	10/100	**11721**
	Champagne metallic			**11722**
	Grey metallic			**11724**
	Graphite metallic			**11725**
	Coffee metallic			**11726**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
curtain control switch	White metallic	10	10/100	**11171A**
	Champagne metallic			**11172A**
	Grey metallic			**11174A**
	Graphite metallic			**11175A**
	Coffee metallic			**11176A**



Type	Colour	Packing (pcs)	Catalogue number
sensor switch	White metallic	10/100	**11411**
	Champagne metallic		**11412**
	Grey metallic		**11414**
	Graphite metallic		**11415**
	Coffee metallic		**11416**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
dimmer switch	White metallic	10	10/100	**11191**
	Champagne metallic			**11192**
	Grey metallic			**11194**
	Graphite metallic			**11195**
	Coffee metallic			**11196**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
door bell switch	White metallic	10	10/100	**11181**
	Champagne metallic			**11182**
	Grey metallic			**11184**
	Graphite metallic			**11185**
	Coffee metallic			**11186**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
door bell switch with name card	White metallic	10	10/100	**11181B**
	Champagne metallic			**11182B**
	Grey metallic			**11184B**
	Graphite metallic			**11185B**
	Coffee metallic			**11186B**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Push light switch	White metallic	10	10/100	**11181C**
	Champagne metallic			**11182C**
	Grey metallic			**11184C**
	Graphite metallic			**11185C**
	Coffee metallic			**11186C**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket	White metallic	10	10/100	**11211**
	Champagne metallic			**11212**
	Grey metallic			**11214**
	Graphite metallic			**11215**
	Coffee metallic			**11216**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket with cover	White metallic	16	10/100	**11211C**
	Champagne metallic			**11212C**
	Grey metallic			**11214C**
	Graphite metallic			**11215C**
	Coffee metallic			**11216C**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket (double)	White metallic	16	5/50	**11371**
	Champagne metallic			**11372**
	Grey metallic			**11374**
	Graphite metallic			**11375**
	Coffee metallic			**11376**



Type	Colour	Packing (pcs)	Catalogue number
Phone socket RJ11	White metallic	10/100	**11261**
	Champagne metallic		**11262**
	Grey metallic		**11264**
	Graphite metallic		**11265**
	Coffee metallic		**11266**



Type	Colour	Packing (pcs)	Catalogue number
Phone socket RJ11 - double	White metallic	10/100	**11741**
	Champagne metallic		**11742**
	Grey metallic		**11744**
	Graphite metallic		**11745**
	Coffee metallic		**11746**

Type	Colour	Packing (pcs)	Catalogue number
Phone socket RJ11 + computer socket RJ45	White metallic	10/100	**11731**
	Champagne metallic		**11732**
	Grey metallic		**11734**
	Graphite metallic		**11735**
	Coffee metallic		**11736**



Type	Colour	Packing (pcs)	Catalogue number
Computer socket (cat5e) RJ45	White metallic	10/100	**11281**
	Champagne metallic		**11282**
	Grey metallic		**11284**
	Graphite metallic		**11285**
	Coffee metallic		**11286**

Type	Colour	Packing (pcs)	Catalogue number
Computer socket RJ45 (CAT6e)	White metallic	10/100	**112816E**
	Champagne metallic		**112826E**
	Grey metallic		**112846E**
	Graphite metallic		**112856E**
	Coffee metallic		**112866E**



Type	Colour	Packing (pcs)	Catalogue number
Computer socket RJ45 - double	White metallic	10/100	**11711**
	Champagne metallic		**11712**
	Grey metallic		**11714**
	Graphite metallic		**11715**
	Coffee metallic		**11716**



Type	Colour	Packing (pcs)	Catalogue number
TV socket	White metallic	10/100	**11251**
	Champagne metallic		**11252**
	Grey metallic		**11254**
	Graphite metallic		**11255**
	Coffee metallic		**11256**



Type	Colour	Packing (pcs)	Catalogue number
TV socket+FM socket + SAT socket *The model is available for individual installation only and cannot be combined with other frames of Rhyme series.	White metallic	10/100	**11681**
	Champagne metallic		**11682**
	Grey metallic		**11684**
	Graphite metallic		**11685**
	Coffee metallic		**11686**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Key card power switch	White metallic	10	10/100	**11331**
	Champagne metallic			**11332**
	Grey metallic			**11334**
	Graphite metallic			**11335**
	Coffee metallic			**11336**











Type	Colour	Packing (pcs)	Catalogue number
2 gangs	White metallic	20/200	**11551**
	Champagne metallic		**11552**
	Grey metallic		**11554**
	Graphite metallic		**11555**
	Coffee metallic		**11556**
3 gangs	White metallic	20/200	**11661**
	Champagne metallic		**11662**
	Grey metallic		**11664**
	Graphite metallic		**11665**
	Coffee metallic		**11666**
4 gangs	White metallic	10/100	**11361**
	Champagne metallic		**11362**
	Grey metallic		**11364**
	Graphite metallic		**11365**
	Coffee metallic		**11366**
5 gangs	White metallic	20/200	**11601**
	Champagne metallic		**11602**
	Grey metallic		**11604**
	Graphite metallic		**11605**
	Coffee metallic		**11606**
6 gangs	White metallic	20/200	**11621**
	Champagne metallic		**11622**
	Grey metallic		**11624**
	Graphite metallic		**11625**
	Coffee metallic		**11626**



Type	Colour	Packing (pcs)	Catalogue number
Outlet safety cap	White	10/100	**192215**
	Brown		**192214**



SPLENDOR

5 YEAR WARRANTY



White



Silver grey



Pear-tree



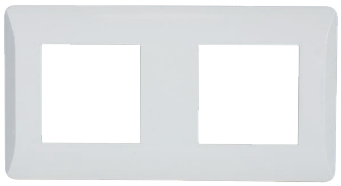
Cherry-tree



Black



Type	Colour	Packing (pcs)	Catalogue number
1 gang	White	30/300	**06301**
1 gang	Silver grey	30/300	**06302**
1 gang	Pear-tree	30/300	**06305**
1 gang	Cherry-tree	30/300	**06306**
1 gang	Black	30/300	**06303**



Type	Colour	Packing (pcs)	Catalogue number
2 gangs	White	20/200	**06311**
2 gangs	Silver grey	20/200	**06312**
2 gangs	Pear-tree	20/200	**06315**
2 gangs	Cherry-tree	20/200	**06316**
2 gangs	Black	20/200	**06313**



Type	Colour	Packing (pcs)	Catalogue number
3 gangs	White	15/150	**06321**
3 gangs	Silver grey	15/150	**06322**
3 gangs	Pear-tree	15/150	**06325**
3 gangs	Cherry-tree	15/150	**06326**
3 gangs	Black	15/150	**06323**



Type	Colour	Packing (pcs)	Catalogue number
single with cover	White	20/200	**0629**
	Silver grey		**06292**
	Pear-tree		**06295**
	Cherry-tree		**06296**
	Black		**1629**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
1 button 1 way switch	white	10	10/100	**0601**
	dark grey	10	10/100	**1601**
1 button 2 way switch	white	10	10/100	**0602**
	dark grey	10	10/100	**1602**
1 button cross switch	white	10	10/100	**0603**
	dark grey	10	10/100	**1603**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
2 buttons 1 way switch	white	10	10/100	**0610**
	dark grey	10	10/100	**1610**
2 buttons 1 way switch with light	white	10	10/100	**0612**
	dark grey	10	10/100	**1612**
2 buttons 2 way switch	white	10	10/100	**0611**
	dark grey	10	10/100	**1611**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket	white	16	10/100	**0616**
	dark grey	16	10/100	**1616**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
1 button 1 way switch with light	white	10	10/100	**0606**
	dark grey	10	10/100	**1606**
1 button 2 way switch with light	white	10	10/100	**0607**
	dark grey	10	10/100	**1607**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Push light switch	white	10	10/100	**0605**
	dark grey	10	10/100	**1605**
Door bell switch with light	white	10	10/100	**0609**
	dark grey	10	10/100	**1609**



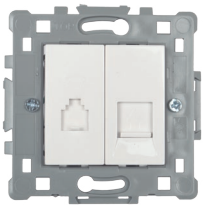
Type	Colour	Power(W)	Packing (pcs)	Catalogue number
Dimmer switch	white	600	10/100	**0618**
	dark grey	600	10/100	**1618**
Fan speed switch	white	500	10/100	**0619**
	dark grey	500	10/100	**1619**





Type	Colour	Packing (pcs)	Catalogue number
TV socket	white	10/100	**0621**
	dark grey	10/100	**1621**
TV socket+FM socket+SAT socket *The model is available for individual installation only and cannot be combined with other frames of Rhyme series.	white	10/100	**0668**
	dark grey	10/100	**1668**
TV socket (female)+ Phone socket RJ11	white	10/100	**0648**
	dark grey	10/100	**1648**
TV socket (female)+ Computer socket RJ45	white	10/100	**0645**
	dark grey	10/100	**1645**





Type	Colour	Packing (pcs)	Catalogue number
Phone socket RJ11	white	10/100	**0623**
	dark grey	10/100	**1623**
Phone socket RJ11 (2 gangs)	white	10/100	**06232**
	dark grey	10/100	**16232**
Computer socket RJ45	white	10/100	**0624**
	dark grey	10/100	**1624**
Phone socket RJ11+ Computer socket RJ45	white	10/100	**0646**
	dark grey	10/100	**1646**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Key card power switch	white	10	10/100	**0633**
	dark grey	10	10/100	**1633**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket (2 gangs)	white	16	10/100	**0637**

LIFE STYLE

5 YEAR WARRANTY


White

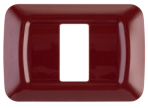

Chrome


Silver grey


Yellow


Pear-tree


Golden


Bordo


Cherry-tree


Dark grey


Green


Light blue


Dark blue











Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
1 gang	White		40/480	**34601**
2 gangs			40/480	**34613**
3 gangs			40/480	**34625**
4 gangs			35/420	**34637**
1 gang	Chrome		40/480	**34609**
2 gangs			40/480	**34621**
3 gangs			40/480	**34633**
4 gangs			35/420	**34645**
1 gang	Silver grey		40/480	**34610**
2 gangs			40/480	**34622**
3 gangs			40/480	**34634**
4 gangs			35/420	**34646**
1 gang	Yellow		40/480	**34602**
2 gangs			40/480	**34614**
3 gangs			40/480	**34626**
4 gangs			35/420	**34638**
1 gang	Pear-tree		40/480	**34611**
2 gangs			40/480	**34623**
3 gangs			40/480	**34635**
4 gangs			35/420	**34647**
1 gang	Golden		40/480	**34608**
2 gangs			40/480	**34620**
3 gangs			40/480	**34632**
4 gangs			35/420	**34644**
1 gang	Bordo		40/480	**34606**
2 gangs			40/480	**34618**
3 gangs			40/480	**34630**
4 gangs			35/420	**34642**
1 gang	Cherry-tree		40/480	**34162**
2 gangs			40/480	**34624**
3 gangs			40/480	**34636**
4 gangs			35/420	**34648**
1 gang	Dark grey		40/480	**34607**
2 gangs			40/480	**34619**
3 gangs			40/480	**34631**
4 gangs			35/420	**34643**
1 gang	Green		40/480	**34603**
2 gangs			40/480	**34615**
3 gangs			40/480	**34627**
4 gangs			35/420	**34639**
1 gang	Light blue		40/480	**34605**
2 gangs			40/480	**34617**
3 gangs			40/480	**34629**
4 gangs			35/420	**34641**
1 gang	Dark blue		40/480	**34604**
2 gangs			40/480	**34616**
3 gangs			40/480	**34628**
4 gangs			35/420	**34640**
6 gangs	White		35/420	**34660**
6 gangs	Silver grey		35/420	**34662**
6 gangs	Dark grey		35/420	**34661**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
one button one way switch	white	16	8/48/960	**20501**
	dark grey	16	8/48/960	**21501**
one button cross switch	white	16	8/48/960	**20579**
	dark grey	16	8/48/960	**21579**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
one button two way switch	white	16	8/48/960	**20506**
	dark grey	16	8/48/960	**21506**
one button two way switch with light	white	16	8/48/960	**20507**
	dark grey	16	8/48/960	**21507**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
door bell switch with light	white	10	8/48/960	**20510A**
	dark grey	10	8/48/960	**21510A**
push light switch with light	white	10	8/48/960	**20510B**
	dark grey	10	8/48/960	**21510B**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
curtain switch	white	10	8/48/960	**20521**
	dark grey	10	8/48/960	**21521**



Type	Colour	Power(W)	Packing (pcs)	Catalogue number
dimmer switch	white	500	8/48/960	**20803**
	dark grey	500	8/48/960	**21803**
fan speed switch	white	500	8/48/960	**20803A**
	dark grey	500	8/48/960	**21803A**



Type	Colour	Rated current In (VA)	Packing (pcs)	Catalogue number
bell 230V	white	8	8/48/960	**20616**
	dark grey	8	8/48/960	**21616**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket	white	16	4/24/480	**20265**
	dark grey	16	4/24/480	**21265**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Italian standard multi socket	white	16	8/48/960	**20203**
	dark grey	16	8/48/960	**21203**



Type	Colour	Packing (pcs)	Catalogue number
TV socket	white	8/48/960	**20228**
	dark grey	8/48/960	**21228**
Satellite socket	white	8/48/960	**30301**
	dark grey	8/48/960	**31301**



Type	Colour	Packing (pcs)	Catalogue number
phone socket RJ 11	white	8/48/960	**20251**
	dark grey	8/48/960	**21251**
computer socket RJ 45	white	8/48/960	**20266**
	dark grey	8/48/960	**21266**



Type	Colour	Packing (pcs)	Catalogue number
decorative cover	white	8/48/960	**20056**
	dark grey	8/48/960	**21056**



Type		Packing (pcs)	Catalogue number
Surface mounting box - for LIFE STYLE series	double	5 / 250	**2702**
	triple	5 / 200	**2703**



Type		IP code	Packing (pcs)	Catalogue number
Watertight box - for LIFE STYLE series	triple	44	1 / 100	**22451A**
	quadruple	44	1 / 100	**22461A**



Type		Packing (pcs)	Catalogue number
Frame - for LIFE STYLE series	double frame	10 / 400	**24262**
	triple frame	10 / 400	**24201**
	quadruple frame	10 / 400	**24202**
	sixfold frame	10 / 200	**24206LF**

* Single switch or socket use triple frame



Type		Packing (pcs)	Catalogue number
Console box for brick and concrete - for LIFE STYLE series	triple	10 / 300	**24203**
	quadruple	10 / 200	**71304**
	sixfold	10 / 200	**68206**

* Single, double and triple switch or socket use triple console



Type		Packing (pcs)	Catalogue number
Console box for plasterboard	triple	160	**24205**
	quadruple	150	**24206**

* Single, double and triple switch or socket use triple console





BASIC

5 YEAR WARRANTY



White



Cream



Silver grey



Pear tree



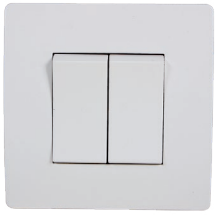
Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
1 button 1 way switch	White	10	10/100	**38000**
	Cream	10	10/100	**38001**
	Silver grey	10	10/100	**38002**
	Pear tree	10	10/100	**38005**
1 button 2 way switch	White	10	10/100	**38010**
	Cream	10	10/100	**38011**
	Silver grey	10	10/100	**38012**
	Pear tree	10	10/100	**38015**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
1 button 1 way switch with light	White	10	10/100	**38700**
	Cream	10	10/100	**38701**
	Silver grey	10	10/100	**38702**
	Pear tree	10	10/100	**38705**



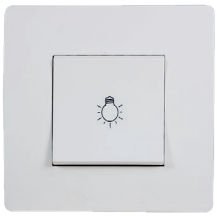
Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Cross switch	White	10	10/100	**38070**
	Cream	10	10/100	**38071**
	Silver grey	10	10/100	**38072**
	Pear tree	10	10/100	**38075**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
2 buttons 1 way switch	White	10	10/100	**38050**
	Cream	10	10/100	**38051**
	Silver grey	10	10/100	**38052**
	Pear tree	10	10/100	**38055**



Type	Colour	Power(W)	Packing (pcs)	Catalogue number
Dimmer switch	White	400	10/100	**38800**
	Cream	400	10/100	**38801**
	Silver grey	400	10/100	**38802**
	Pear tree	400	10/100	**38805**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Push light switch	White	10	10/100	**38100**
	Cream	10	10/100	**38101**
	Silver grey	10	10/100	**38102**
	Pear tree	10	10/100	**38105**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
Door bell switch	White	10	10/100	**38120**
	Cream	10	10/100	**38121**
	Silver grey	10	10/100	**38122**
	Pear tree	10	10/100	**38125**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket	White	16	10/100	**38200**
	Cream	16	10/100	**38201**
	Silver grey	16	10/100	**38202**
	Pear tree	16	10/100	**38205**



Type	Colour	Rated current In (A)	Packing (pcs)	Catalogue number
German type socket with cover	White	16	10/100	**38250**
	Cream	16	10/100	**38251**
	Silver grey	16	10/100	**38252**
	Pear tree	16	10/100	**38255**



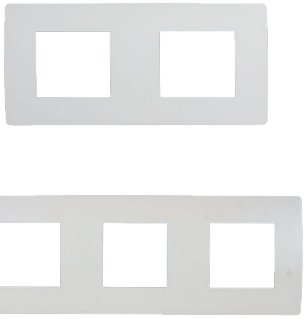
Type	Colour	Packing (pcs)	Catalogue number
Phone socket	White	10/100	**38350**
	Cream	10/100	**38351**
	Silver grey	10/100	**38352**
	Pear tree	10/100	**38355**



Type	Colour	Packing (pcs)	Catalogue number
Computer socket	White	10/100	**38300**
	Cream	10/100	**38301**
	Silver grey	10/100	**38302**
	Pear tree	10/100	**38305**



Type	Colour	Packing (pcs)	Catalogue number
TV socket	White	10/100	**38360**
	Cream	10/100	**38361**
	Silver grey	10/100	**38362**
	Pear tree	10/100	**38365**



Type	Colour	Packing (pcs)	Catalogue number
2 gang panel	White	20/200	**38900**
	Cream	20/200	**38901**
	Silver grey	20/200	**38902**
	Pear tree	20/200	**38905**
3 gang panel	White	15/150	**38910**
	Cream	15/150	**38911**
	Silver grey	15/150	**38912**
	Pear tree	15/150	**38915**



Type	Colour	Packing (pcs)	Catalogue number
Outlet safety cap	White	10/100	**192215**
	Brown		**192214**





German type socket waterproof with transparent cover

5 YEAR WARRANTY

Type		IP code	Packing (pcs)	Catalogue number
German type socket water-proof with transparent cover	Single	44	120	**19221304**
	Double	44	60	**1922100311**
	Triple	44	50	**1922100312**





German type socket waterproof with white cover

5 YEAR WARRANTY

Type		IP code	Packing (pcs)	Catalogue number
German type socket water-proof with white cover	Single	44	120	**1922130101**
	Double	44	60	**1922100307**
	Triple	44	50	**1922100309**





Switch - waterproof

5 YEAR WARRANTY

Type		IP code	Packing (pcs)	Catalogue number
Switch - waterproof	One way switch	44	120	**1922130104**
	One button two way switch	44	120	**1922130106**
	Two buttons one way switch	44	120	**1922130105**
	Push light switch/door bell switch	44	120	**1922130107**





Switch

5 YEAR WARRANTY

	Type	IP code	Packing (pcs)	Catalogue number
Switch	One button two way switch	20	120	**19221305**
	Puch light switch	20	120	**19221306**
	Two buttons one way switch	20	120	**19221307**



Socket

5 YEAR WARRANTY

Type	IP code	Packing (pcs)	Catalogue number
Socket	20	120	**19221308**



Multisocket

2 YEAR WARRANTY

Type	Colour	Rated current in (A)	Rated current in (W)	Packing (pcs)	Catalogue number
Multisocket double	black	16	3500	60	**192216**
Multisocket double	white	16	3500	60	**192217**
Multisocket triple	black	16	3500	60	**192218**
Multisocket triple	white	16	3500	60	**192219**



Adapters

2 YEAR WARRANTY

Type	Colour	Rated current in (A)	Rated current in (W)	Packing (pcs)	Catalogue number
Adapter double	White	16	3500	50	**192213**
Adapter double	Graphite	16	3500	50	**192212**
Adapter double with key	White	16	3500	50	**192211**
Adapter double with key	Graphite	16	3500	50	**192210**
Adapter triple	White	16	3500	40	**192209**
Adapter triple	Graphite	16	3500	40	**192208**
Adapter triple with key	White	16	3500	40	**192207**
Adapter triple with key	Graphite	16	3500	40	**192206**



Rubber- coated socket

2 YEAR WARRANTY

Type	Colour	IP code	Packing (pcs)	Catalogue number
Rubber- coated socket	black	44	25 / 100	**192220**



Rubber-coated plug

2 YEAR WARRANTY

Type	Colour	IP code	Packing (pcs)	Catalogue number
Rubber- coated plug	black	44	25 / 100	**192221**



Plug with PVC muff

2 YEAR WARRANTY

Type	Rated current In (A)	Colour	Material	Packing (pcs)	Catalogue number
Plug	16	black / white	with pvc muff	300	**192113**



Plug bakelite

2 YEAR WARRANTY

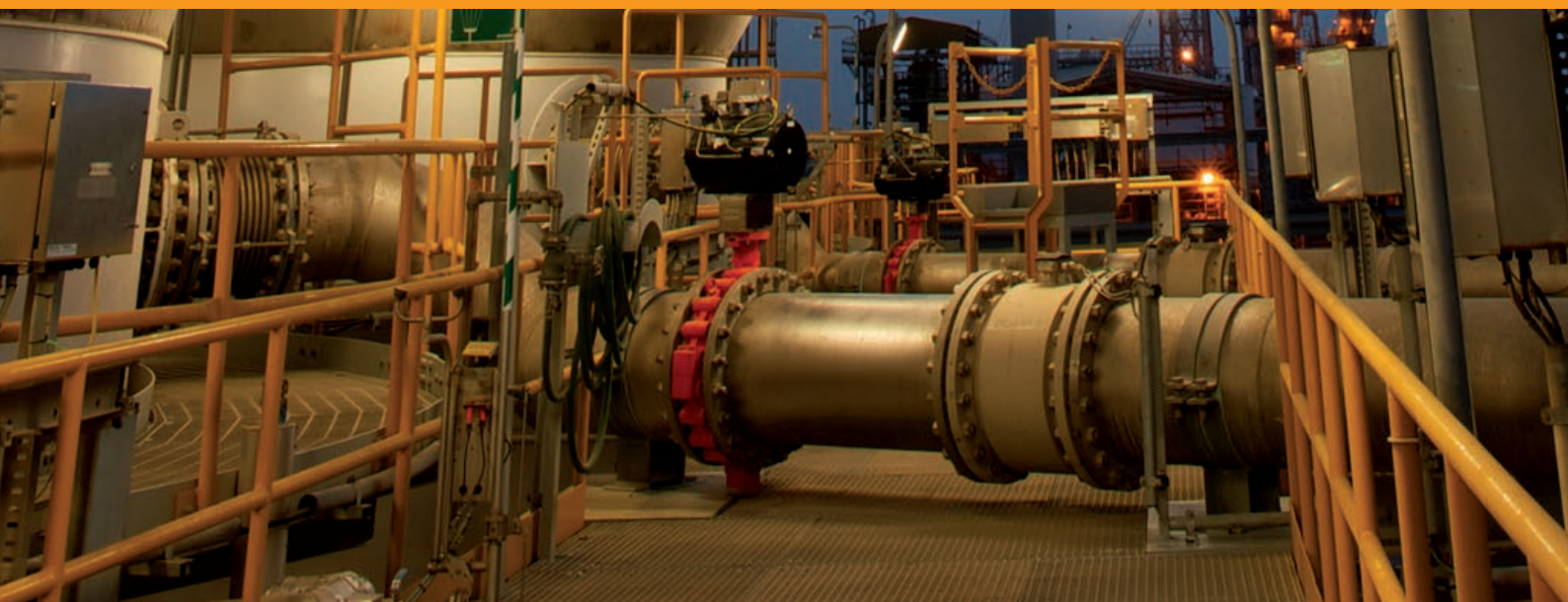
Type	Rated current In (A)	Colour	Material	Packing (pcs)	Catalogue number
Plug	16	white	bakelite	80	**19211102**
Plug	16	black	bakelite	80	**19211101**

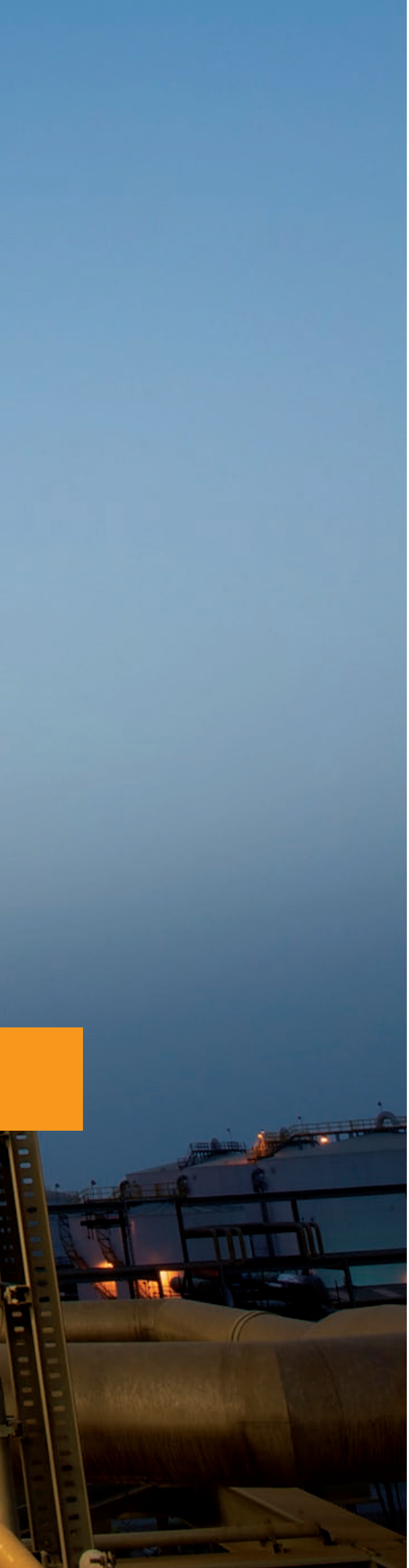


ELMARK®

The Brand of Electricity

LED INDUSTRIAL LIGHTING





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High bay fixtures | 240

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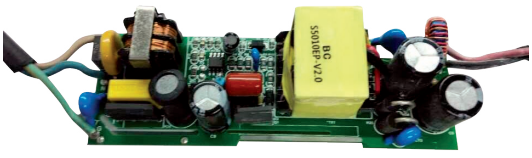
LED INDUSTRIAL LIGHTING

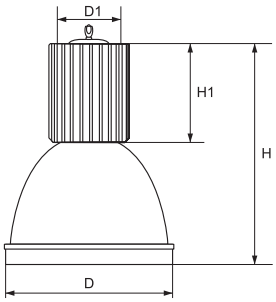
Using imported ultra bright led chip. Low luminous decay and good intensity. Built-in power driver ensuring stability of light. High quality reflecting cover with opto reflectivity. Aluminum shell and surface oxidization treatment, good thermal arrangement.

Drivers features:

· Easy installation
· Low consumption
· Strong compatibility
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current (CC/IC)
· Structure: isolated
· International broad voltage AC input
· Protection: electric shock
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency, long life span, and high reliability







MINICOLOR

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	D1	H	H1	Catalogue number	Packing (pcs)
30W	3600	2400	5500	red	220	115	280	120	**98MINICOL-R**	1
30W	3600	2400	5500	green	220	115	280	120	**98MINICOL-G**	1
30W	3600	2400	5500	blue	220	115	280	120	**98MINICOL-B**	1
30W	3600	2400	5500	black	220	115	280	120	**98MINICOL-BL**	1
30W	3600	2400	5500	white	220	115	280	120	**98MINICOL-WT**	1
30W	3600	2400	5500	grey	220	115	280	120	**98MINICOL-GR**	1

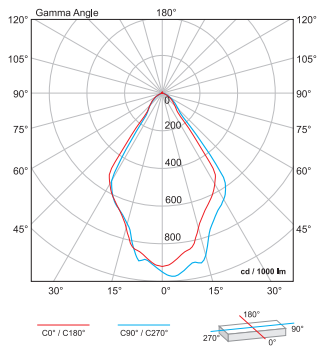
Reflector: aluminium | **Gear box:** aluminium casting | **LED driver:** mounted in the gear box | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C



~230V | 50/60 Hz | COB | 90° | Ra>80 | 30000h | Hg

5 YEAR WARRANTY

MINICOLOR 30W

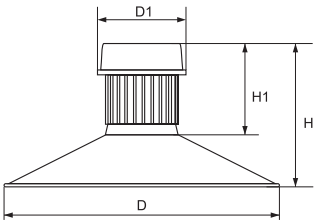




SENA50



SENA100



SENA50

A++ A | IP 64 | RoHS COMPLIANT | EMC | CE

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	D1	H	H1	Catalogue number	Packing (pcs)
SENA50	50W	6000	4000	5500	grey	450	220	350	210	**98SENA50120**	1

Reflector: aluminium | **Gear box:** aluminium casting | **LED driver:** mounted in the gear box | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

~230V | 50/60 Hz | COB | 120° | Ra>80 | 30000h | Hg

5 YEAR WARRANTY

SENA100

A++ A | IP 64 | RoHS COMPLIANT | EMC | CE

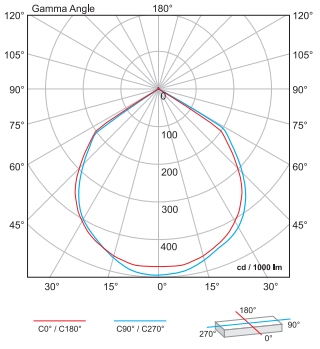
Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	D1	H	H1	Catalogue number	Packing (pcs)
SENA100	100W	12000	8000	5500	grey	450	220	400	260	**98SENA100120**	1

Reflector: aluminium | **Gear box:** aluminium casting | **LED driver:** mounted in the gear box | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

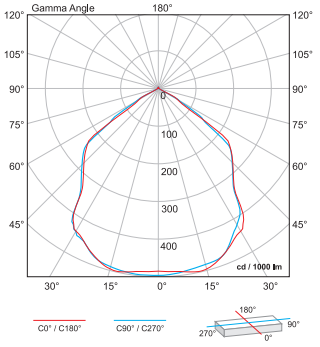
~230V | 50/60 Hz | COB | 120° | Ra>80 | 30000h | Hg

5 YEAR WARRANTY

SENA 50W



SENA 100W

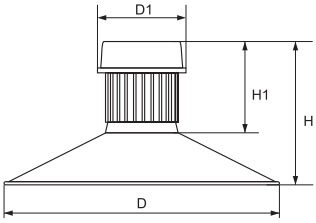




ELBA 150



ETNA 200



ELBA150

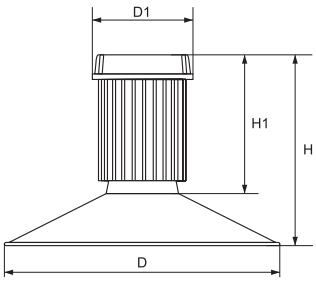
A++ A | IP 64 | RoHS COMPLIANT | EMC | CE

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	D1	H	H1	Catalogue number	Packing (pcs)
ELBA150	150W	18000	12000	5500	grey	500	300	470	320	**98ELBA150120**	1

Reflector: aluminium | **Gear box:** aluminium casting | **LED driver:** 3pcs - mounted in the gear box | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

~230V | 50/60 Hz | COB | 120° | Ra>80 | 30000h | Hg

5 YEAR WARRANTY



ETNA200

A++ A | IP 64 | RoHS COMPLIANT | EMC | CE

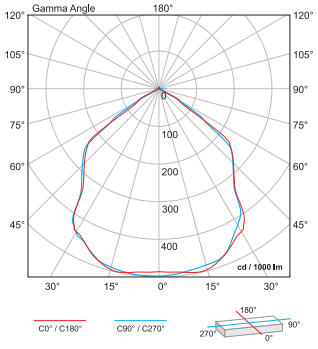
Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	D1	H	H1	Catalogue number	Packing (pcs)
ETNA200	200W	24000	16000	5500	grey	500	300	485	350	**98ETNA200120**	1

Reflector: aluminium | **Gear box:** aluminium casting | **LED driver:** 4pcs - mounted in the gear box | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

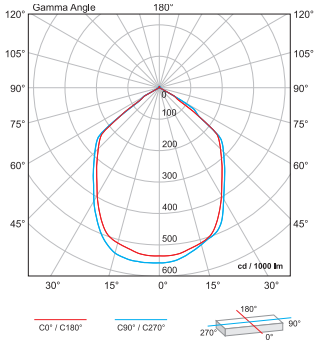
~230V | 50/60 Hz | COB | 120° | Ra>80 | 30000h | Hg

5 YEAR WARRANTY

ELBA 150W



ETNA 200W





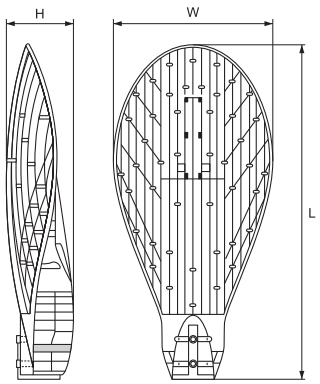
STREET150/180



STREET100



STREET50



STREET

A++ A | IP 65 | RoHS COMPLIANT | EMC | CE

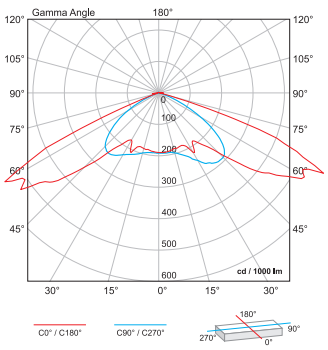
Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
STREET50	50W	6000	4000	5500	dark grey	530	250	105	**98STREET50**	1
STREET100	100W	12000	8000	5500	dark grey	650	250	105	**98STREET100**	1
STREET150	150W	18000	12000	5500	dark grey	800	300	115	**98STREET150**	1
STREET180	180W	21600	14400	5500	dark grey	800	300	115	**98STREET180**	1

Body: aluminium casting | **Diffuser:** lens | **LED driver:** mounted in the body | **Light source:** Epistar | **Reflector:** beam angle 140° | **Ambient Temperature:** - 40°C÷ + 65°C | **Pole:** STREET50/100 - Diam. 50mm; STREET150/180 - Diam. 60mm

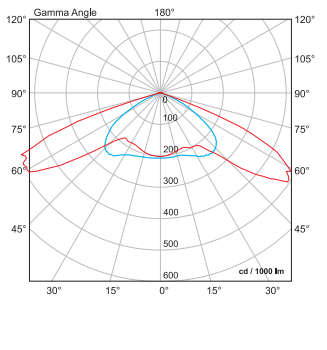
~230V | 50/60 Hz | COB | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

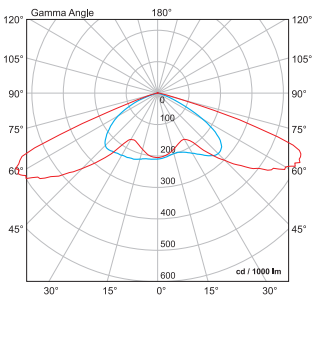
STREET 100W



STREET 150W



STREET 180W

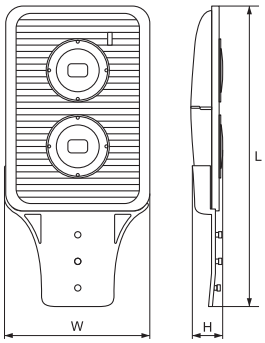




AVENUE100



AVENUE50



AVENUE

A++ A | IP 65 | RoHS COMPLIANT | EMC | CE

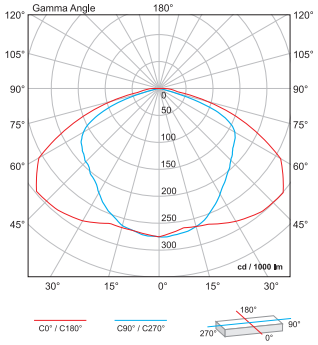
Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
						Length	Width	Height		
AVENUE50	50W	6000	4000	5500	dark grey	300	250	120	**98AVENUE50**	1
AVENUE100	100W	12000	8000	5500	dark grey	515	235	110	**98AVENUE100**	1

Body: aluminium casting | **Diffuser:** lens | **LED driver:** mounted in the body | **Light source:** Epistar | **Reflector:** beam angle 140° | **Ambient Temperature:** - 40°C÷ +65°C | **Pole:** Diam. 60mm

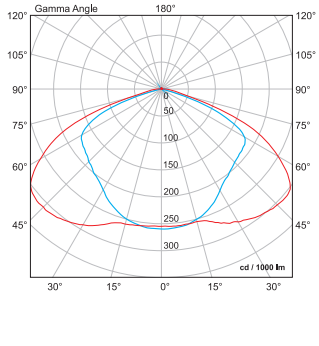
~230V | 50/60 Hz | COB | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

AVENUE 50W



AVENUE 100W





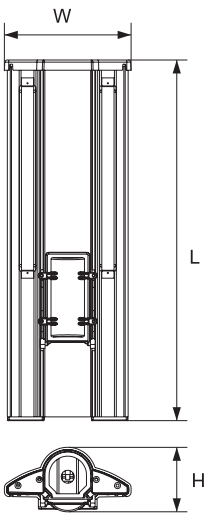
STREET POLE JOINT
Diam.: 45mm
Colour body: grey
Size (mm): Diameter 45 / Width 150 / Height 250
Catalogue number: **98POLE45**
Packing (pcs): 1

RoHS COMPLIANT | CE

STREET POLE JOINT
Diam.: 60mm
Colour body: grey
Size (mm): Diameter 60 / Width 150 / Height 250
Catalogue number: **98POLE60**
Packing (pcs): 1

RoHS COMPLIANT | CE





STREETII

A++ A | IP 65 | RoHS COMPLIANT | EMC | F | CE

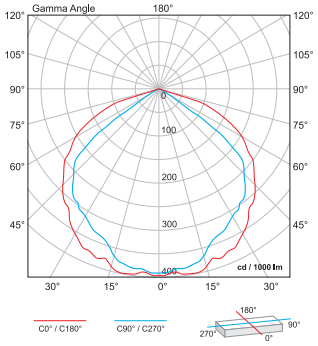
Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
						Length	Width	Height		
STREETII24	24W	2880	1920	4000	grey	284	166	85	**98AT8024**	1
STREETII40	40W	4800	3200	4000	grey	474	166	85	**98AT8040**	1
STREETII80	80W	9600	6400	4000	grey	650	166	85	**98AT8080**	1
STREETII120	120W	14400	9600	4000	grey	890	166	85	**98AT80120**	1

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** SAMSUNG | **Reflector:** beam angle 120° | **Ambient Temperature:** - 40°C÷ +65°C | **Pole:** Diam. 60 mm

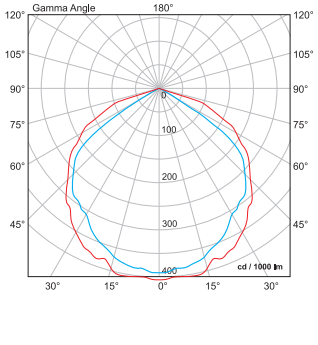
~230V | 50/60 Hz | SMD | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

STREETII 40W



STREETII 80W





STREET POLE JOINT

Diam.: 60mm

Colour body: grey

Size (mm): Diameter 60 / Width 150 / Height 250

Catalogue number: **98POLE60**

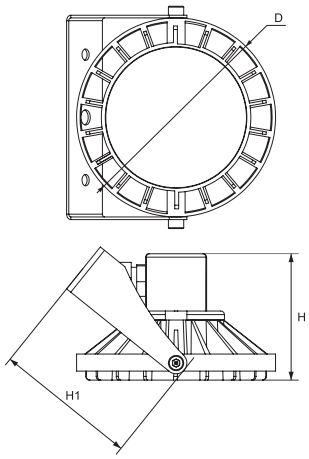
Packing (pcs): 1

RoHS COMPLIANT | CE









RING

A++ A | IP 65 | RoHS COMPLIANT | EMC | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	Height	Height1	Catalogue number	Packing (pcs)
6W	720	480	4000	grey	111	71	74	**98AT8006GR**	1
6W	720	480	4000	black	111	71	74	**98AT8006BL**	1
12W	1440	960	4000	grey	111	71	74	**98AT8012GR**	1
12W	1440	960	4000	black	111	71	74	**98AT8012BL**	1
20W	2400	1600	4000	grey	150	77	83	**98AT8020GR**	1
20W	2400	1600	4000	black	150	77	83	**98AT8020BL**	1

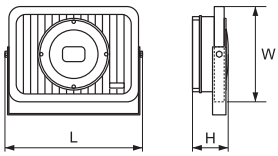
Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** SAMSUNG | **Ambient Temperature:** - 40°C÷ +65°C

~230V | 50/60 Hz | SMD | Ra>70 | 30000h | Hg

5 YEAR WARRANTY







HELIS30/50

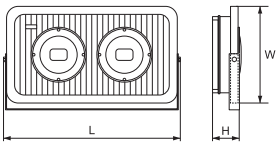
A++ A | IP 65 | RoHS COMPLIANT | EMC

Watt	Lens Beam Angle	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
30W	90°	3600	2700	5500	dark grey	200	165	100	**98HELIS3090**	1
30W	140°	3600	2700	5500	dark grey	200	165	100	**98HELIS30**	1
50W	90°	6000	4500	5500	dark grey	200	270	110	**98HELIS5090**	1
50W	140°	6000	4500	5500	dark grey	200	270	110	**98HELIS50**	1

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

~230V | 50/60 Hz | COB | Ra>70 | 30000h | Hg

5 YEAR WARRANTY



HELIS100

A++ A | IP 65 | RoHS COMPLIANT | EMC

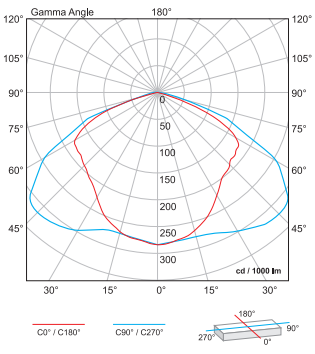
Watt	Lens Beam Angle	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
100W	90°	12000	9000	5500	dark grey	370	240	120	**98HELIS10090**	1
100W	140°	12000	9000	5500	dark grey	370	240	120	**98HELIS100**	1

Body: aluminium casting | **LED driver:** 2pcs - mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

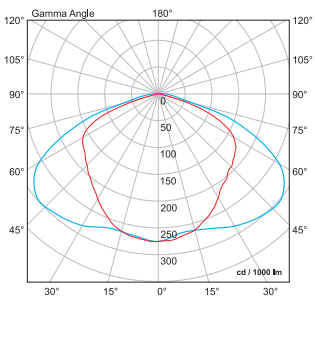
~230V | 50/60 Hz | COB | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

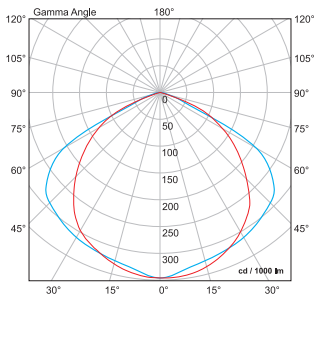
HELIS 30W



HELIS 50W



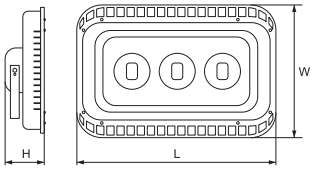
HELIS 100W







SIRIUS150



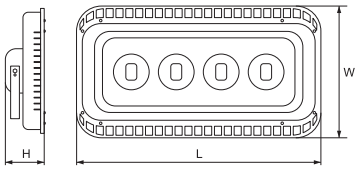
Watt	Lens Beam Angle	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
150W	90°	18000	13500	5500	dark grey	450	310	180	**98SIRIUS15090**	1
150W	120°	18000	13500	5500	dark grey	450	310	180	**98SIRIUS150**	1

Body: aluminium casting | **LED driver:** 3pcs - mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

~230V | 50/60 Hz | COB | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

SIRIUS200/240



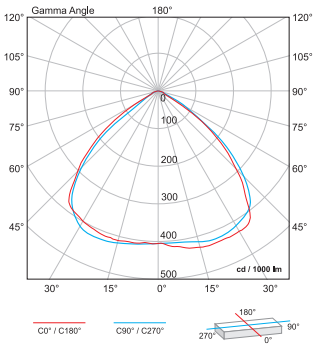
Watt	Lens Beam Angle	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
200W	90°	24000	18000	5500	dark grey	560	310	210	**98SIRIUS20090**	1
200W	120°	24000	18000	5500	dark grey	560	310	210	**98SIRIUS200**	1
240W	90°	28800	21600	5500	dark grey	560	310	210	**98SIRIUS24090**	1
240W	120°	28800	21600	5500	dark grey	560	310	210	**98SIRIUS240**	1

Body: aluminium casting | **LED driver:** 4pcs - mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

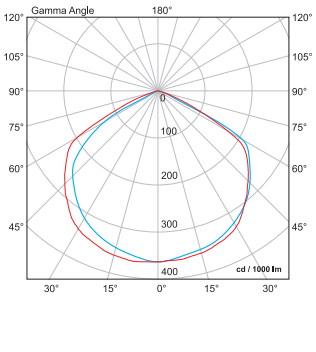
~230V | 50/60 Hz | COB | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

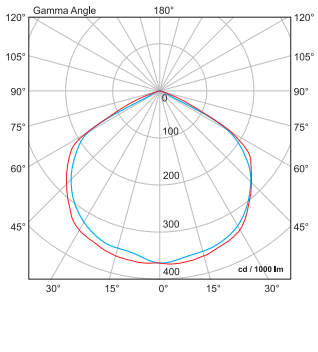
SIRIUS 150W



SIRIUS 200W



SIRIUS 240W

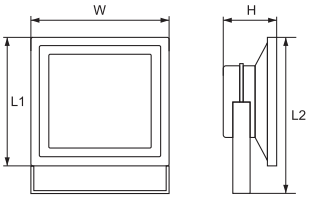




VEGA10/20/30/50



VEGA80/100



VEGA

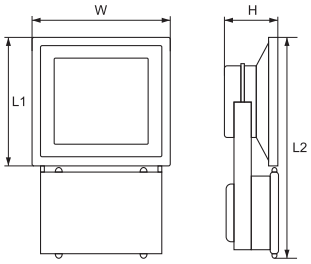
A++ A | IP 65 | RoHS | F | CE

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length1/ Length2	Width	Height	Catalogue number	Packing (pcs)
VEGA10	10W	1100	700	5500	grey	85/95	115	80	**98VEGA10**	30
VEGA10	10W	1100	700	3000	grey	85/95	115	80	**98VEGA10WW**	30
VEGA20	20W	2200	1400	5500	grey	140/150	180	100	**98VEGA20**	12
VEGA20	20W	2200	1400	3000	grey	140/150	180	100	**98VEGA20WW**	12
VEGA30	30W	3300	2100	5500	grey	185/195	225	100	**98VEGA30**	12
VEGA30	30W	3300	2100	3000	grey	185/195	225	100	**98VEGA30WW**	12
VEGA50	50W	5500	3500	5500	grey	235/245	285	110	**98VEGA50**	6
VEGA50	50W	5500	3500	3000	grey	235/245	285	110	**98VEGA50WW**	6

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +55°C

~230V | 50/60 Hz | COB | 120° | Ra>70 | 30000h | Hg

2 YEAR WARRANTY



VEGA

A++ A | IP 65 | RoHS | F | CE

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length1/ Length2	Width	Height	Catalogue number	Packing (pcs)
VEGA80	80W	8800	5600	5500	grey	235/380	285	80	**98VEGA80**	4
VEGA100	100W	11000	7000	5500	grey	235/385	285	120	**98VEGA100**	4

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +55°C

~230V | 50/60 Hz | COB | 120° | Ra>70 | 30000h | Hg

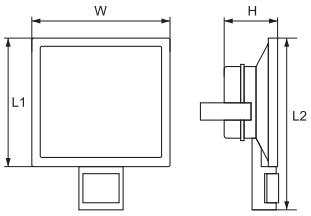
2 YEAR WARRANTY



VEGA SENSOR



VEGA RGB



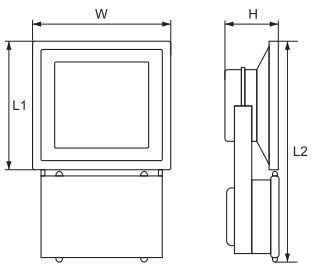
VEGA SENSOR

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length1/ Length2	Width	Height	Catalogue number	Packing (pcs)
VEGA10S	10W	1100	700	5500	grey	85/195	115	80	**98VEGA10SEN**	36
VEGA20S	20W	2200	1400	5500	grey	140/250	180	100	**98VEGA20SEN**	24
VEGA30S	30W	3300	2100	5500	grey	185/295	225	100	**98VEGA30SEN**	10
VEGA50S	50W	5500	3500	5500	grey	235/345	285	110	**98VEGA50SEN**	6

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** Epistar | **Input voltage:** 85V-265V
Ambient Temperature: - 40°C÷ +55°C

~230V | 50/60 Hz | COB | 120° | Ra>70 | 30000h | Hg

2 YEAR WARRANTY



VEGA RGB

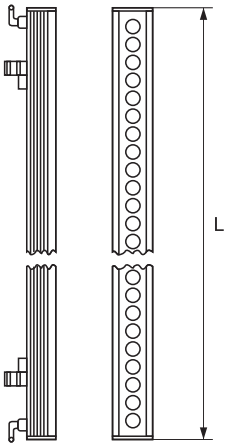
Model	Watt	Colour temp. (K)	Colour body	Size (mm) Length1/ Length2	Width	Height	Catalogue number	Packing (pcs)
VEGA10RGB	10W	RGB	grey	85/95	115	80	**98VEGA10RGB**	30
VEGA20RGB	20W	RGB	grey	140/150	180	100	**98VEGA20RGB**	12
VEGA30RGB	30W	RGB	grey	185/195	225	100	**98VEGA30RGB**	12
VEGA50RGB	50W	RGB	grey	235/245	285	110	**98VEGA50RGB**	6
VEGA70RGB	70W	RGB	grey	235/380	285	80	**98VEGA70RGB**	4
VEGA100RGB	100W	RGB	grey	235/385	285	120	**98VEGA100RGB**	4

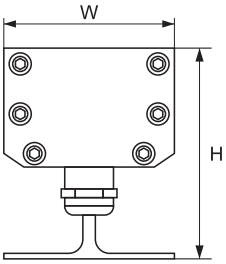
Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** Epistar | **Input voltage:** 85V-265V | **Ambient Temperature:** - 40°C÷ +55°C

~230V | 50/60 Hz | COB | 120° | 30000h | Hg

2 YEAR WARRANTY







STREAM

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
STREAM9	9W	1080	720	5500	grey	300	50	56	**98STREAM9**	30
STREAM18	18W	2160	1440	5500	grey	600	50	56	**98STREAM18**	30
STREAM36	36W	4320	2880	5500	grey	1000	50	56	**98STREAM36**	12

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

~230V | 50/60 Hz | High power | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

STREAM RGB

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
STREAM9 RGB	9W	-	-	RGB	grey	300	50	56	**98STREAM9RGB**	30
STREAM18 RGB	18W	-	-	RGB	grey	600	50	56	**98STREAM18RGB**	30
STREAM36 RGB	36W	-	-	RGB	grey	1000	50	56	**98STREAM36RGB**	12

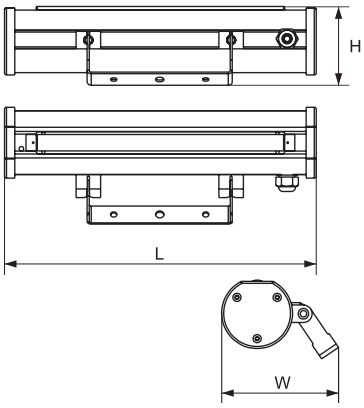
Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** Epistar | **Ambient Temperature:** - 40°C÷ +65°C

~230V | 50/60 Hz | High power | Ra>70 | 30000h | Hg

5 YEAR WARRANTY







STANDARD PROJECT

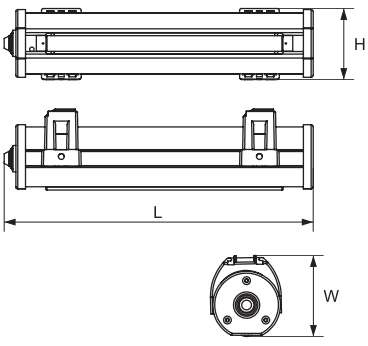
A++ A | IP 65 | RoHS | EMC

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
20W	2400	1600	4000	grey	305	125	65	**98AT8120**	1
40W	4800	3200	4000	grey	578	125	83	**98AT8140**	1

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** SAMSUNG | **Reflector:** beam angle 140° | **Ambient Temperature:** - 40°C÷ +65°C | **Pole:** Diam. 60 mm

~230V | 50/60 Hz | SMD | Ra>70 | 30000h | Hg

5 YEAR WARRANTY



STANDARD

A++ A | IP 65 | RoHS | EMC

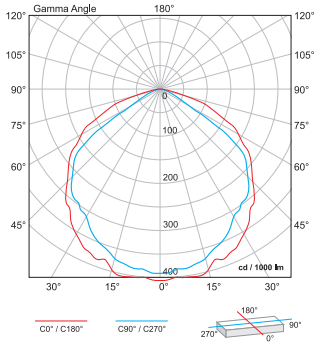
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
20W	2400	1600	4000	grey	317	84	65	**98AT8121**	1
40W	4800	3200	4000	grey	590	84	65	**98AT8141**	1

Body: aluminium casting | **LED driver:** mounted in the body | **Light source:** SAMSUNG | **Reflector:** beam angle 140° | **Ambient Temperature:** - 40°C÷ +65°C | **Pole:** Diam. 60 mm

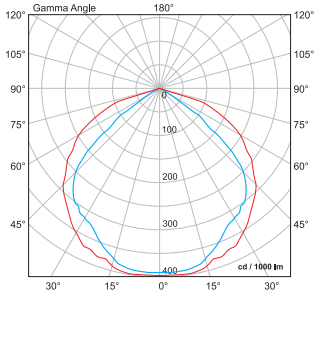
~230V | 50/60 Hz | SMD | Ra>70 | 30000h | Hg

5 YEAR WARRANTY

STANDARD 20W



STANDARD 40W





LED INTERIOR LIGHTING



ELMARK lighting

LED Panels | 256

LED fixtures | 262

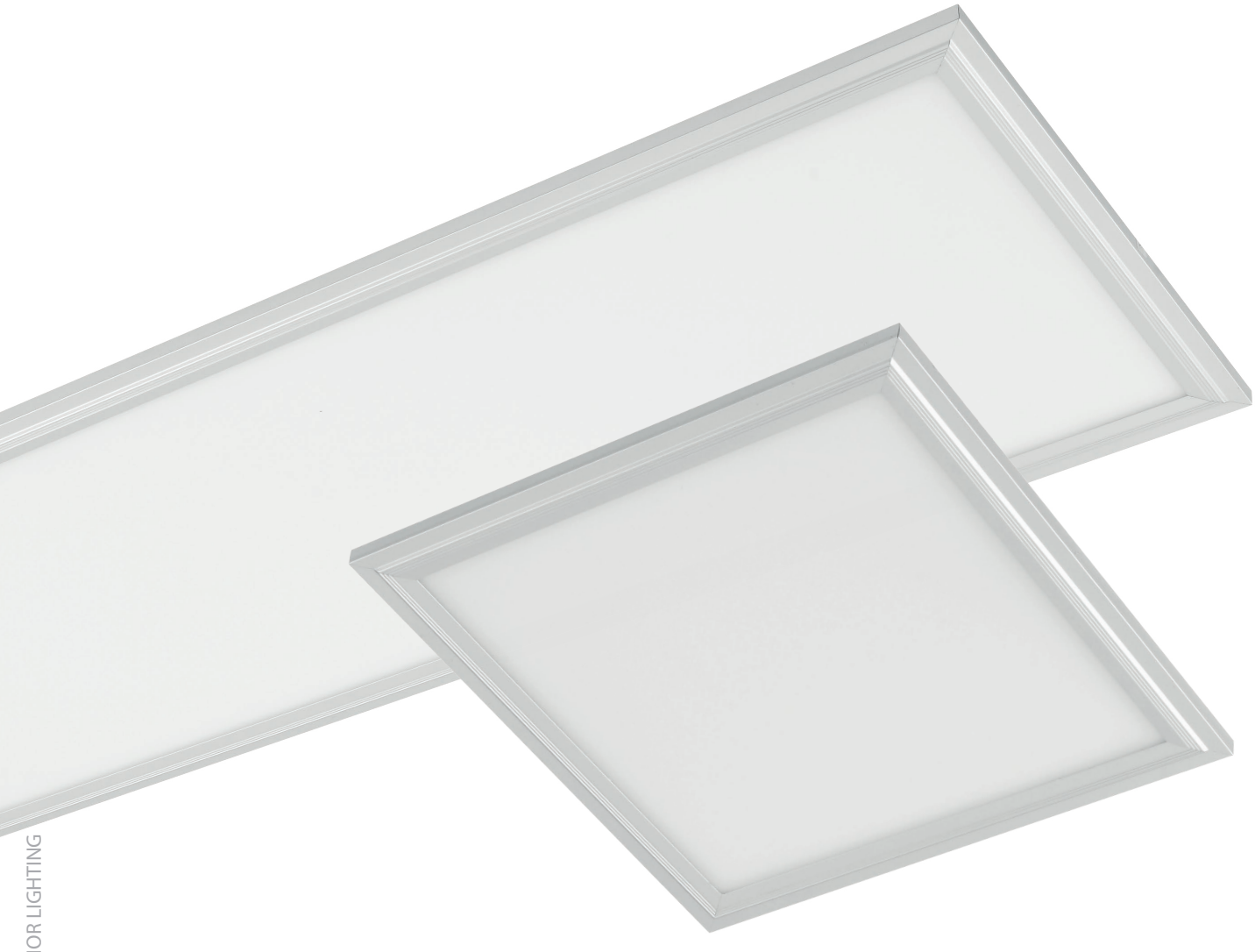
Emergency lighting fixtures | 268

LED Cabinet lights | 270

LED Accent lighting | 274

LED Downlight fixtures | 282

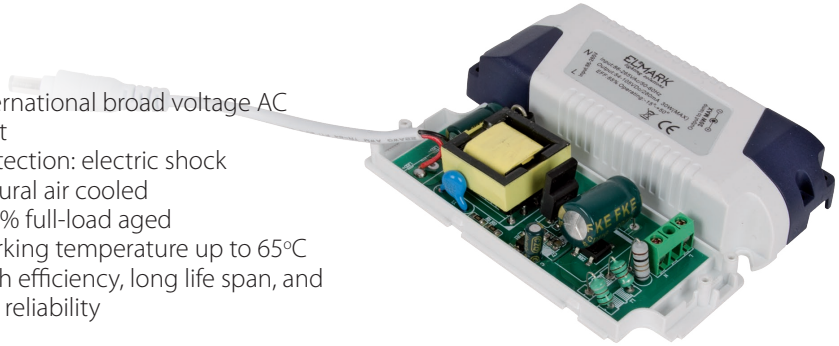
LED Spotlight fixtures | 292



LED PANELS

Drivers features:

· Easy installation
· Low consumption
· Strong compatibility
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current (CC/IC)
· Structure: isolated
· International broad voltage AC input
· Protection: electric shock
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency, long life span, and high reliability



* Driver for LED round panel





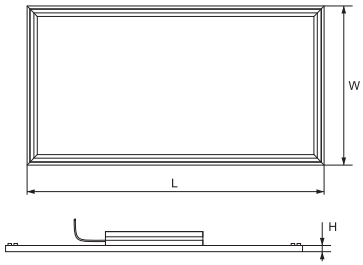
LED PANEL

Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
24W	25/120	1900	4000-4300	aluminium	295	295	11	**92PANEL012**	5
36W	25/180	2880	4000-4300	aluminium	595	295	11	**92PANEL013**	5
48W	25/240	4000	4000-4300	aluminium	1195	295	11	**92PANEL014**	5
48W	25/240	4000	4000-4300	aluminium	1195	295	11	**92PANEL015**	5

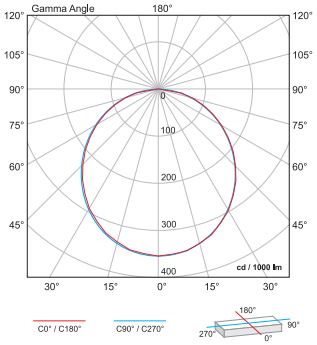
Suitable for mounting in suspended ceiling Armstrong type (in grid ceilings)
Body: aluminium | **Light source:** Epistar SMD4014 | **Starting time:** <0.5s | **Power factor:** λ>0.9
LED panels can be dimmed using a suitable dimmable driver and remote control.

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >15000 | INSTANT 100% | 30000h | Hg

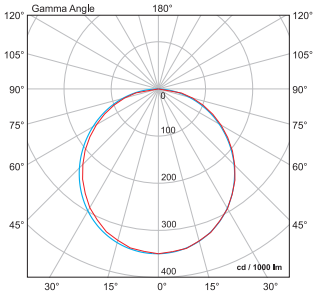
5 YEAR WARRANTY



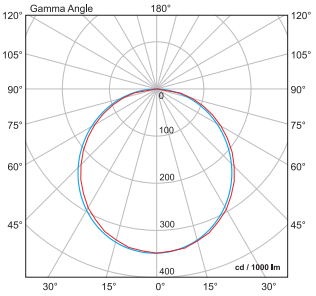
LED PANEL 24W



LED PANEL 36W



LED PANEL 48W



Mounting in suspended ceiling Armstrong type (in grid ceilings).



INSTALLATION ACCESSORIES FOR LED PANELS
Suspension wire for suspended mounting 4pcs/pack
Catalogue number: **99ACC18**
Packing (pcs): 1pack

CE



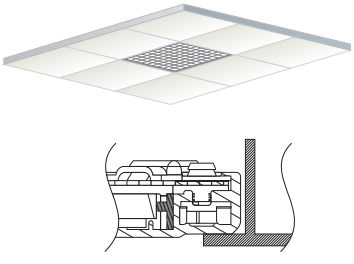
INSTALLATION ACCESSORIES FOR LED PANELS
Clips for mounting on plasterboard 4pcs/pack
Catalogue number: **99ACC21**
Packing (pcs): 1pack

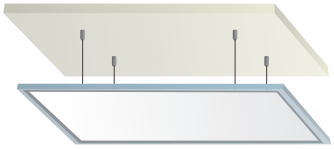
CE

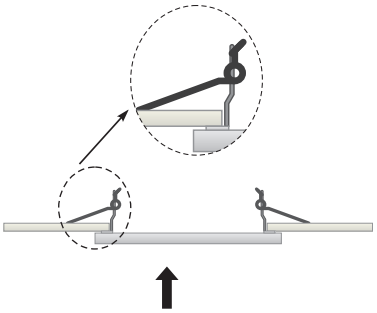


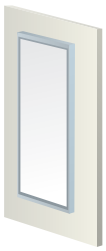
INSTALLATION ACCESSORIES FOR LED PANELS
Fasteners for surface mounting 4pcs/pack
Catalogue number: **99ACC22**
Packing (pcs): 1pack

CE





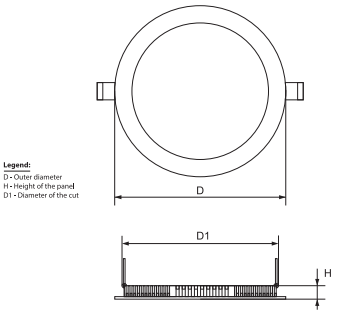












LED PANEL ROUND

A++ A | IP 40 | RoHS COMPLIANT | EMC | CE

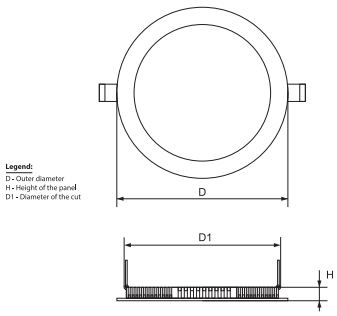
Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
6W	27/30	480	4000-4300	white	105	21	90	**99LED609**	60
6W	27/30	480	2700-3000	white	105	21	90	**99LED610**	60
12W	27/60	960	4000-4300	white	145	21	130	**99LED611**	40
12W	27/60	960	2700-3000	white	145	21	130	**99LED612**	40
16W	27/75	1280	4000-4300	white	192	21	175	**99LED614**	20
16W	27/75	1280	2700-3000	white	192	21	175	**99LED615**	20
21W	27/100	1680	4000-4300	white	225	21	205	**99LED617**	20
21W	27/100	1680	2700-3000	white	225	21	205	**99LED618**	20
30W	27/120	2400	4000-4300	white	300	21	280	**99LED620**	20
30W	27/120	2400	2700-3000	white	300	21	280	**99LED621**	20

Body: aluminium | **Light source:** Epistar SMD2016 | **Starting time:** <0.5s | **Power factor:** λ>0.8
Easy installation due to handy clips | Recessed mounted luminaire.

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





LED PANEL ROUND

A++ A | IP 40 | RoHS COMPLIANT | EMC | CE

Watt	LED chip lumens (lm)/ LED (pcs)	Change colour	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
12W	27/120	3500K / 5000K / 6500K	white	145	21	130	**99LED613**	40
16W	27/150	3500K / 5000K / 6500K	white	192	21	175	**99LED616**	20
21W	27/180	3500K / 5000K / 6500K	white	225	21	205	**99LED619**	20

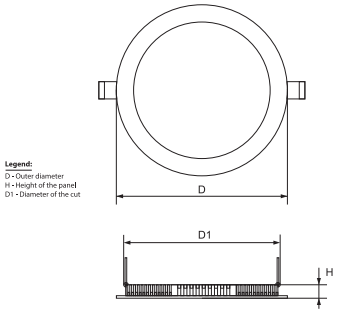
Easy installation due to handy clips | **Body:** aluminium | **Light source:** Epistar SMD2016 | **Starting time:** <0.5s | **Power factor:** λ>0.8
Recessed mounted luminaire. The LED panel is made with three types sources of light, with different colour temperatures - 3500K / 5000K / 6500K. Colours are changed via commutation of the electrical switch.

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY







LED PANEL ROUND

A++ A | IP 40 | RoHS COMPLIANT | EMC | CE

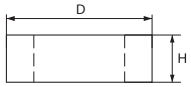
Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
8W	27/30	640	4000-4300	satin nickel	120	21	100	**99LED628**	40
8W	27/30	640	2700-3000	satin nickel	120	21	100	**99LED629**	40
21W	27/100	1680	4000-4300	satin nickel	225	21	205	**99LED630**	20
21W	27/100	1680	2700-3000	satin nickel	225	21	205	**99LED631**	20

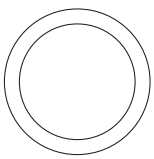
Body: aluminium | **Light source:** Epistar SMD2016 | **Starting time:** <0.5s | **Power factor:** λ>0.8
Easy installation due to handy clips | Recessed mounted luminaire.

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY







LED PANEL ROUND OM

A++ A | IP 40 | RoHS COMPLIANT | EMC | CE

Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	Catalogue number	Packing (pcs)
13W	27/60	1040	4000-4300	satin nickel	170	38	**99LED624**	40
13W	27/60	1040	2700-3000	satin nickel	170	38	**99LED625**	40
21W	27/100	1680	4000-4300	white	220	38	**99LED622**	20
21W	27/100	1680	2700-3000	white	220	38	**99LED623**	20
21W	27/100	1680	4000-4300	satin nickel	220	38	**99LED626**	20
21W	27/100	1680	2700-3000	satin nickel	220	38	**99LED627**	20

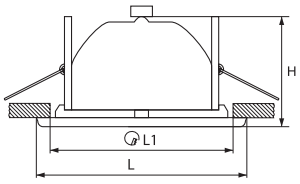
Body: aluminium | **Light source:** Epistar SMD2016 | **Starting time:** <0.5s | **Power factor:** λ>0.8
OM - surface mounted luminaire

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY







Legend:
L - Outer length
H - Height of the panel
L1 - Length of the cut
L=W
L1=W1

LED PANEL SQUARE

A++ A | IP 40 | RoHS COMPLIANT | EMC | CE

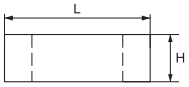
Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	L1	W1	Catalogue number	Packing (pcs)
12W	27/60	960	4000-4300	white	145	145	21	130	130	**99LED632**	40
12W	27/60	960	2700-3000	white	145	145	21	130	130	**99LED633**	40
21W	27/100	1680	4000-4300	white	225	225	21	205	205	**99LED634**	20
21W	27/100	1680	2700-3000	white	225	225	21	205	205	**99LED635**	20

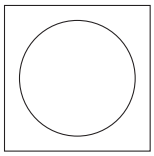
Body: aluminium | **Light source:** Epistar SMD2016 | **Starting time:** <0.5s | **Power factor:** λ>0.8
Easy installation due to handy clips | Recessed mounted luminaire.

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY







LED PANEL SQUARE OM

A++ A | IP 40 | RoHS COMPLIANT | EMC | CE

Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	H	Catalogue number	Packing (pcs)
21W	27/100	1680	4000-4300	white	225	38	**99LED636**	20
21W	27/100	1680	2700-3000	white	225	38	**99LED637**	20

Body: aluminium | **Light source:** Epistar SMD2016 | **Starting time:** <0.5s | **Power factor:** λ>0.8
OM - surface mounted luminaire

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY



Legend:
D - Outer diameter
H - Height of the panel
D1 - Diameter of the cut

LED GLASS PANEL ROUND

Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
6W	60/12	480	4000-4300	white	100	40	80	**99LED638**	60
6W	60/12	480	2700-3000	white	100	40	80	**99LED639**	60
18W	60/36	1440	4000-4300	white	200	40	180	**99LED640**	20
18W	60/36	1440	2700-3000	white	200	40	180	**99LED641**	20

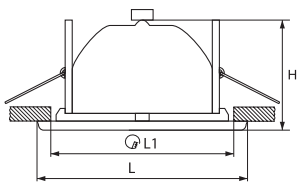
Body: aluminium | **Light source:** Epistar SMD2835 | **Starting time:** <0.5s | **Power factor:** λ>0.8
Easy installation due to handy clips | Recessed mounted luminaire.

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY







Legend:
L - Outer length
H - Height of the panel
L1 - Length of the cut
L=W
L1=W1

LED GLASS PANEL SQUARE

Watt	LED chip lumens (lm)/ LED (pcs)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	L1	W1	Catalogue number	Packing (pcs)
6W	60/12	480	4000-4300	white	97	97	40	77	77	**99LED642**	60
6W	60/12	480	2700-3000	white	97	97	40	77	77	**99LED643**	60
18W	60/36	1440	4000-4300	white	200	200	40	180	180	**99LED644**	20
18W	60/36	1440	2700-3000	white	200	200	40	180	180	**99LED645**	20

Body: aluminium | **Light source:** Epistar SMD2835 | **Starting time:** <0.5s | **Power factor:** λ>0.8
Easy installation due to handy clips | Recessed mounted luminaire.

~230V | 50/60 Hz | SMD | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

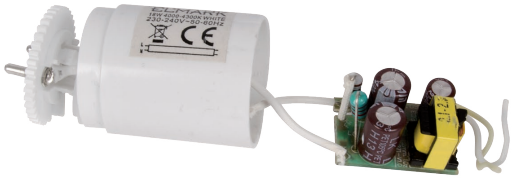
5 YEAR WARRANTY



LED FIXTURES

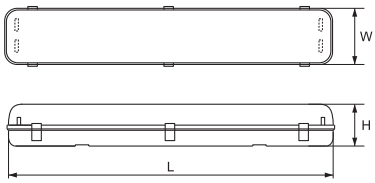
Drivers features:

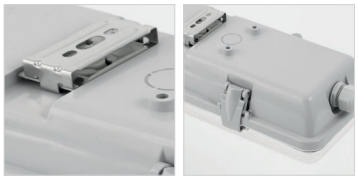
· Low consumption
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current (CC/IC)
· Structure: non isolated
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency
· Long life span
· High reliability











BELLA Luminaire with LED Tubes

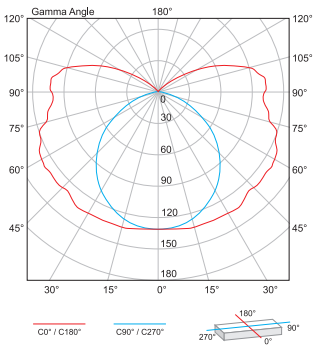
Watt	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
1X10W	6400	grey	670	86	100	**9BM110LEDCW**	12
1X10W	4000	grey	670	86	100	**9BM110LED**	12
2X10W	6400	grey	670	131	100	**9BM210LEDCW**	9
2X10W	4000	grey	670	131	100	**9BM210LED**	9
1X18W	6400	grey	1270	86	100	**9BM118LEDCW**	9
1X18W	4000	grey	1270	86	100	**9BM118LED**	9
2X18W	6400	grey	1270	131	100	**9BM218LEDCW**	6
2X18W	4000	grey	1270	131	100	**9BM218LED**	6
1X24W	6400	grey	1570	106	110	**9BM124LEDCW**	6
1X24W	4000	grey	1570	106	110	**9BM124LED**	6
2X24W	6400	grey	1570	166	110	**9BM224LEDCW**	4
2X24W	4000	grey	1570	166	110	**9BM224LED**	4

Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC) | **Reflector:** steel white | **Clips:** polycarbonate | Cable gland, metal clips for wall fixing. | Lumens of the LED tubes (lm): 10W - 850lm; 18W - 1700lm; 24W - 2100lm | **Light source:** LED tubes

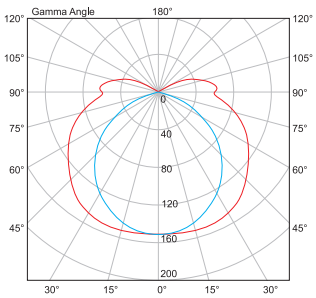
~230V | 50/60 Hz | LED T8 | G13 | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

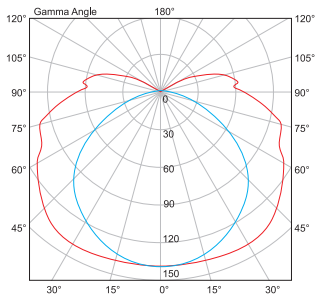
BELLA / 1X10W



BELLA / 2X18W



BELLA / 2X24W







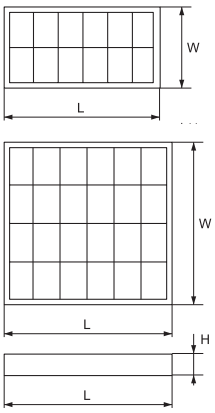
LENA-V BM with LED Tubes

Watt	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
2X10W	6400	white	595	295	70	**9LBM260LEDCW**	1
2X10W	4000	white	595	295	70	**9LBM260LED**	1
4X10W	6400	white	595	595	70	**9LBM460LEDCW**	1
4X10W	4000	white	595	595	70	**9LBM460LED**	1
2X18W	6400	white	1195	295	70	**9LBM2120LEDCW**	1
2X18W	4000	white	1195	295	70	**9LBM2120LED**	1

Body: white powder painted steel | **Reflector:** aluminium mirror double parabolic grid - type V | **BM** - recessed mounted luminaire
Lumens of the LED tubes (lm): 10W - 850lm; 18W - 1700lm | **Light source:** LED tubes

~230V | 50/60 Hz | LED T8 | G13 | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY



LENA-V OM with LED Tubes

Watt	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
2X10W	6400	white	630	330	70	**9LOM260LEDCW**	1
2X10W	4000	white	630	330	70	**9LOM260LED**	1
4X10W	6400	white	630	630	70	**9LOM460LEDCW**	1
4X10W	4000	white	630	630	70	**9LOM460LED**	1
2X18W	6400	white	1230	330	70	**9LOM2120LEDCW**	1
2X18W	4000	white	1230	330	70	**9LOM2120LED**	1

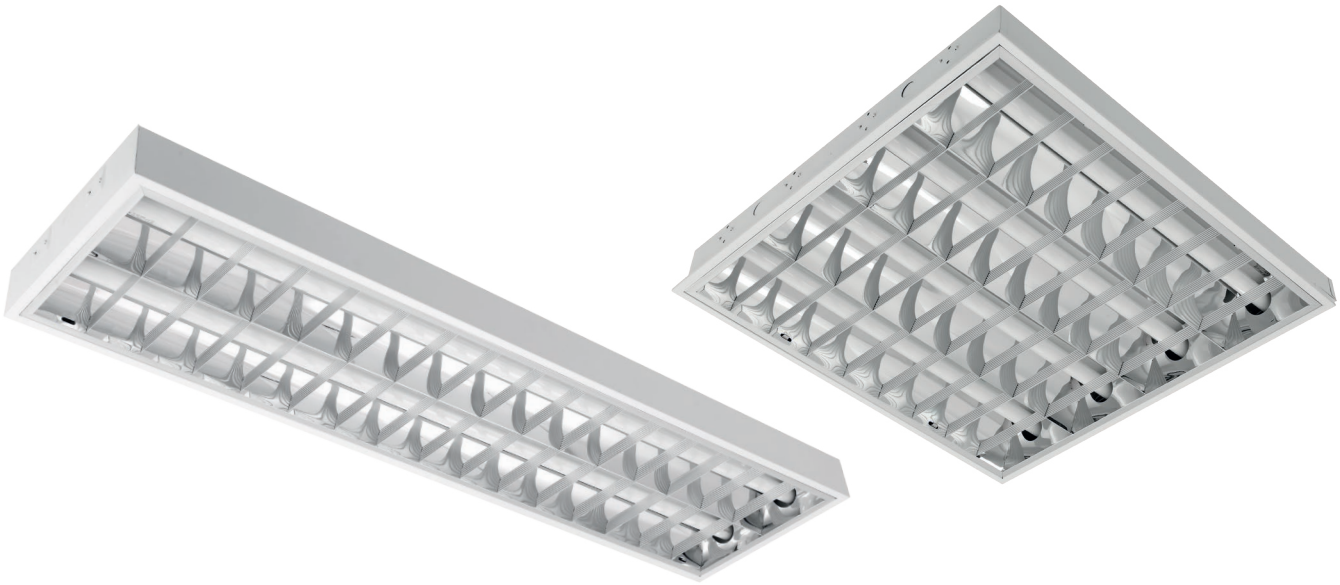
Body: white powder painted steel | **Reflector:** aluminium mirror double parabolic grid - type V | **OM** - surface mounted luminaire
Lumens of the LED tubes (lm): 10W - 850lm; 18W - 1700lm | **Light source:** LED tubes

~230V | 50/60 Hz | LED T8 | G13 | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY









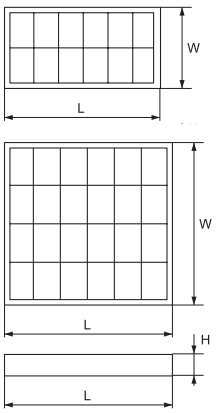
LENA-I BM with LED Tubes

Watt	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
2X10W	6400	white	595	295	70	**9LBM260LEDKCW**	1
2X10W	4000	white	595	295	70	**9LBM260LEDK**	1
4X10W	6400	white	595	595	70	**9LBM460LEDKCW**	1
4X10W	4000	white	595	595	70	**9LBM460LEDK**	1
2X18W	6400	white	1195	295	70	**9LBM2120LEDKCW**	1
2X18W	4000	white	1195	295	70	**9LBM2120LEDK**	1

Body: white powder painted steel | **Reflector:** aluminium mirror single parabolic grid - type I | **BM** - recessed mounted luminaire
Lumens of the LED tubes (lm): 10W - 850lm; 18W - 1700lm | **Light source:** LED tubes

~230V | 50/60 Hz | LED T8 | G13 | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY



LENA-I OM with LED Tubes

Watt	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
2X10W	6400	white	608	308	70	**9LOM260LEDKCW**	1
2X10W	4000	white	608	308	70	**9LOM260LEDK**	1
4X10W	6400	white	608	608	70	**9LOM460LEDKCW**	1
4X10W	4000	white	608	608	70	**9LOM460LEDK**	1
2X18W	6400	white	1218	308	70	**9LOM2120LEDKCW**	1
2X18W	4000	white	1218	308	70	**9LOM2120LEDK**	1

Body: white powder painted steel | **Reflector:** aluminium mirror single parabolic grid - type I | **OM** - surface mounted luminaire
Lumens of the LED tubes (lm): 10W - 850lm; 18W - 1700lm | **Light source:** LED tubes

~230V | 50/60 Hz | LED T8 | G13 | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

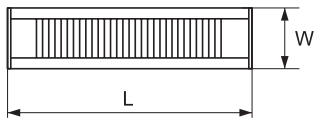
3 YEAR WARRANTY

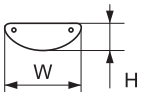












NINA Luminaire with LED Tubes

Watt	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
1X10W	6400	white	740	118	48	**920118LEDCW**	12
1X10W	4000	white	740	118	48	**920118LED**	12
2X10W	6400	white	740	160	55	**920218LEDCW**	6
2X10W	4000	white	740	160	55	**920218LED**	6
1X18W	6400	white	1345	118	48	**920136LEDCW**	12
1X18W	4000	white	1345	118	48	**920136LED**	12
2X18W	6400	white	1345	160	55	**920236LEDCW**	6
2X18W	4000	white	1345	160	55	**920236LED**	6

Body: white powder painted steel | **Reflector:** ABS plastic grid | Lumens of the LED tubes (lm): 10W - 850lm; 18W - 1700lm
Light source: LED tubes

~230V | 50/60 Hz | LED T8 | G13 | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

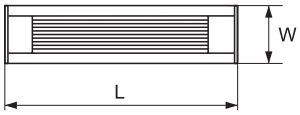
3 YEAR WARRANTY

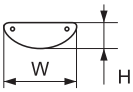
















NEDA Luminaire with LED Tubes

Watt	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
1X10W	6400	white	740	118	48	**950118LEDCW**	12
1X10W	4000	white	740	118	48	**950118LED**	12
2X10W	6400	white	740	160	55	**950218LEDCW**	6
2X10W	4000	white	740	160	55	**950218LED**	6
1X18W	6400	white	1345	118	48	**950136LEDCW**	12
1X18W	4000	white	1345	118	48	**950136LED**	12
2X18W	6400	white	1345	160	55	**950236LEDCW**	6
2X18W	4000	white	1345	160	55	**950236LED**	6

Body: white powder painted steel | **Reflector:** plastic cover | Lumens of the LED tubes (lm): 10W - 850lm; 18W - 1700lm
Light source: LED tubes

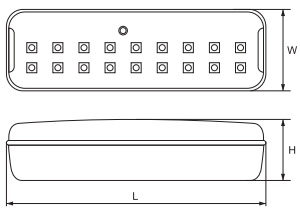
~230V | 50/60 Hz | LED T8 | G13 | Ra≥80 | >20000 | 100% | 30000h | Hg

3 YEAR WARRANTY

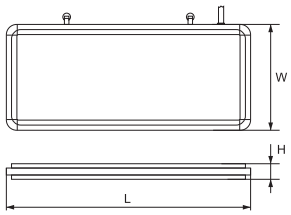




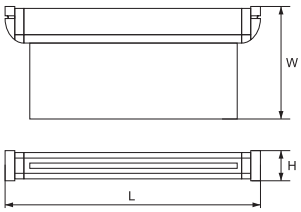
EMERGENCY LIGHTING FIXTURES



XL101LED



XL88



TA 3115



XL101

Model	LED chip lumens (lm)	Whole fixture lumens (lm)	Watt	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
XL101BLED	6	60	18x0,1W	6200-6500	white	246	76	41	**9XL101BLED**	10
XL101CLED	6	75	24x0,1W	6200-6500	white	327	76	43	**9XL101CLED**	10

Body: PVC | **Diffuser:** PVC | Duration time approx 4 hours | **Battery:** 2X4V / 800mAh Ni-Cd
Note: with stickers



~230V | 50/60 Hz | Ra>70 | 20000h | Hg

3 YEAR WARRANTY





XL88

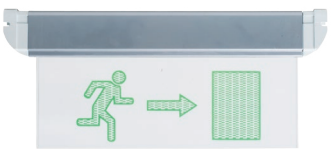
Model	LED chip lumens (lm)	Whole fixture lumens (lm)	Watt	Size (mm) Length	Width	Height	Lamp	Catalogue number	Packing (pcs)
XL88 LED / DOUBLE FACE	6	35	3W	360	150	25	LED	**9XL88LED**	10
XL88A LED / ONE FACE ONLY	6	35	3W	360	150	25	LED	**9XL88A LED**	10

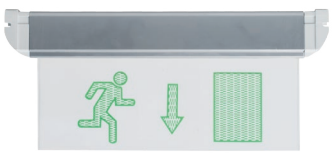
Frame: aluminium | **Diffuser:** glass | Duration time approx 3 hours | **Battery:** 2X4V / 900mAh Ni-Cd

~230V | 50/60 Hz | Hg

3 YEAR WARRANTY







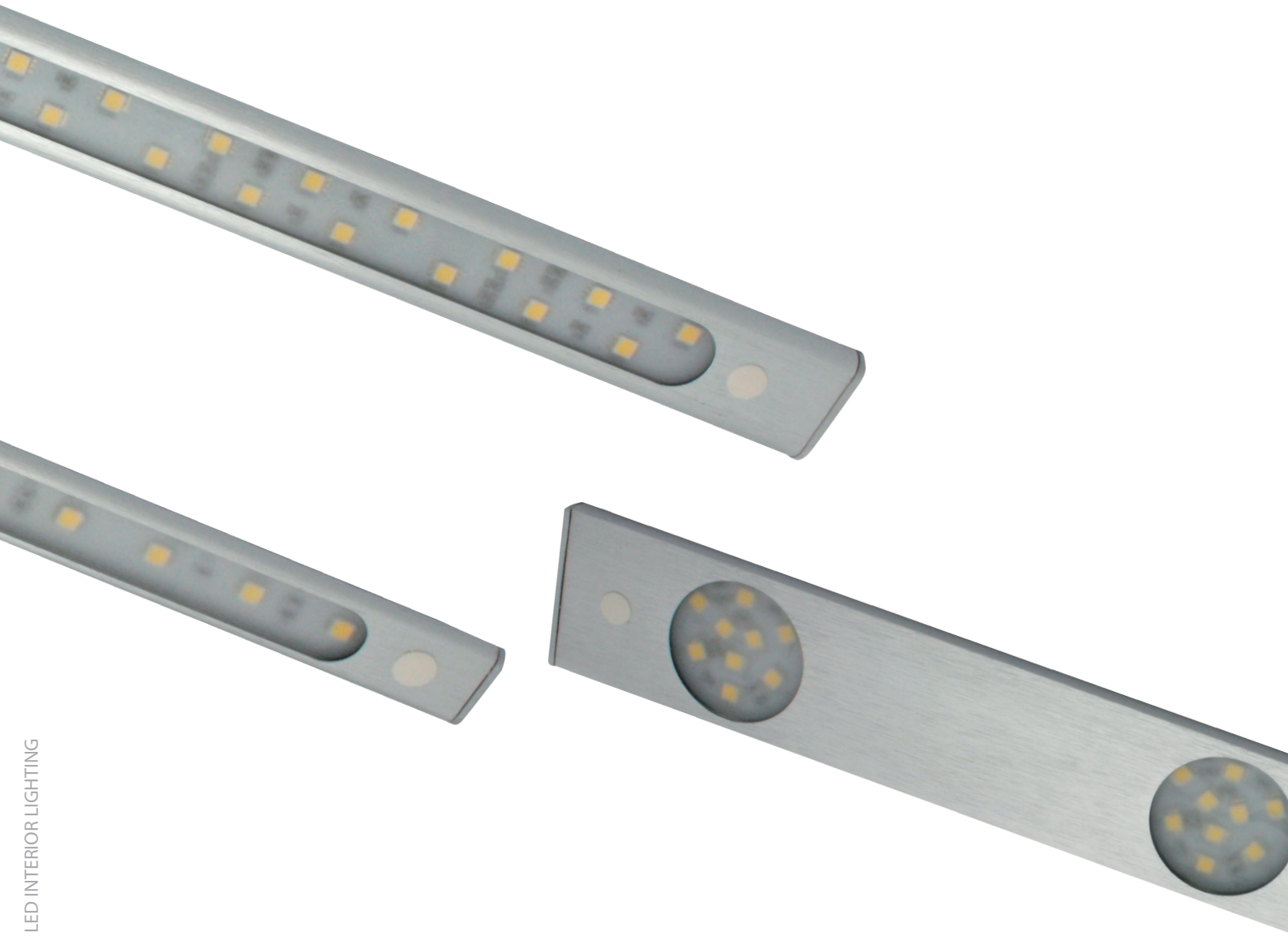
TA - Emergency Light

Model	LED Type	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
TA 3115	4X6000 mcd 20°	310	155	30	**9AT3115**	30
TA 3114	4X6000 mcd 20°	310	155	30	**9AT3114**	30
TA 5113	4X6000 mcd 20°	310	155	30	**9AT5113**	30

Frame: PVC | **Diffuser:** PVC | **Battery:** 3,6V/60mAh Ni-Cd | Duration time approx 2 hours

~230V | 50/60 Hz | Hg

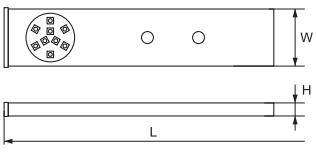
3 YEAR WARRANTY



LED CABINET LIGHTS

Application: Kitchen, Display case, Cabinet, Drawer, Wardrobe, Bedroom, TV stand





CAB-19

A++ A | IP 20 | RoHS COMPLIANT | EMC | CE

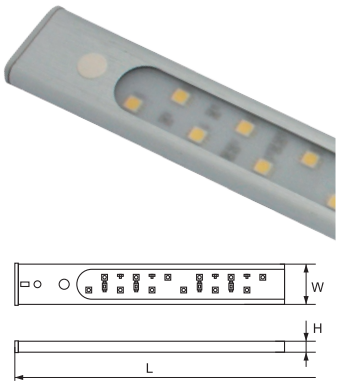
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm)			Catalogue number	Packing (pcs)
				Length	Width	Height		
2,8W	185	white	grey	160	50	9	**919LED010**	10
2,8W	185	warm white	grey	160	50	9	**919LED110**	10

Body: Aluminium | **Diffuser:** PMMA | **With integrated door sensor** - The lamp will switch on when the door is open and switch off when the door is closed. Reaction distance is 50mm - 100mm. | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted
Starting time: <0.01s

12V DC | SMD 5050 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY

CAB-10



Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
7W	540	white	grey	500	33	7	**910LED07**	10
7W	540	warm white	grey	500	33	7	**910LED17**	10

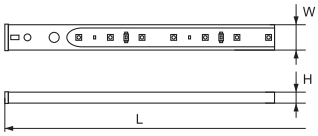
Body: Aluminium | **Diffuser:** PMMA | **With integrated motion sensor** - The lamp will switch on when you move your hand in front of the sensor, and switch off when you move your hands again. | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted
Starting time: <0.01s

12V DC | SMD 5050 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY

CAB-11





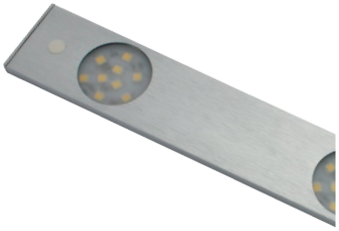
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
3,5W	270	white	grey	450	23	7	**911LED04**	10
3,5W	270	warm white	grey	450	23	7	**911LED14**	10

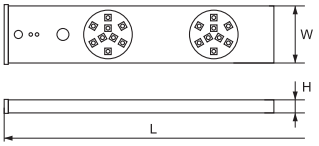
Body: Aluminium | **Diffuser:** PMMA | **With integrated motion sensor** - The lamp will switch on when you move your hand in front of the sensor, and switch off when you move your hands again. | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted
Starting time: <0.01s

12V DC | SMD 5050 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY

CAB-12





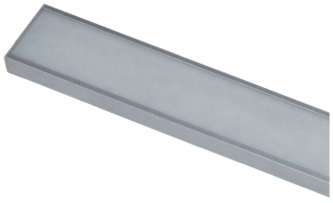
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
7W	480	white	grey	450	50	9	**912LED06**	10
7W	480	warm white	grey	450	50	9	**912LED16**	10

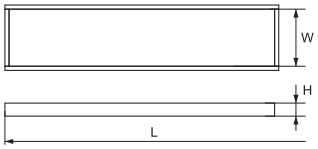
Body: Aluminium | **Diffuser:** PMMA | **With integrated motion sensor** - The lamp will switch on when you move your hand in front of the sensor, and switch off when you move your hands again. | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted
Starting time: <0.01s

12V DC | SMD 5050 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY

CAB-20





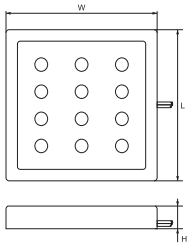
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
12W	1050	white	grey	500	42	15	**920LED011**	60
12W	1050	warm white	grey	500	42	15	**920LED111**	60

Body: Aluminium | **Diffuser:** PMMA | **Sensor:** NO | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted
Starting time: <0.01s

12V DC | SMD 5050 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





CAB-14

A++ A | IP 20 | RoHS COMPLIANT | EMC | CE

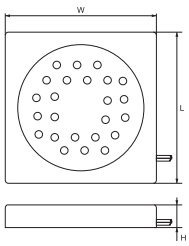
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
2,4W	210	white	silver	57	57	10	**914LED02**	100
2,4W	210	warm white	silver	57	57	10	**914LED12**	100

Body: ABS | **Diffuser:** PC | **Sensor:** NO | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted | **Starting time:** <0.01s

12V DC | SMD 5050 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





CAB-15

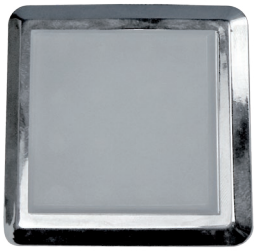
A++ A | IP 20 | RoHS COMPLIANT | EMC | CE

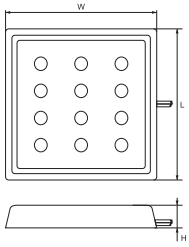
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
1,8W	160	white	silver	57	57	10	**915LED03**	100
1,8W	160	warm white	silver	57	57	10	**915LED13**	100

Body: ABS | **Diffuser:** PC | **Sensor:** NO | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted | **Starting time:** <0.01s

12V DC | SMD 30/14 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





CAB-16

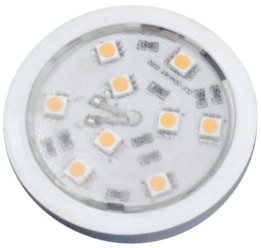
A++ A | IP 20 | RoHS COMPLIANT | EMC | CE

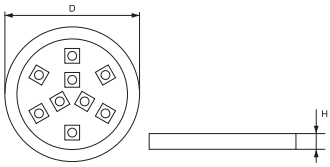
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
1W	90	white	chrome	52	52	10	**916LED05**	100
1W	90	warm white	chrome	52	52	10	**916LED15**	100

Body: ABS | **Diffuser:** PC | **Sensor:** NO | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted | **Starting time:** <0.01s

12V DC | SMD 35/28 | 120° | Ra≥80 | >10000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





CAB-13

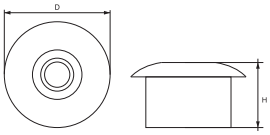
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Diameter	Size (mm) Height	Catalogue number	Packing (pcs)
1,8W	180	white	silver	60	7	**913LED01**	100
1,8W	180	warm white	silver	60	7	**913LED11**	100

Body: ABS | **Diffuser:** PC | **Sensor:** NO | w/o driver | **Light source:** Epistar | **Assemble:** Surface Mounted | **Starting time:** <0.01s

12V DC | SMD 5050 | 120° | Ra≥80 | >10000 | 100% | 30000h | Hg

5 YEAR WARRANTY





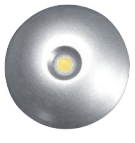
CAB-17

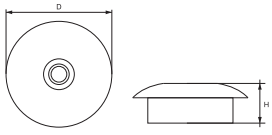
Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Diameter	Size (mm) Height	Catalogue number	Packing (pcs)
1W	110	white	silver	30	20	**917LED08**	200
1W	110	warm white	silver	30	20	**917LED18**	200

Body: ABS | **Diffuser:** ABS | **Sensor:** NO | with driver | **Light source:** Epistar | **Assemble:** Recessed Mounted | **Starting time:** <0.01s

~230V | 50/60 Hz | High power | 120° | Ra≥80 | >10000 | 100% | 30000h | Hg

5 YEAR WARRANTY





CAB-18

Watt	Lumen (lm)	Colour temp.	Colour body	Size (mm) Diameter	Size (mm) Height	Catalogue number	Packing (pcs)
1W	100	white	silver	30	14	**918LED09**	200
1W	100	warm white	silver	30	14	**918LED19**	200

Body: ABS | **Diffuser:** ABS | **Sensor:** NO | with driver | **Light source:** Epistar | **Assemble:** Recessed Mounted | **Starting time:** <0.01s

~230V | 50/60 Hz | High power | 120° | Ra≥80 | >10000 | 100% | 30000h | Hg

5 YEAR WARRANTY



JUNCTION
3 mouths with 10 cm wire
Catalogue number: **99LED456**
Packing (pcs): 1

JUNCTION
6 mouths with 10 cm wire
Catalogue number: **99LED457**
Packing (pcs): 1

JUNCTION
12 mouths with 10 cm wire
Catalogue number: **99LED458**
Packing (pcs): 1

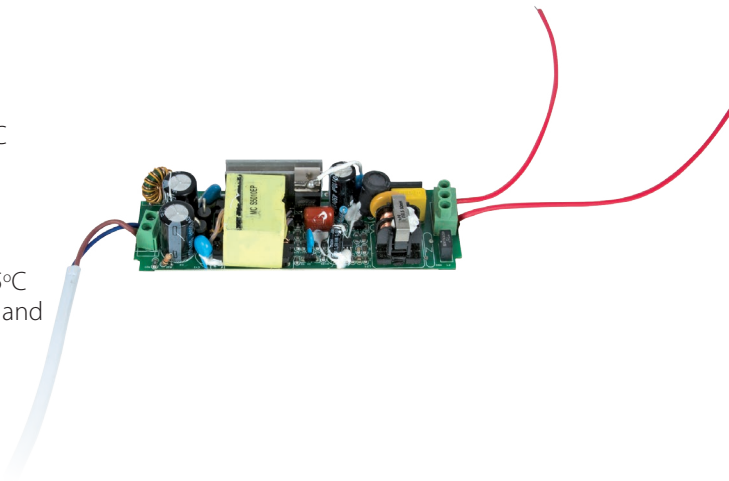




LED ACCENT LIGHTING

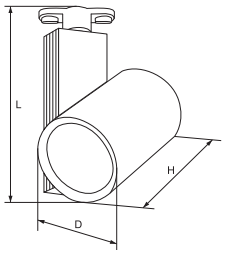
Drivers features:

· Easy installation
· Low consumption
· Strong compatibility
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current (CC/IC)
· Structure: isolated
· International broad voltage AC input
· Protection: electric shock
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency, long life span, and high reliability



SKY TL502 COB





Watt	LED chip lumens (lm)	Whole fixture Lumen (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Diameter	Height	Catalogue number	Packing (pcs)
20W	2400	1600	4000-4300	white	230	80	135	**93TL502/WH**	6
20W	2400	1600	4000-4300	black	230	80	135	**93TL502/BL**	6

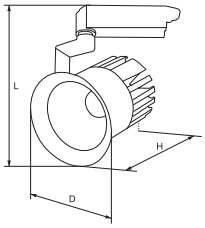
Body: aluminium | **Light source:** Epistar | **Power factor:** λ>0.9 | **Starting time:** <1s

~230V | 50/60 Hz | COB | 36° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

SKY TL5016 COB





Watt	LED chip lumens (lm)	Whole fixture Lumen (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Diameter	Height	Catalogue number	Packing (pcs)
30W	3600	2400	4000-4300	white	250	120	140	**93TL5016**	6

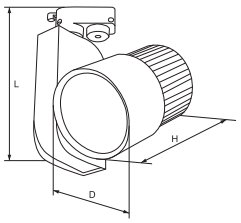
Body: aluminium | **Light source:** Epistar | **Power factor:** λ>0.9 | **Starting time:** <1s

~230V | 50/60 Hz | COB | 60° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

SKY TL568 COB





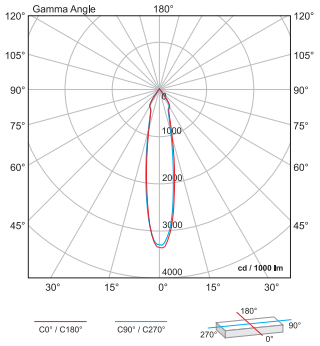
Watt	LED chip lumens (lm)	Whole fixture Lumen (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Diameter	Height	Catalogue number	Packing (pcs)
30W	3600	2400	4000-4300	white	200	98	130	**93TL568**	6

Body: aluminium | **Light source:** Epistar | **Power factor:** λ>0.9 | **Starting time:** <1s

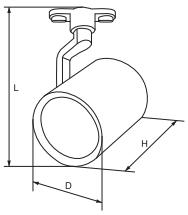
~230V | 50/60 Hz | COB | 36° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

SKY TL568 COB 30W







SKY TL809

A+ A++ A IP 20 RoHS EMC F CE

Watt	LED chip lumens (lm)	Whole fixture Lumen (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Diameter	Height	Catalogue number	Packing (pcs)
12W	1440	900	4000	white	130	95	180	**93SKY140**	1
12W	1440	900	2700	white	130	95	180	**93SKY127**	1
12W	1440	900	4000	black	130	95	180	**93SKY240**	1
12W	1440	900	2700	black	130	95	180	**93SKY227**	1

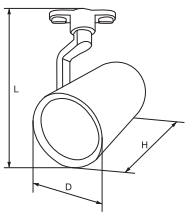
Body: aluminium | **Light source:** LED lamp PAR30
Power factor: λ>0.9 | **Starting time:** <1s



~230V | 50/60 Hz | LED PAR30 | E27 | 38° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

3 YEAR WARRANTY





SKY TL808

A+ A++ A IP 20 RoHS EMC F CE

Watt	LED chip lumens (lm)	Whole fixture Lumen (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
12W	1440	900	4000	white	150	100	210	**93SKY340**	1
12W	1440	900	2700	white	150	100	210	**93SKY327**	1
12W	1440	900	4000	black	150	100	210	**93SKY440**	1
12W	1440	900	2700	black	150	100	210	**93SKY427**	1

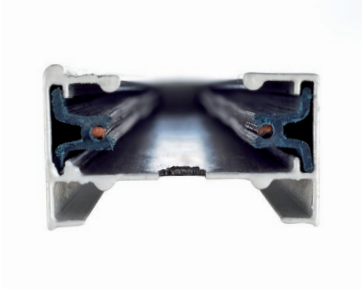
Body: aluminium | **Light source:** LED lamp PAR30
Power factor: λ>0.9 | **Starting time:** <1s



~230V | 50/60 Hz | LED PAR30 | E27 | 38° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

3 YEAR WARRANTY





SINGLE-PHASE RAILS / ADAPTERS

IP 20 RoHS F CE

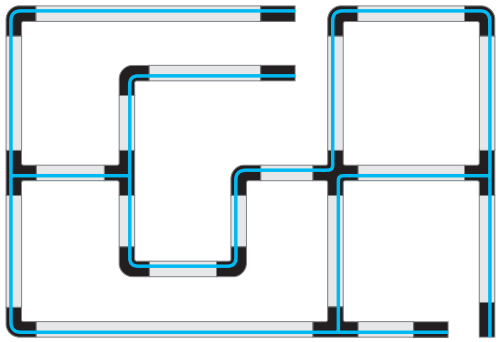
Model	Colour body	Size (mm)			Catalogue number	Packing (pcs)
		Length	Width	Height		
SKYWAY 401	white	1000	40	20	**93401**	20
SKYWAY 201	black	1000	40	20	**93201**	20
SKYWAY 402	white	2000	40	20	**93402**	20
SKYWAY 202	black	2000	40	20	**93202**	20
SKYWAY 410 I-type	white	80	40	20	**93410**	100
SKYWAY 210 I-type	black	80	40	20	**93210**	100
SKYWAY 420 L-type	white	70	40	20	**93420**	100
SKYWAY 220 L-type	black	70	40	20	**93220**	100
SKYWAY 430 T-type	white	106	40	20	**93430**	100
SKYWAY 230 T-type	black	106	40	20	**93230**	100
SKYWAY 440 X-type	white	106	40	20	**93440**	100
SKYWAY 240 X-type	black	106	40	20	**93240**	100

Body material: aluminium

~230V | 50/60 Hz | max. 10A

ADAPTER POWER SUPPLY





I -TYPE



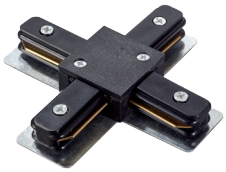
L -TYPE



T -TYPE



X -TYPE

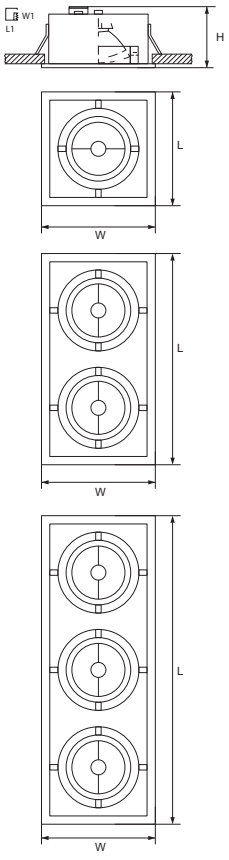




QUAD310

QUAD210

QUAD110



Legend:
L/W - Outer size
H - Height of the downlight
L1/W1 - Size of the cut

QUAD

A+ A++ A IP 20 RoHS EMC

Model	Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	L1	W1	Catalogue number	Packing (pcs)
QUAD110	10W	700	4000K	white	190	190	145	165	165	**92Q11040WH**	20
QUAD110	10W	700	2700K	white	190	190	145	165	165	**92Q11027WH**	20
QUAD110	10W	700	4000K	silver	190	190	145	165	165	**92Q11040SLV**	20
QUAD110	10W	700	2700K	silver	190	190	145	165	165	**92Q11027SLV**	20
QUAD110	10W	700	4000K	dark grey	190	190	145	165	165	**92Q11040DGR**	20
QUAD110	10W	700	2700K	dark grey	190	190	145	165	165	**92Q11027DGR**	20
QUAD210	2X10W	1400	4000K	white	340	190	145	315	165	**92Q21040WH**	20
QUAD210	2X10W	1400	2700K	white	340	190	145	315	165	**92Q21027WH**	20
QUAD210	2X10W	1400	4000K	silver	340	190	145	315	165	**92Q21040SLV**	20
QUAD210	2X10W	1400	2700K	silver	340	190	145	315	165	**92Q21027SLV**	20
QUAD210	2X10W	1400	4000K	dark grey	340	190	145	315	165	**92Q21040DGR**	20
QUAD210	2X10W	1400	2700K	dark grey	340	190	145	315	165	**92Q21027DGR**	20
QUAD310	3X10W	2100	4000K	white	490	190	145	465	165	**92Q31040WH**	20
QUAD310	3X10W	2100	2700K	white	490	190	145	465	165	**92Q31027WH**	20
QUAD310	3X10W	2100	4000K	silver	490	190	145	465	165	**92Q31040SLV**	20
QUAD310	3X10W	2100	2700K	silver	490	190	145	465	165	**92Q31027SLV**	20
QUAD310	3X10W	2100	4000K	dark grey	490	190	145	465	165	**92Q31040DGR**	20
QUAD310	3X10W	2100	2700K	dark grey	490	190	145	465	165	**92Q31027DGR**	20

Body: aluminium | **Light source:** LED lamp PAR30
LED recessed downlight. Easy installation due to handy clips.





white



silver



dark grey

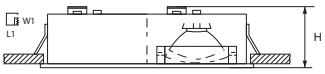
~230V 50/60 Hz LED PAR30 E27 38° Ra>80 30000h >20000 INSTANT 100% Hg

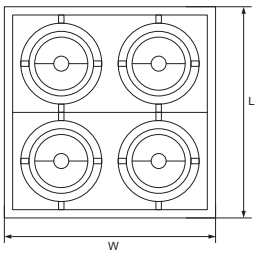
3 YEAR WARRANTY

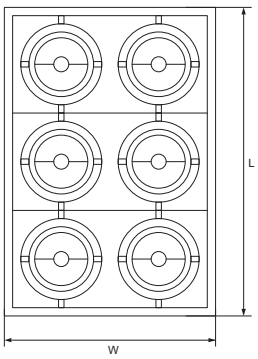


QUAD610

QUAD410







Legend:
L/W - Outer size
H - Height of the downlight
L1/W1 - Size of the cut

QUAD

Model	Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	L1	W1	Catalogue number	Packing (pcs)
QUAD410	4X10W	2800	4000K	white	340	340	145	315	315	**92Q41040WH**	6
QUAD410	4X10W	2800	2700K	white	340	340	145	315	315	**92Q41027WH**	6
QUAD410	4X10W	2800	4000K	silver	340	340	145	315	315	**92Q41040SLV**	6
QUAD410	4X10W	2800	2700K	silver	340	340	145	315	315	**92Q41027SLV**	6
QUAD410	4X10W	2800	4000K	dark grey	340	340	145	315	315	**92Q41040DGR**	6
QUAD410	4X10W	2800	2700K	dark grey	340	340	145	315	315	**92Q41027DGR**	6
QUAD610	6X10W	4200	4000K	white	490	340	145	465	315	**92Q61040WH**	4
QUAD610	6X10W	4200	2700K	white	490	340	145	465	315	**92Q61027WH**	4
QUAD610	6X10W	4200	4000K	silver	490	340	145	465	315	**92Q61040SLV**	4
QUAD610	6X10W	4200	2700K	silver	490	340	145	465	315	**92Q61027SLV**	4
QUAD610	6X10W	4200	4000K	dark grey	490	340	145	465	315	**92Q61040DGR**	4
QUAD610	6X10W	4200	2700K	dark grey	490	340	145	465	315	**92Q61027DGR**	4

Body: aluminium | **Light source:** LED lamp PAR30
LED recessed downlight. Easy installation due to handy clips.





white silver dark grey

~230V | 50/60 Hz | LED PAR30 | E27 | 38° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

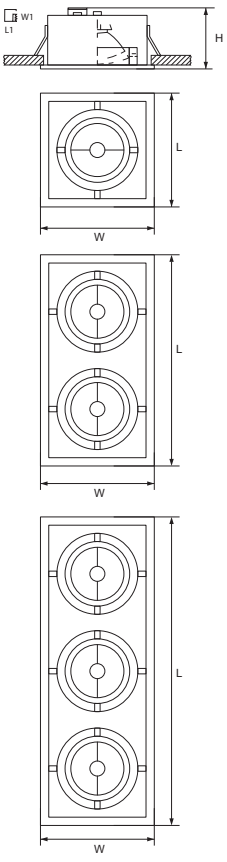
3 YEAR WARRANTY



QUAD312

QUAD212

QUAD112



Legend:
L/W - Outer size
H - Height of the downlight
L1/W1 - Size of the cut

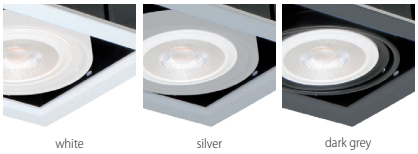
QUAD

A+ A++ A IP 20 RoHS COMPLIANT EMC

Model	Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	L1	W1	Catalogue number	Packing (pcs)
QUAD112	12W	900	4000K	white	190	190	145	165	165	**92Q11240WH**	20
QUAD112	12W	900	2700K	white	190	190	145	165	165	**92Q11227WH**	20
QUAD112	12W	900	4000K	silver	190	190	145	165	165	**92Q11240SLV**	20
QUAD112	12W	900	2700K	silver	190	190	145	165	165	**92Q11227SLV**	20
QUAD112	12W	900	4000K	dark grey	190	190	145	165	165	**92Q11240DGR**	20
QUAD112	12W	900	2700K	dark grey	190	190	145	165	165	**92Q11227DGR**	20
QUAD212	2X12W	1800	4000K	white	340	190	145	315	165	**92Q21240WH**	20
QUAD212	2X12W	1800	2700K	white	340	190	145	315	165	**92Q21227WH**	20
QUAD212	2X12W	1800	4000K	silver	340	190	145	315	165	**92Q21240SLV**	20
QUAD212	2X12W	1800	2700K	silver	340	190	145	315	165	**92Q21227SLV**	20
QUAD212	2X12W	1800	4000K	dark grey	340	190	145	315	165	**92Q21240DGR**	20
QUAD212	2X12W	1800	2700K	dark grey	340	190	145	315	165	**92Q21227DGR**	20
QUAD312	3X12W	2700	4000K	white	490	190	145	465	165	**92Q31240WH**	20
QUAD312	3X12W	2700	2700K	white	490	190	145	465	165	**92Q31227WH**	20
QUAD312	3X12W	2700	4000K	silver	490	190	145	465	165	**92Q31240SLV**	20
QUAD312	3X12W	2700	2700K	silver	490	190	145	465	165	**92Q31227SLV**	20
QUAD312	3X12W	2700	4000K	dark grey	490	190	145	465	165	**92Q31240DGR**	20
QUAD312	3X12W	2700	2700K	dark grey	490	190	145	465	165	**92Q31227DGR**	20

Body: aluminium | **Light source:** LED lamp PAR30
LED recessed downlight. Easy installation due to handy clips.





white silver dark grey

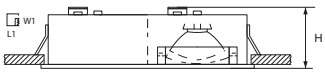
~230V 50/60 Hz LED PAR30 E27 38° Ra>80 30000h >20000 INSTANT 100% Hg

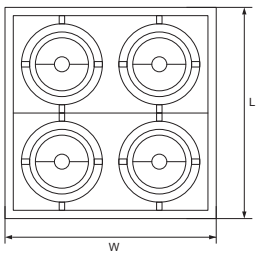
3 YEAR WARRANTY

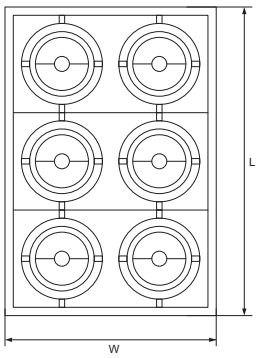


QUAD612

QUAD412







Legend:
L/W - Outer size
H - Height of the downlight
L1/W1 - Size of the cut

QUAD

A+ | A++ A | IP 20 | RoHS | EMC

Model	Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	L1	W1	Catalogue number	Packing (pcs)
QUAD412	4X12W	3600	4000K	white	340	340	145	315	315	**92Q41240WH**	6
QUAD412	4X12W	3600	2700K	white	340	340	145	315	315	**92Q41227WH**	6
QUAD412	4X12W	3600	4000K	silver	340	340	145	315	315	**92Q41240SLV**	6
QUAD412	4X12W	3600	2700K	silver	340	340	145	315	315	**92Q41227SLV**	6
QUAD412	4X12W	3600	4000K	dark grey	340	340	145	315	315	**92Q41240DGR**	6
QUAD412	4X12W	3600	2700K	dark grey	340	340	145	315	315	**92Q41227DGR**	6
QUAD612	6X12W	5400	4000K	white	490	340	145	465	315	**92Q61240WH**	4
QUAD612	6X12W	5400	2700K	white	490	340	145	465	315	**92Q61227WH**	4
QUAD612	6X12W	5400	4000K	silver	490	340	145	465	315	**92Q61240SLV**	4
QUAD612	6X12W	5400	2700K	silver	490	340	145	465	315	**92Q61227SLV**	4
QUAD612	6X12W	5400	4000K	dark grey	490	340	145	465	315	**92Q61240DGR**	4
QUAD612	6X12W	5400	2700K	dark grey	490	340	145	465	315	**92Q61227DGR**	4

Body: aluminium | **Light source:** LED lamp PAR30
LED recessed downlight. Easy installation due to handy clips.





white | silver | dark grey

~230V | 50/60 Hz | LED PAR30 | E27 | 38° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

3 YEAR WARRANTY

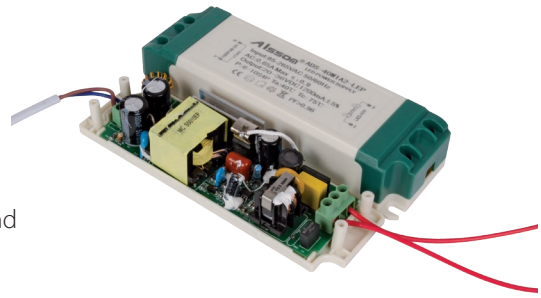




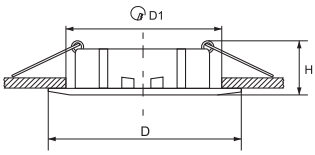
LED DOWNLIGHT FIXTURES

Drivers features:

· Easy installation
· Low consumption
· Strong compatibility
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current (CC/IC)
· Structure: isolated
· International broad voltage AC input
· Protection: electric shock
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency, long life span, and high reliability







Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

RDL60COB

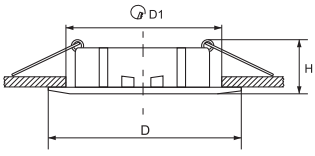
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	L	D1	Catalogue number	Packing (pcs)
20W	2200	1600	4000-4300	black/white	140	77	120	**92DL62040**	18
20W	2200	1600	2700-3000	black/white	140	77	120	**92DL62027**	18

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar | **Power factor:** λ>0.9 | **Starting time:** <0.5s
LED recessed round downlight COB. Easy installation due to handy clips.

~230V | 50/60 Hz | COB | 60° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY





Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

RDL60COB

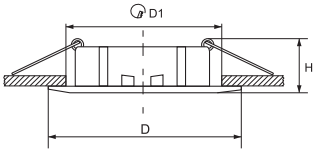
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	L	D1	Catalogue number	Packing (pcs)
30W	3300	2400	4000-4300	black/white	160	110	140	**92DL63040**	12
30W	3300	2400	2700-3000	black/white	160	110	140	**92DL63027**	12

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar | **Power factor:** λ>0.9 | **Starting time:** <0.5s
LED recessed round downlight COB. Easy installation due to handy clips.

~230V | 50/60 Hz | COB | 60° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY





Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

RDL60COB

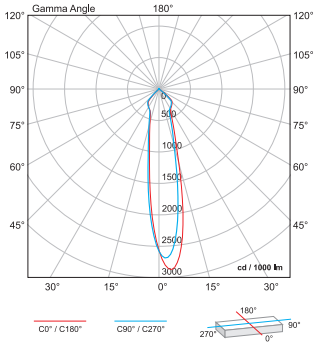
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	L	D1	Catalogue number	Packing (pcs)
40W	4400	3200	4000-4300	black/white	160	110	140	**92DL64040**	12
40W	4400	3200	2700-3000	black/white	160	110	140	**92DL64027**	123

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar | **Power factor:** λ>0.9 | **Starting time:** <0.5s
LED recessed round downlight COB. Easy installation due to handy clips.

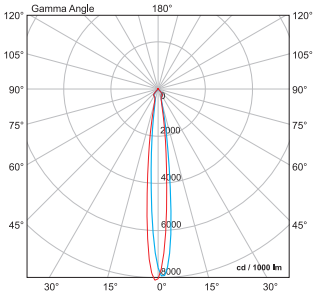
~230V | 50/60 Hz | COB | 60° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

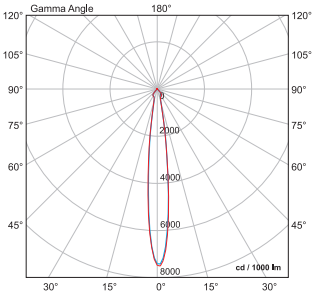
RDL60COB 20W



RDL60COB 30W



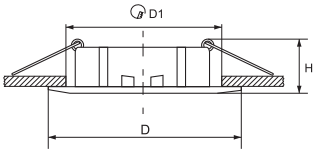
RDL60COB 40W



RDLCOB



Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
10W	1100	800	4000-4300	white	128	45	113	**92DLC1040/WH**	30
10W	1100	800	2700-3000	white	128	45	113	**92DLC1027/WH**	30
10W	1100	800	4000-4300	satin nickel	128	45	113	**92DLC1040/SN**	30
10W	1100	800	2700-3000	satin nickel	128	45	113	**92DLC1027/SN**	30



Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar
Power factor: λ>0.9 | **Starting time:** <0.5s | LED recessed round downlight COB. Easy installation due to handy clips.



white satin nickel

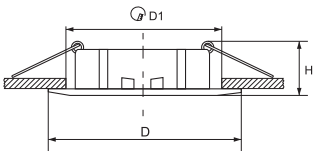
~230V 50/60 Hz COB 140° Ra>80 30000h >20000 INSTANT 100% Hg

5 YEAR WARRANTY

RDLCOB



Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
15W	1650	1200	4000-4300	white	165	50	150	**92DLC1540/WH**	30
15W	1650	1200	2700-3000	white	165	50	150	**92DLC1527/WH**	30
15W	1650	1200	4000-4300	satin nickel	165	50	150	**92DLC1540/SN**	30
15W	1650	1200	2700-3000	satin nickel	165	50	150	**92DLC1527/SN**	30



Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar
Power factor: λ>0.9 | **Starting time:** <0.5s | LED recessed round downlight COB. Easy installation due to handy clips.

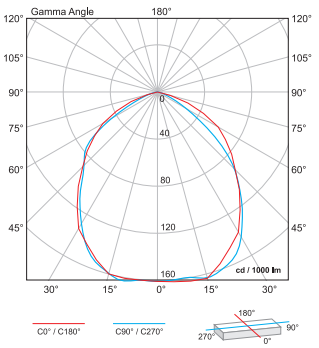


white satin nickel

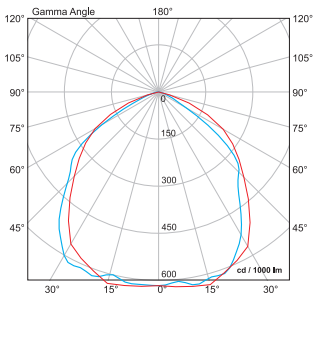
~230V 50/60 Hz COB 140° Ra>80 30000h >20000 INSTANT 100% Hg

5 YEAR WARRANTY

RDLCOB 10W

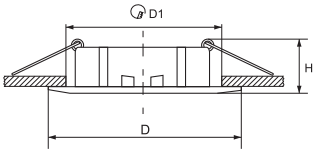


RDLCOB 15W



RDLCOB





Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
25W	2750	2000	4000-4300	white	190	60	175	**92DLC2540/WH**	30
25W	2750	2000	2700-3000	white	190	60	175	**92DLC2527/WH**	30
25W	2750	2000	4000-4300	satin nickel	190	60	175	**92DLC2540/SN**	30
25W	2750	2000	2700-3000	satin nickel	190	60	175	**92DLC2527/SN**	30

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar
Power factor: λ>0.9 | **Starting time:** <0.5s | LED recessed round downlight COB. Easy installation due to handy clips.



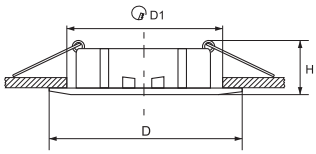
white satin nickel

~230V | 50/60 Hz | COB | 140° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

RDLCOB





Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
30W	3300	2400	4000-4300	white	230	97	215	**92DLC3040/WH**	30
30W	3300	2400	2700-3000	white	230	97	215	**92DLC3027/WH**	30
30W	3300	2400	4000-4300	satin nickel	230	97	215	**92DLC3040/SN**	30
30W	3300	2400	2700-3000	satin nickel	230	97	215	**92DLC3027/SN**	30

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar
Power factor: λ>0.9 | **Starting time:** <0.5s | LED recessed round downlight COB. Easy installation due to handy clips.

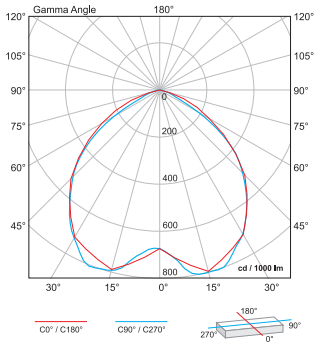


white satin nickel

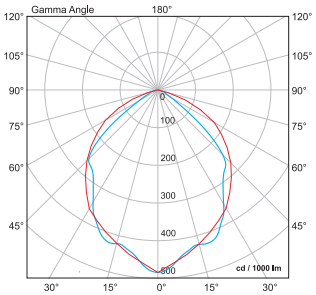
~230V | 50/60 Hz | COB | 140° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

RDLCOB 25W



RDLCOB 30W

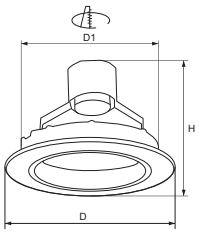




GL106LED

A+ A++ A | IP 20 | RoHS COMPLIANT | EMC

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
12W	1440	900	4000	white	160	145	140	**93GL106540**	1
12W	1440	900	2700	white	160	145	140	**93GL106527**	1



Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Body: aluminium | **Light source:** Epistar | LED recessed round downlight COB. Easy installation due to handy clips.



~230V | 50/60 Hz | LED PAR30 | E27 | 120° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

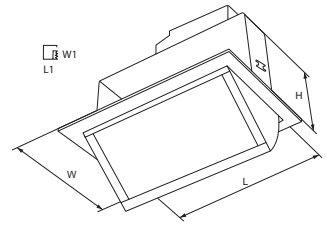
3 YEAR WARRANTY



QDL2COB

A++ A | IP 40 | RoHS COMPLIANT | EMC

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	L1	W1	Catalogue number	Packing (pcs)
30W	3600	2400	4000-4300	white	230	145	140	220	135	**92QDL123040**	6
40W	4800	3200	4000-4300	white	230	145	140	220	135	**92QDL124040**	6



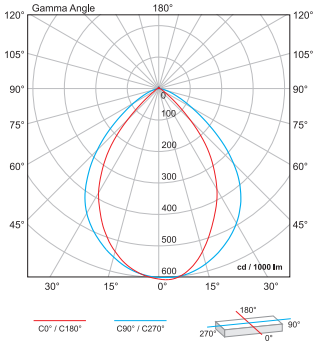
Legend:
L/W - Outer size
H - Height of the downlight
L1/W1 - Size of the cut

Body: aluminium | **Diffuser:** glass | **Light source:** Epistar | **Power factor:** λ>0.9 | **Starting time:** <0.5s
LED recessed round downlight COB. Easy installation due to handy clips.

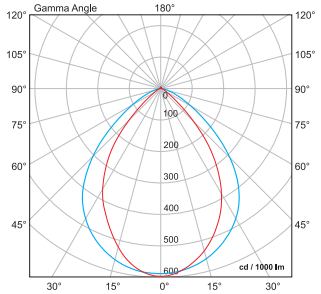
~230V | 50/60 Hz | COB | 120° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

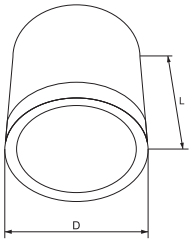
QDL2COB 30W



QDL2COB 40W







RDLOMCOB

A++ A | IP 40 | RoHS COMPLIANT | EMC | F | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	Size (mm) L	Catalogue number	Packing (pcs)
10W	1200	800	4000-4300	white	95	70	**92DLOM1040/WH**	24
10W	1200	800	2700-3000	white	95	70	**92DLOM1027/WH**	24
10W	1200	800	4000-4300	silver	95	70	**92DLOM1040/S**	24
10W	1200	800	2700-3000	silver	95	70	**92DLOM1027/S**	24

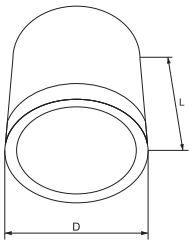
Body: aluminium | **Light source:** Epistar
Power factor: λ>0.9 | **Starting time:** <0.5s
LED surface round downlight COB.


white silver

~230V | 50/60 Hz | COB | 60° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY





RDLOMCOB

A++ A | IP 40 | RoHS COMPLIANT | EMC | F | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	Size (mm) L	Catalogue number	Packing (pcs)
20W	2400	1600	4000-4300	white	95	110	**92DLOM2040/WH**	12
20W	2400	1600	2700-3000	white	95	110	**92DLOM2027/WH**	12
20W	2400	1600	4000-4300	silver	95	110	**92DLOM2040/S**	12
20W	2400	1600	2700-3000	silver	95	110	**92DLOM2027/S**	12

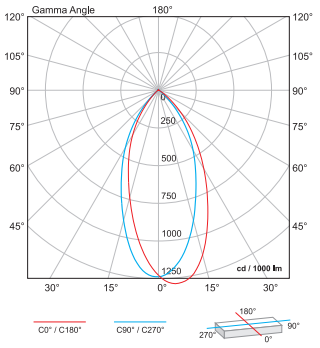
Body: aluminium | **Light source:** Epistar
Power factor: λ>0.9 | **Starting time:** <0.5s
LED surface round downlight COB.


white silver

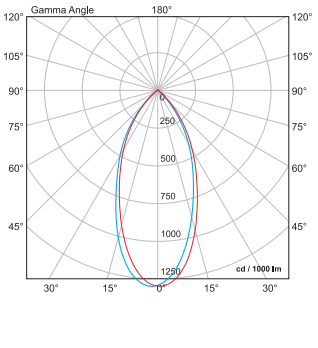
~230V | 50/60 Hz | COB | 60° | Ra>80 | 30000h | >20000 | INSTANT 100% | Hg

5 YEAR WARRANTY

RDLOMCOB



RDLOMCOB

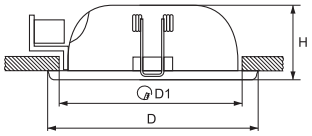




GL201LED

A+ A++ A | IP 20 | RoHS | EMC | F | CE

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
2X10W	1600	4000	white	226	110	210	**92201LED01**	1
2X10W	1600	2700	white	226	110	210	**92201LED03**	1
2X10W	1600	4000	satin nickel	226	110	210	**92201LED02**	1
2X10W	1600	2700	satin nickel	226	110	210	**92201LED04**	1



Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Body: aluminium alloy | **Light source:** LED lamp PLC | LED recessed round downlight. Easy installation due to handy clips. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.





white satin nickel

~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

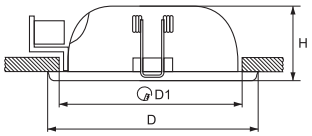
3 YEAR WARRANTY



GL201LED

A+ A++ A | IP 20 | RoHS | EMC | F | CE

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
2X15W	2400	4000	white	226	110	210	**92201LED05**	1
2X15W	2400	2700	white	226	110	210	**92201LED07**	1
2X15W	2400	4000	satin nickel	226	110	210	**92201LED06**	1
2X15W	2400	2700	satin nickel	226	110	210	**92201LED08**	1



Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Body: aluminium alloy | **Light source:** LED lamp PLC | LED recessed round downlight. Easy installation due to handy clips. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.





white satin nickel

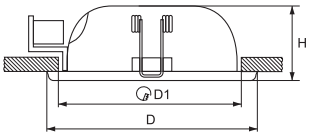
~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

3 YEAR WARRANTY



GL210LED

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
2X10W	1600	4000	white	228	110	210	**92210LED01**	1
2X10W	1600	2700	white	228	110	210	**92210LED03**	1
2X10W	1600	4000	satin nickel	228	110	210	**92210LED02**	1
2X10W	1600	2700	satin nickel	228	110	210	**92210LED04**	1



Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Body: aluminium alloy | **Light source:** LED lamp PLC | LED recessed round downlight. Easy installation due to handy clips. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.





white satin nickel

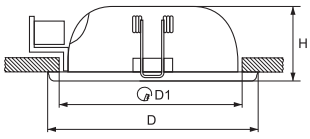
~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

3 YEAR WARRANTY



GL210LED

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
2X15W	2400	4000	white	228	110	210	**92210LED05**	1
2X15W	2400	2700	white	228	110	210	**92210LED07**	1
2X15W	2400	4000	satin nickel	228	110	210	**92210LED06**	1
2X15W	2400	2700	satin nickel	228	110	210	**92210LED08**	1



Legend:
D - Outer diameter
H - Height of the downlight
D1 - Diameter of the cut

Body: aluminium alloy | **Light source:** LED lamp PLC | LED recessed round downlight. Easy installation due to handy clips. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.



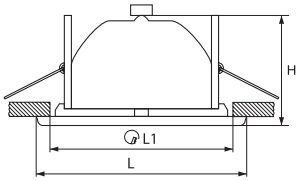


white satin nickel

~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

3 YEAR WARRANTY





Legend:
L=W - Outer length
H - Height of the downlight
L1=W1 - Length of the cut

GL204LED

A+ A++ A | IP 20 | RoHS COMPLIANT | EMC

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L=W	Size (mm) H	Size (mm) L1=W1	Catalogue number	Packing (pcs)
2X10W	1600	4000	white	230	110	210	**92204LED01**	1
2X10W	1600	2700	white	230	110	210	**92204LED03**	1
2X10W	1600	4000	satin nickel	230	110	210	**92204LED02**	1
2X10W	1600	2700	satin nickel	230	110	210	**92204LED04**	1

Body: aluminium alloy | **Light source:** LED lamp PLC | LED recessed square downlight. Easy installation due to handy clips. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.





white

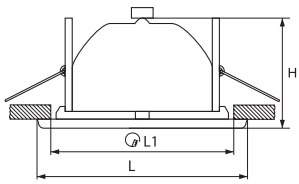


satin nickel

~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

3 YEAR WARRANTY





Legend:
L=W - Outer length
H - Height of the downlight
L1=W1 - Length of the cut

GL204LED

A+ A++ A | IP 20 | RoHS COMPLIANT | EMC

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L=W	Size (mm) H	Size (mm) L1=W1	Catalogue number	Packing (pcs)
2X15W	2400	4000	white	230	110	210	**92204LED05**	1
2X15W	2400	2700	white	230	110	210	**92204LED07**	1
2X15W	2400	4000	satin nickel	230	110	210	**92204LED06**	1
2X15W	2400	2700	satin nickel	230	110	210	**92204LED08**	1

Body: aluminium alloy | **Light source:** LED lamp PLC | LED recessed square downlight. Easy installation due to handy clips. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.





white

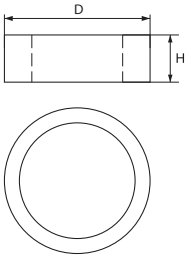


satin nickel

~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

3 YEAR WARRANTY





GL213LED

A+ A++ A IP 20 RoHS COMPLIANT EMC

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	Size (mm) H	Catalogue number	Packing (pcs)
2X10W	1600	4000	white	266	65	**92213LED01**	1
2X10W	1600	2700	white	266	65	**92213LED03**	1
2X10W	1600	4000	satin nickel	266	65	**92213LED02**	1
2X10W	1600	2700	satin nickel	266	65	**92213LED04**	1

Body: aluminium alloy | **Light source:** LED lamp PLC | LED surface round downlight. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.



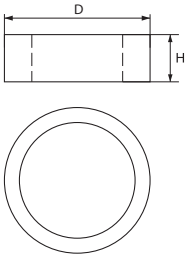

white


satin nickel

~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

3 YEAR WARRANTY





GL213LED

A+ A++ A IP 20 RoHS COMPLIANT EMC

Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	Size (mm) H	Catalogue number	Packing (pcs)
2X15W	2400	4000	white	266	65	**92213LED05**	1
2X15W	2400	2700	white	266	65	**92213LED07**	1
2X15W	2400	4000	satin nickel	266	65	**92213LED06**	1
2X15W	2400	2700	satin nickel	266	65	**92213LED08**	1

Body: aluminium alloy | **Light source:** LED lamp PLC | LED surface round downlight. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.




white


satin nickel

~230V | 50/60 Hz | LED PLC | G24d | 120° | Ra>80 | 30000h | Hg

3 YEAR WARRANTY

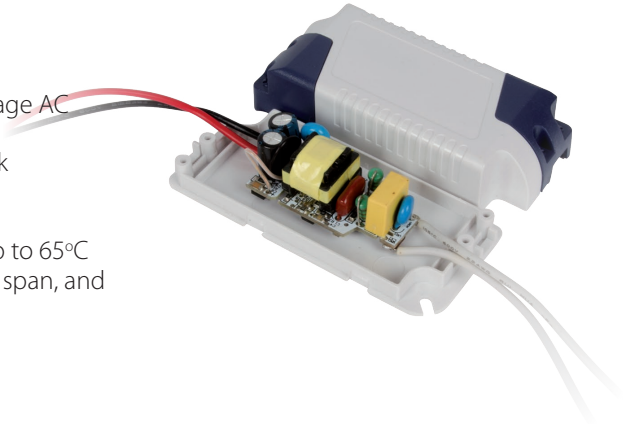




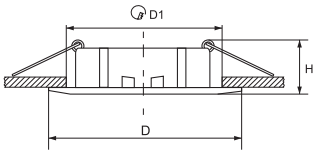
LED SPOTLIGHT FIXTURES

Drivers features:

· Easy installation
· Low consumption
· Strong compatibility
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current (CC/IC)
· Structure: isolated
· International broad voltage AC input
· Protection: electric shock
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency, long life span, and high reliability







Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

LSLCOB

A++ A | IP 20 | RoHS | EMC | F | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
5W	500	400	4000-4300	white	85	50	75	**92LSLC540/WH**	50
5W	500	400	2700-3000	white	85	50	75	**92LSLC527/WH**	50
5W	500	400	4000-4300	satin nickel	85	50	75	**92LSLC540/SN**	50
5W	500	400	2700-3000	satin nickel	85	50	75	**92LSLC527/SN**	50

Body: aluminium alloy | **Light source:** Epistar | LED recessed round spotlight COB. Easy installation due to handy clips.

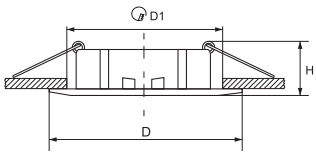


white satin nickel

~230V | 50/60 Hz | COB | 120° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

LSLCOB

A++ A | IP 20 | RoHS | EMC | F | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
7W	700	560	4000-4300	white	85	50	75	**92LSLC740/WH**	50
7W	700	560	2700-3000	white	85	50	75	**92LSLC727/WH**	50
7W	700	560	4000-4300	satin nickel	85	50	75	**92LSLC740/SN**	50
7W	700	560	2700-3000	satin nickel	85	50	75	**92LSLC727/SN**	50

Body: aluminium alloy | **Light source:** Epistar | LED recessed round spotlight COB. Easy installation due to handy clips.

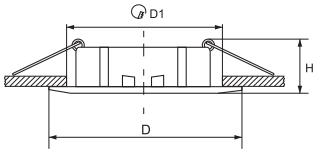


white satin nickel

~230V | 50/60 Hz | COB | 120° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

SAS-13

A++ A | IP 20 | RoHS COMPLIANT | EMC | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
1W	110	80	4000-4300	satin nickel	52	21	45	**9213WH/SN**	100
1W	110	80	2700-3000	satin nickel	52	21	45	**9213WW/SN**	100
1W	110	80	4000-4300	gold	52	21	45	**9213WH/G**	100
1W	110	80	2700-3000	gold	52	21	45	**9213WW/G**	100
1W	110	80	4000-4300	graphite	52	21	45	**9213WH/GR**	100
1W	110	80	2700-3000	graphite	52	21	45	**9213WW/GR**	100

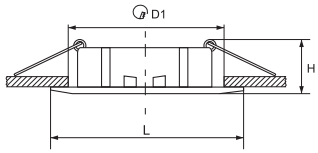
Body: aluminium alloy | **Light source:** Epistar
LED recessed round spotlight. Easy installation due to handy clips.


satin nickel gold graphite

~230V | 50/60 Hz | High power | 60° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





Legend:
L - Outer length
H - Height of the spotlight
D1 - Diameter of the cut

SAS-14

A++ A | IP 20 | RoHS COMPLIANT | EMC | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	H	D1	Catalogue number	Packing (pcs)
1W	110	80	4000-4300	satin nickel	60	21	50	**9214WH/SN**	100
1W	110	80	2700-3000	satin nickel	60	21	50	**9214WW/SN**	100
1W	110	80	4000-4300	gold	60	21	50	**9214WH/G**	100
1W	110	80	2700-3000	gold	60	21	50	**9214WW/G**	100
1W	110	80	4000-4300	graphite	60	21	50	**9214WH/GR**	100
1W	110	80	2700-3000	graphite	60	21	50	**9214WW/GR**	100

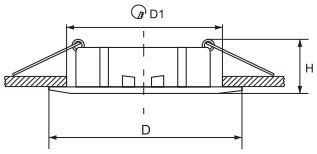
Body: aluminium alloy | **Light source:** Epistar
LED recessed square spotlight. Easy installation due to handy clips.


satin nickel gold graphite

~230V | 50/60 Hz | High power | 60° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

SA-913

A++ A | IP 20 | RoHS | EMC | F | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
3W	110	240	4000-4300	satin nickel	90	50	82	**92913WH/SN**	100
3W	110	240	2700-3000	satin nickel	90	50	82	**92913WW/SN**	100
3W	110	240	4000-4300	gold	90	50	82	**92913WH/G**	100
3W	110	240	2700-3000	gold	90	50	82	**92913WW/G**	100
3W	110	240	4000-4300	graphite	90	50	82	**92913WH/GR**	100
3W	110	240	2700-3000	graphite	90	50	82	**92913WW/GR**	100

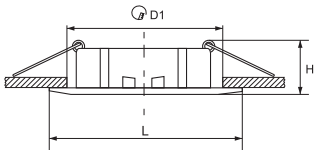
Body: aluminium alloy | **Light source:** Epistar
LED recessed round spotlight. Easy installation due to handy clips.


satin nickel | gold | graphite

~230V | 50/60 Hz | High power | 60° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





Legend:
L - Outer length
H - Height of the spotlight
D1 - Diameter of the cut

SA-914

A++ A | IP 20 | RoHS | EMC | F | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	H	D1	Catalogue number	Packing (pcs)
3W	110	240	4000-4300	satin nickel	92	45	85	**92914WH/SN**	100
3W	110	240	2700-3000	satin nickel	92	45	85	**92914WW/SN**	100
3W	110	240	4000-4300	gold	92	45	85	**92914WH/G**	100
3W	110	240	2700-3000	gold	92	45	85	**92914WW/G**	100
3W	110	240	4000-4300	graphite	92	45	85	**92914WH/GR**	100
3W	110	240	2700-3000	graphite	92	45	85	**92914WW/GR**	100

Body: aluminium alloy | **Light source:** Epistar
LED recessed square spotlight. Easy installation due to handy clips.


satin nickel | gold | graphite

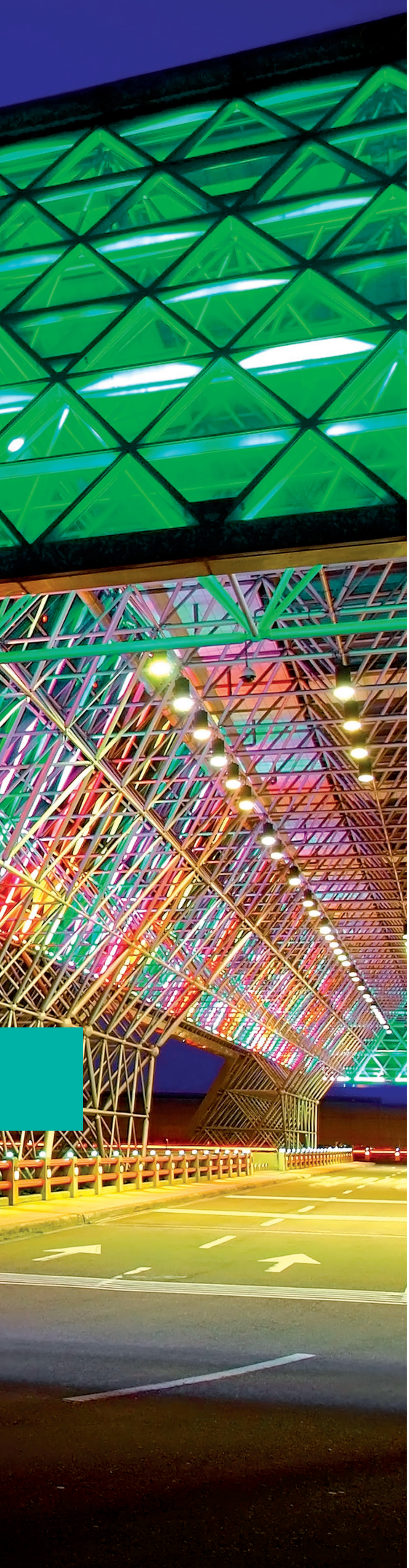
~230V | 50/60 Hz | High power | 60° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY



LED EXTERIOR LIGHTING





ELMARK lighting

Facade lighting | 298

Garden lighting | 302

Wall recessed fixtures | 304

Ground recessed fixtures | 306

Wall mounted fixtures | 310



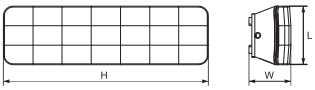
LED EXTERIOR LIGHTING

Drivers features:

· Easy installation
· Low consumption
· Strong compatibility
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current
· Structure: isolated
· International broad voltage AC input
· Protection: electric shock
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency, long life span, and high reliability







OL9613-W LED

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
6W	510	360	4000-4300	dark grey	60	43	210	**9613LEDW**	16

Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC) | **LED driver:** mounted in the body | **Light source:** 30 pcs SMD LED Epistar
Operating temperature: -20°C÷+65°C

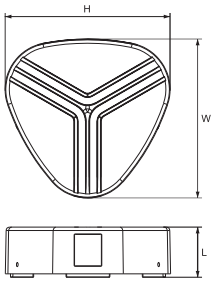
~230V | 50/60 Hz | Ra>80 | >15000 | 30000h | Hg

5 YEAR WARRANTY









GRF9617 LED

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
3 x 3W	600	480	4000-4300	dark grey	44	138	143	**9617LEDW**	24
3 x 3W	600	480	4000-4300	dark grey	44	138	143	**9618LEDW**	24
2 x 3W	520	380	4000-4300	dark grey	44	138	143	**9619LEDW**	24

Body: aluminium | **Diffuser:** tempered glass | **LED driver:** mounted in the body | **Light source:** CREE LED
Operating temperature: -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | 30000h | Hg

5 YEAR WARRANTY

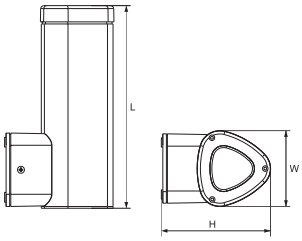


OL9611-W1 LED



Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
3W	270	210	4000-4300	dark grey	153	72.6	106.4	**9611LEDW1**	16

Body: aluminium | **Diffuser:** tempered glass | **LED driver:** mounted in the body | **Light source:** CREE LED
Operating temperature: -20°C÷+65°C



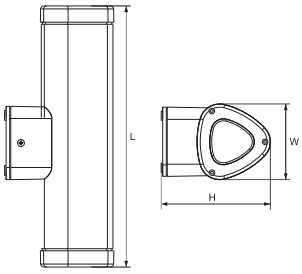


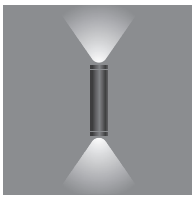
OL9611-W2 LED



Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
2 x 3W	480	320	4000-4300	dark grey	231.6	72.6	106.4	**9611LEDW2**	16

Body: aluminium | **Diffuser:** tempered glass | **LED driver:** mounted in the body | **Light source:** CREE LED
Operating temperature: -20°C÷+65°C





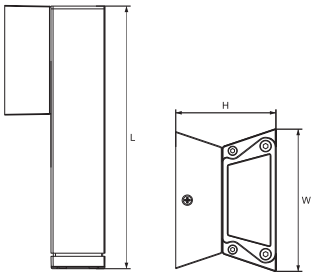


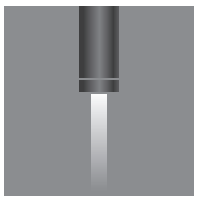
OL9612-W1 LED

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
3W	270	210	4000-4300	dark grey	170	92	65	**9612LEDW1**	12

Body: aluminium | **Diffuser:** tempered glass | **LED driver:** mounted in the body | **Light source:** CREE LED
Operating temperature: -20°C÷+65°C

5 YEAR WARRANTY





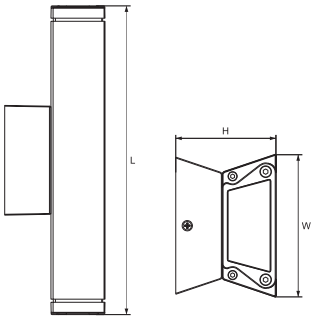


OL9612-W2 LED

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
2 x 3W	480	320	4000-4300	dark grey	200	92	65	**9612LEDW2**	12

Body: aluminium | **Diffuser:** tempered glass | **LED driver:** mounted in the body | **Light source:** CREE LED
Operating temperature: -20°C÷+65°C

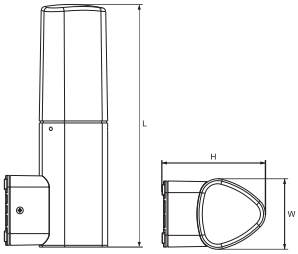
5 YEAR WARRANTY





GRF967-W LED





Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF967-W LED	6W	650	480	4000-4300	dark grey	199	74	107	**967LEDW200**	16

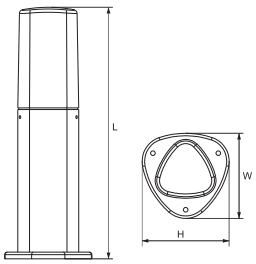
Body: aluminium | **Diffuser:** polycarbonate | **Light source:** Osram LED | **Operating temperature:** -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | 100% | 30000h | Hg

5 YEAR WARRANTY

GRF967 LED



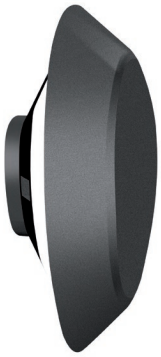


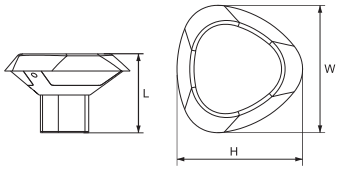
Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF967-30 LED	6W	650	480	4000-4300	dark grey	200	102	104	**967LEDP300**	9
GRF967-50 LED	6W	650	480	4000-4300	dark grey	500	102	104	**967LEDP500**	9
GRF967-80 LED	6W	650	480	4000-4300	dark grey	800	102	104	**967LEDP800**	9

Body: aluminium | **Diffuser:** polycarbonate | **LED driver:** mounted in the body | **Light source:** Osram LED
Operating temperature: -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | 100% | 30000h | Hg

5 YEAR WARRANTY





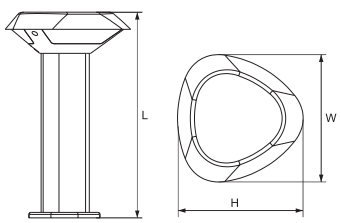
GRF968-W LED

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF968-W LED	6W	650	480	4000-4300	dark grey	115	186	183	**968LEDW60**	12

Body: aluminium | **Diffuser:** polycarbonate | **Light source:** Osram LED | **Operating temperature:** -20°C÷+65°C

5 YEAR WARRANTY





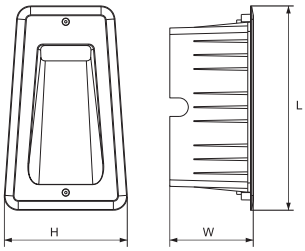
GRF968 LED

Model	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF968-30 LED	6W	650	480	4000-4300	dark grey	300	186	183	**968LEDP300**	8
GRF968-50 LED	6W	650	480	4000-4300	dark grey	500	186	183	**968LEDP500**	4
GRF968-80 LED	6W	650	480	4000-4300	dark grey	800	186	183	**968LEDP800**	4

Body: aluminium | **Diffuser:** polycarbonate | **LED driver:** mounted in the body | **Light source:** Osram LED
Operating temperature: -20°C÷+65°C

5 YEAR WARRANTY





GRF9620 LED

A++ A | IP 54 | RoHS COMPLIANT | EMC | CE

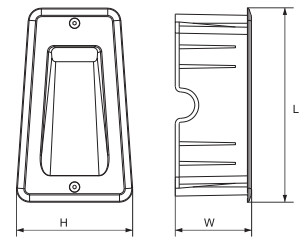
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
6W	520	480	4000-4300	dark grey	220	90	133	**9620LEDW**	12

Body: aluminium | **LED driver:** mounted in the body | **Light source:** Osram LED recessed fixture
Operating temperature: -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





GRF9621 LED

A++ A | IP 54 | RoHS COMPLIANT | EMC | CE

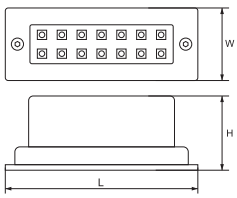
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
3W	360	260	4000-4300	dark grey	148	58	89	**9621LEDW**	12

Body: aluminium | **LED driver:** mounted in the body | **Light source:** Osram LED recessed fixture
Operating temperature: -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





GRF LED

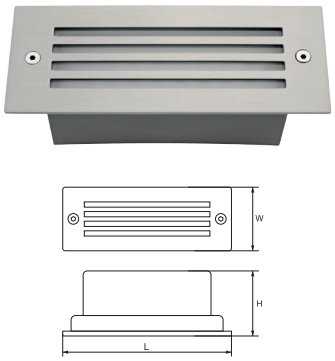
A++ A | IP 54 | RoHS COMPLIANT | EMC | CE

Model	LEDs (pcs)	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF LED003	12	1,5W	6	30	6000-6500	satin nickel	110	45	54	**96GRFLED003**	50
GRF LED004	16	2W	6	35	6000-6500	satin nickel	170	68	57	**96GRFLED004**	27

Body: PVC | **Diffuser:** aluminium ring and glass diffuser | **LED driver:** mounted in the body | **Light source:** LED type Φ5mm recessed fixture | **Operating temperature:** -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY



GRF LED

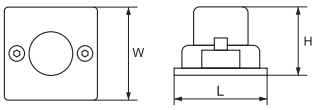
Model	LEDs (pcs)	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF LED005	12	1,5W	6	30	6000-6500	satin nickel	110	45	54	**96GRFLED005**	50
GRF LED006	16	2W	6	35	6000-6500	satin nickel	170	68	57	**96GRFLED006**	27

Body: PVC | **Diffuser:** aluminium ring and glass diffuser | **LED driver:** mounted in the body | **Light source:** LED type Φ5mm recessed fixture | **Operating temperature:** -20°C÷+65°C

~230V · 50/60 Hz · Ra>80 · >15000 · INSTANT 100% · 30000h · Hg

5 YEAR WARRANTY





GRF LED

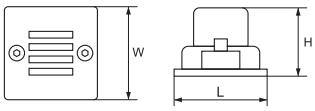
Model	LEDs (pcs)	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF LED007	9	1,2W	6	30	6000-6500	satin nickel	70	70	54	**96GRFLED007**	50
GRF LED008	16	2W	6	35	6000-6500	satin nickel	105	105	57	**96GRFLED008**	27

Body: PVC | **Diffuser:** aluminium ring and glass diffuser | **LED driver:** mounted in the body | **Light source:** LED type Φ5mm recessed fixture | **Operating temperature:** -20°C÷+65°C

~230V · 50/60 Hz · Ra>80 · >15000 · INSTANT 100% · 30000h · Hg

5 YEAR WARRANTY





GRF LED

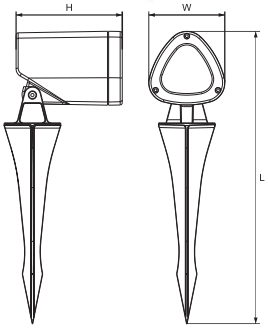
Model	LEDs (pcs)	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) L	W	H	Catalogue number	Packing (pcs)
GRF LED009	9	1,2W	6	30	6000-6500	satin nickel	70	70	54	**96GRFLED009**	50
GRF LED010	16	2W	6	35	6000-6500	satin nickel	105	105	57	**96GRFLED010**	27

Body: PVC | **Diffuser:** aluminium ring and glass diffuser | **LED driver:** mounted in the body | **Light source:** LED type Φ5mm recessed fixture | **Operating temperature:** -20°C÷+65°C

~230V · 50/60 Hz · Ra>80 · >15000 · INSTANT 100% · 30000h · Hg

5 YEAR WARRANTY





GRF9615 LED

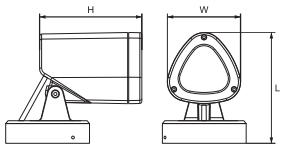
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
3W	270	210	4000-4300	dark grey	279	73	112	**9615LEDP**	16

Body: aluminium | **Diffuser:** tempered glass | **LED driver:** mounted in the body | **Light source:** CREE LED
Operating temperature: -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY





GRF9616 LED

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) L	W	H	Catalogue number	Packing (pcs)
3W	270	210	4000-4300	dark grey		73	112	**9616LEDW**	16

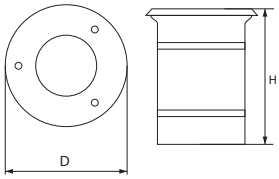
Body: aluminium | **Diffuser:** tempered glass | **LED driver:** mounted in the body | **Light source:** CREE LED
Operating temperature: -20°C÷+65°C

~230V | 50/60 Hz | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY

RAY





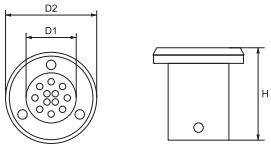
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) D	Size (mm) H	Catalogue number	Packing (pcs)
10W	1100	800	5500	satin nickel	150	100	**96RAY10**	10
20W	2200	1600	5500	satin nickel	210	125	**96RAY20**	8
30W	3300	2400	5500	satin nickel	210	125	**96RAY30**	8
40W	4400	3600	5500	satin nickel	230	100	**96RAY40**	6

Body: aluminium | **Diffuser:** aluminium ring and tempered glass | Load capacity is 20 ton | **LED driver:** mounted in the body
Light source: Epistar LED

5 YEAR WARRANTY

GRF LED001





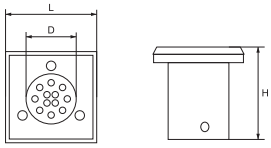
LEDs (pcs)	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Size (mm) D2	Size (mm) D1	Size (mm) H	Catalogue number	Packing (pcs)
12	1,5W	6	35	6000-6500	95	60	80	**96GRFLED001**	16

Body: PVC | **Diffuser:** aluminium ring and tempered glass | Load capacity is 20 ton | **LED driver:** mounted in the body | **Light source:** LED type Φ5mm recessed fixture | **Operating temperature:** -20°C÷+65°C

5 YEAR WARRANTY

GRF LED002



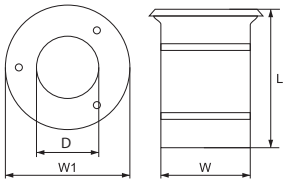


LEDs (pcs)	Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Size (mm) L	Size (mm) D	Size (mm) H	Catalogue number	Packing (pcs)
12	1,5W	6	35	6000-6500	95	60	80	**96GRFLED002**	16

Body: PVC | **Diffuser:** aluminium ring and tempered glass | Load capacity is 20 ton | **LED driver:** mounted in the body | **Light source:** LED type Φ5mm recessed fixture | **Operating temperature:** -20°C÷+65°C

5 YEAR WARRANTY





GRF105LED

A+ A++ A IP 65 RoHS

Watt	Lumen (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) D	L	W/W1	Catalogue number	Packing (pcs)
3W	230	4000	satin nickel	60	140	87/110	**96GRF105LED01**	1
3W	230	2700	satin nickel	60	140	87/110	**96GRF105LED02**	1
3W	-	green	satin nickel	60	140	87/110	**96GRF105LED03**	1
3W	-	blue	satin nickel	60	140	87/110	**96GRF105LED04**	1
3W	-	red	satin nickel	60	140	87/110	**96GRF105LED05**	1

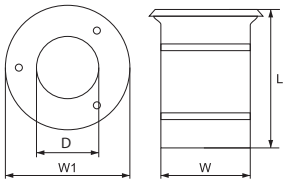
Body: PVC | **Diffuser:** aluminium ring and tempered glass
Light source: LED lamp MR16
Load capacity is 20 ton. | w/o driver



12V AC/DC · LED MR-16 · GU5.3 · 120° · Ra>80 · >15000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY





GRF105LED

A+ A++ A IP 65 RoHS

Watt	Lumen (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) D	L	W/W1	Catalogue number	Packing (pcs)
5,5W	400	4000	satin nickel	60	140	87/110	**96GRF105LED06**	1
5,5W	400	2700	satin nickel	60	140	87/110	**96GRF105LED07**	1

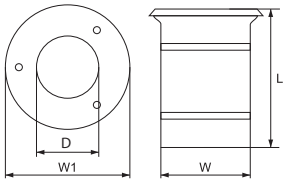
Body: PVC | **Diffuser:** aluminium ring and tempered glass
Light source: LED lamp MR16
Load capacity is 20 ton. | w/o driver



12V AC/DC · LED MR-16 · GU5.3 · 120° · Ra>80 · >15000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY





GRF106LED

A+ A++ A | IP 65 | RoHS | F | CE

Watt	Lumen (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) D	L	W/W1	Catalogue number	Packing (pcs)
3W	230	4000	satin nickel	60	140	90/100	**96GRF106LED01**	1
3W	230	2700	satin nickel	60	140	90/100	**96GRF106LED02**	1
3W	-	green	satin nickel	60	140	90/100	**96GRF106LED03**	1
3W	-	blue	satin nickel	60	140	90/100	**96GRF106LED04**	1
3W	-	red	satin nickel	60	140	90/100	**96GRF106LED05**	1

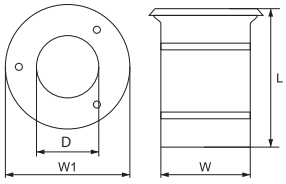
Body: PVC | **Diffuser:** aluminium ring and tempered glass
Light source: LED lamp GU10
Load capacity is 20 ton.



~230V | 50/60 Hz | LED GU10 | GU10 | 120° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY





GRF106LED

A+ A++ A | IP 65 | RoHS | F | CE

Watt	Lumen (lm)	Colour temp. (K)	Colour aluminium ring	Size (mm) D	L	W/W1	Catalogue number	Packing (pcs)
5,5W	400	4000	satin nickel	60	140	90/100	**96GRF106LED06**	1
5,5W	400	2700	satin nickel	60	140	90/100	**96GRF106LED07**	1

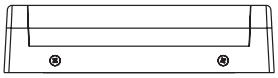
Body: PVC | **Diffuser:** aluminium ring and tempered glass
Light source: LED lamp GU10
Load capacity is 20 ton.

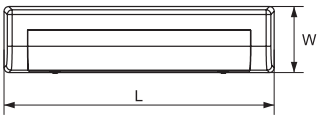


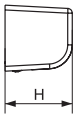
~230V | 50/60 Hz | LED GU10 | GU10 | 120° | Ra>80 | >15000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY









CORNER

A++ A | IP 54 | RoHS | EMC | F | CE

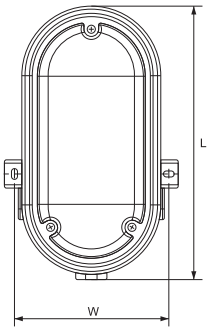
Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
					Length	Width	Height		
6W	720	600	4000	white	225	55	56	**91AT800506WH**	1
6W	720	600	4000	black	225	55	56	**91AT800506BL**	1
12W	1440	1200	4000	white	440	55	56	**91AT800512WH**	1
12W	1440	1200	4000	black	440	55	56	**91AT800512BL**	1

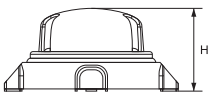
Body: polycarbonate | **LED driver:** mounted in the body | **Light source:** SAMSUNG

~230V | 50/60 Hz | SMD | Ra>80 | 30000h | Hg

5 YEAR WARRANTY







ECONOMIC

A++ A | IP 54 | RoHS | EMC | F | CE

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm)			Catalogue number	Packing (pcs)
					Length	Width	Height		
5W	720	600	4000	grey	209	118	63,5	**91AT3002**	1

Body: polycarbonate | **LED driver:** mounted in the body | **Light source:** SAMSUNG

~230V | 50/60 Hz | SMD | Ra>80 | 30000h | Hg

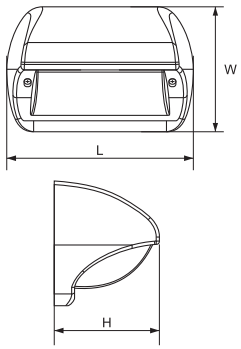
5 YEAR WARRANTY



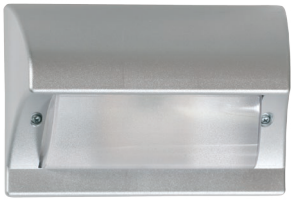
FUTURA OVAL

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
5W	720	600	4000	grey	210	140	118	**91AT3001**	1

Body: polycarbonate | **LED driver:** mounted in the body | **Light source:** SAMSUNG



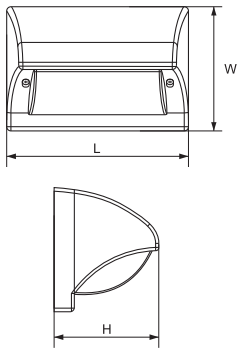
5 YEAR WARRANTY



FUTURA

Watt	LED chip lumens (lm)	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
5W	720	600	4000	grey	208	140	118	**91AT3003**	1

Body: polycarbonate | **LED driver:** mounted in the body | **Light source:** SAMSUNG



5 YEAR WARRANTY



LED LAMPS AND COMPONENTS



ELMARK®
lighting

LED fixtures T5 | 314

LED Tubes T8 | 316

LED Lamps | 318

LED Modules | 332

LED Strip lights | 334

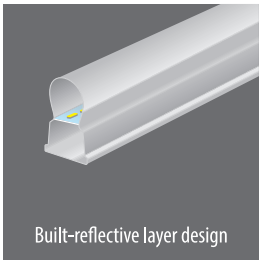
Accessories for LED Strip | 338

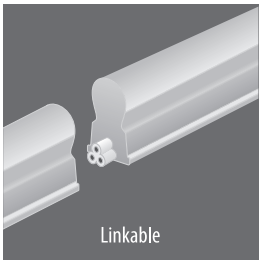
Power supplies and controls | 341



LED FIXTURES T5

Most popular application:
- stylized niches and bays on the ceilings and walls
- wall-hung kitchen cupboards
- shelves and cases
- wardrobes and dressing rooms
- glass cases of home libraries and cabinets

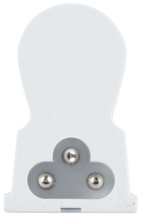


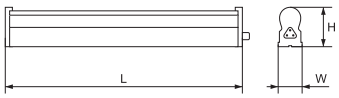












RAINBOW LED T5

A++ A | IP 20 | RoHS COMPLIANT | EMC | F | CE

Watt	Colour	LED lamp lumens (lm)	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
4W	white	320	300	22	35	**9RT5300/WH**	25
4W	warm white	210	300	22	35	**9RT5300/WW**	25
4W	red	-	300	22	35	**9RT5300/R**	25
4W	green	-	300	22	35	**9RT5300/G**	25
4W	blue	-	300	22	35	**9RT5300/B**	25
7W	white	560	600	22	35	**9RT5600/WH**	25
7W	warm white	560	600	22	35	**9RT5600/WW**	25
7W	red	-	600	22	35	**9RT5600/R**	25
7W	green	-	600	22	35	**9RT5600/G**	25
7W	blue	-	600	22	35	**9RT5600/B**	25
10W	white	830	900	22	35	**9RT5900/WH**	25
10W	warm white	830	900	22	35	**9RT5900/WW**	25
10W	red	-	900	22	35	**9RT5900/R**	25
10W	green	-	900	22	35	**9RT5900/G**	25
10W	blue	-	900	22	35	**9RT5900/B**	25
14W	white	1200	1200	22	35	**9RT51200/WH**	25
14W	warm white	1200	1200	22	35	**9RT51200/WW**	25
14W	red	-	1200	22	35	**9RT51200/R**	25
14W	green	-	1200	22	35	**9RT51200/G**	25
14W	blue	-	1200	22	35	**9RT51200/B**	25

Body: aluminium | **Diffuser:** PVC

~230V | 50/60 Hz | SMD 2835 | 270° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

5 YEAR WARRANTY

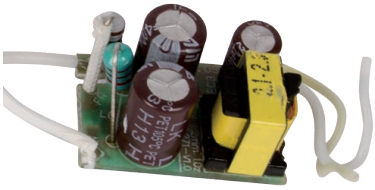
Light is one of the most important space-shaping elements. Therefore it is worth to consider the quality of the selected lighting fittings.
The SMD LED series of modern fittings is an innovative solution of lighting that is functional and decorative at the same time. The fittings emit high quality light and their compact form, matching contemporary furniture, enables a multitude of arrangements. The fittings can be connected in order to achieve the lighting line of the desired length, and the energy-efficient LED light makes it possible to achieve a spectacular effect in any interior.



LED LAMPS

Drivers features:

- Low consumption
- Compliance to worldwide safety regulations for lighting
- Certificate: CE, ROHS, EMC, LVD
- Type: constant current
- Structure: non isolated
- Natural air cooled
- 100% full-load aged
- Working temperature up to 65°C
- High efficiency
- Long life span
- High reliability





LED TUBE T8

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
10W	cold white	25/48	850	6400	605	28	**99LED351**	50
10W	white	25/48	850	4000	605	28	**99LED352**	50

~230V | 50/60 Hz | SMD 4014 | G13 | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ — 10 kWh/1000h



Installation



LED TUBE T8

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
18W	cold white	25/90	1700	6400	1213	28	**99LED354**	50
18W	white	25/90	1700	4000	1213	28	**99LED355**	50

~230V | 50/60 Hz | SMD 4014 | G13 | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ — 18 kWh/1000h



Installation



LED TUBE T8

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
24W	cold white	25/120	2100	6400	1513	28	**99LED447**	50
24W	white	25/120	2100	4000	1513	28	**99LED448**	50

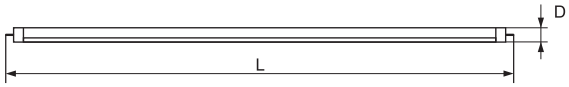
~230V | 50/60 Hz | SMD 4014 | G13 | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ — 24 kWh/1000h



Installation





LEDCOB PAR30

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
10W	white	1100/1	700	4000	100	95	**99LED700**	50
10W	warm white	1100/1	700	2700	100	95	**99LED701**	50

~230V | 50/60 Hz | COB | E27 | 38° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ | 10 kWh/1000h



LEDCOB PAR30

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
12W	white	1320/1	900	4000	95	95	**99LED658**	30
12W	warm white	1320/1	900	2700	95	95	**99LED659**	30

~230V | 50/60 Hz | COB | E27 | 38° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ | 12 kWh/1000h



LED AR111

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
11W	white	200/6	630	4000	58	111	**99LED702**	30
11W	warm white	200/6	630	2700	58	111	**99LED703**	30

12V AC/DC | 50/60 Hz | High power | G 53 | 36° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ | 12.1 kWh/1000h



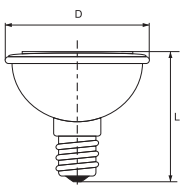
LEDT25

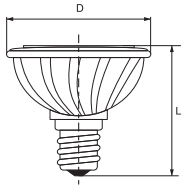
Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
1W	white	25/16	90	4000	63	25	**99LED445**	500
1W	warm white	25/16	90	2700	63	25	**99LED446**	500

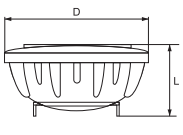
~230V | 50/60 Hz | SMD 2835 | E14 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

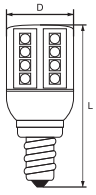
3 YEAR WARRANTY

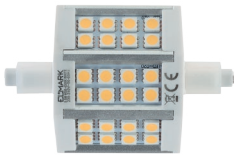
ENERGY EFFICIENCY CLASS A+ | 1 kWh/1000h











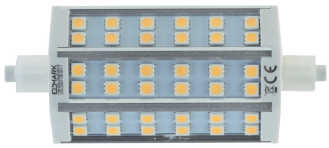
LEDJ78

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
5,5W	white	25/24	440	4000	78	51	31	**99LED443**	100

~230V | 50/60 Hz | SMD 2835 | R7s | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ — 5.5 kWh/1000h



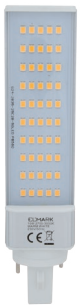
LEDJ118

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
7,5W	white	25/36	700	4000	118	51	31	**99LED444**	50

~230V | 50/60 Hz | SMD 2835 | R7s | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ — 7.5 kWh/1000h



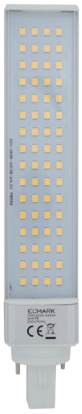
LEDPLC

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Diameter	Catalogue number	Packing (pcs)
10W	white	22/50	900	4000	119	38	**99LED550**	10
10W	warm white	22/50	900	2700	119	38	**99LED551**	10

~230V | 50/60 Hz | SMD 2835 | G24d | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ — 10 kWh/1000h



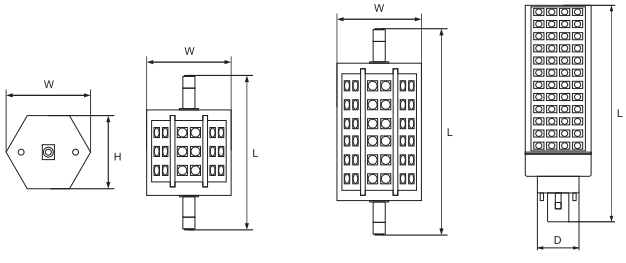
LEDPLC

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Diameter	Catalogue number	Packing (pcs)
15W	white	22/64	1350	4000	158	38	**99LED552**	10
15W	warm white	22/64	1350	2700	158	38	**99LED553**	10

~230V | 50/60 Hz | SMD 2835 | G24d | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ — 15 kWh/1000h





LED R50

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5,5W	white	33/19	440	4000	85	50	**99LED439**	100
5,5W	warm white	33/19	440	2700	85	50	**99LED440**	100

~230V | 50/60 Hz | SMD 2835 | E14 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERG A++ A+ A B C D E — A+ — 5.5 kWh/1000h



LED R63

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
10W	white	47/24	800	4000	105	63	**99LED441**	40
10W	warm white	47/24	800	2700	105	63	**99LED442**	40

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERG A++ A+ A B C D E — A+ — 10 kWh/1000h



LED CANDLE C35 FILAMENT

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
2W	warm white	120/2	200	2700	mat	100	35	**99LED706**	100
2W	warm white	120/2	200	2700	clear	100	35	**99LED713**	100
4W	warm white	120/4	400	2700	mat	100	35	**99LED662**	100
4W	warm white	120/4	400	2700	clear	100	35	**99LED714**	100

~230V | 50/60 Hz | COB BRACKET | E14 | 360° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERG A++ A+ A B C D E — A+ — 2 / 4 kWh/1000h



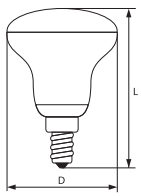
LED FLAME FC35 FILAMENT

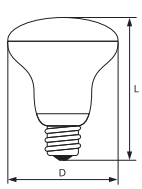
Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
2W	warm white	120/2	200	2700	mat	120	35	**99LED707**	100
2W	warm white	120/2	200	2700	clear	120	35	**99LED715**	100
4W	warm white	120/4	400	2700	mat	120	35	**99LED663**	100
4W	warm white	120/4	400	2700	clear	120	35	**99LED716**	100

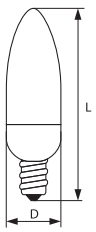
~230V | 50/60 Hz | COB BRACKET | E14 | 360° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

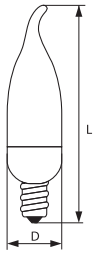
3 YEAR WARRANTY

ENERG A++ A+ A B C D E — A+ — 2 / 4 kWh/1000h











LED GLOBE G45 FILAMENT

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
2W	warm white	120/2	200	2700	mat	76	45	**99LED708**	100
2W	warm white	120/2	200	2700	clear	76	45	**99LED717**	100
4W	warm white	120/4	400	2700	mat	76	45	**99LED664**	100
4W	warm white	120/4	400	2700	clear	76	45	**99LED718**	100

~230V | 50/60 Hz | COB BRACKET | E14 | 360° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A++ A+ A B C D E — A+ — 2 / 4 kWh/1000h



LED GLOBE G45 FILAMENT

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
2W	warm white	120/2	200	2700	mat	72	45	**99LED709**	100
2W	warm white	120/2	200	2700	clear	72	45	**99LED719**	100
4W	warm white	120/4	400	2700	mat	72	45	**99LED665**	100
4W	warm white	120/4	400	2700	clear	72	45	**99LED720**	100

~230V | 50/60 Hz | COB BRACKET | E27 | 360° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A++ A+ A B C D E — A+ — 2 / 4 kWh/1000h



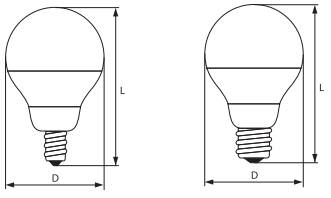
LED A60 FILAMENT

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Colour body	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
4W	warm white	120/4	400	2700	mat	104	60	**99LED660**	100
4W	warm white	120/4	400	2700	clear	104	60	**99LED710**	100
6W	warm white	120/6	600	2700	mat	104	60	**99LED661**	100
6W	warm white	120/6	600	2700	clear	104	60	**99LED711**	100
8W	warm white	120/8	800	2700	mat	104	60	**99LED705**	100
8W	warm white	120/8	800	2700	clear	104	60	**99LED712**	100

~230V | 50/60 Hz | COB BRACKET | E27 | 360° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A++ A+ A B C D E — A+ — 4/6/8 kWh/1000h





LED CANDLE C35

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
4,5W	white	47/14	350	4000	104	35	**99LED590**	100
4,5W	warm white	47/14	350	2700	104	35	**99LED589**	100

~230V | 50/60 Hz | SMD 2835 | E14 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

4.5 kWh/1000h



LED CANDLE C37

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
4.5W	white	47/14	350	4000	97	37	**99LED646**	100
4.5W	warm white	47/14	350	2700	97	37	**99LED647**	100

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

4.5 kWh/1000h



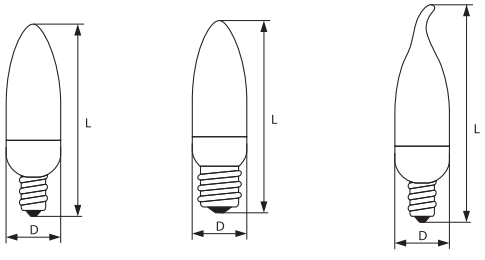
LED FLAME

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
4,5W	white	33/14	350	4000	125	37	**99LED514**	100
4,5W	warm white	33/14	350	2700	125	37	**99LED515**	100

~230V | 50/60 Hz | SMD 2835 | E14 | 120° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

4.5 kWh/1000h



ELMARK lighting



LED GLOBE G45

RoHS COMPLIANT EMC CE

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5W	white	47/13	400	4000	85	45	**99LED648**	100
5W	warm white	47/13	400	2700	85	45	**99LED649**	100

~230V | 50/60 Hz | SMD 2835 | E14 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY LABEL ELMARK A+ 5 kWh/1000h



LED GLOBAL G45

RoHS COMPLIANT EMC CE

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5W	white	47/13	400	4000	89	45	**99LED592**	100
5W	warm white	47/13	400	2700	89	45	**99LED591**	100

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY LABEL ELMARK A+ 5 kWh/1000h



LED PEAR A65

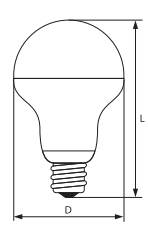
RoHS COMPLIANT EMC CE

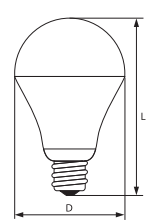
Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
15W	white	60/30	1200	4000	121	65	**99LED579**	40
15W	warm white	60/30	1200	2700	121	65	**99LED580**	40

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY LABEL ELMARK A+ 15 kWh/1000h





LED LAMPS AND COMPONENTS
323
LED Lamps



LED PEAR A55

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
8W	white	47/21	640	4000	102	57	**99LED584**	100
8W	warm white	47/21	640	2700	102	57	**99LED583**	100

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ | 8 kWh/1000h



LED PEAR A60

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
10W	white	47/26	800	4000	110	60	**99LED586**	60
10W	warm white	47/26	800	2700	110	60	**99LED585**	60

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ | 10 kWh/1000h



LED PEAR A67

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
12W	white	60/24	1000	4000	127	67	**99LED588**	60
12W	warm white	60/24	1000	2700	127	67	**99LED587**	60

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ | 12 kWh/1000h



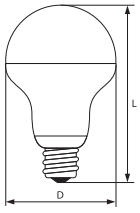
LED PEAR A67 DIMMABLE

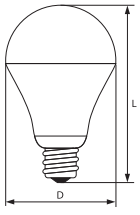
Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
12W	white	60/24	960	4000	127	67	**99LED582**	60
12W	warm white	60/24	960	2700	127	67	**99LED581**	60

~230V | 50/60 Hz | SMD 2835 | E27 | 180° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ | 12 kWh/1000h





ELMARK lighting



LED GLOBE G95

RoHS COMPLIANT | EMC | CE

ENERGY LABEL ENERGIA ENERGIA ELMARK A+ 15/20 kWh/1000h

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
15W	white	60/36	1200	4000	130	95	**99LED694**	50
15W	warm white	60/36	1200	2700	130	95	**99LED695**	50
20W	white	60/45	1600	4000	130	95	**99LED696**	50
20W	warm white	60/45	1600	2700	130	95	**99LED697**	50

~230V | 50/60 Hz | SMD 2835 | E27 | 240° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY



LED GLOBE G120

RoHS COMPLIANT | EMC | CE

ENERGY LABEL ENERGIA ENERGIA ELMARK A+ 15 kWh/1000h

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
15W	white	60/36	1200	4000	150	120	**99LED698**	50
15W	warm white	60/36	1200	2700	150	120	**99LED699**	50

~230V | 50/60 Hz | SMD 2835 | E27 | 240° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY



LEDCOB MR16

RoHS COMPLIANT | EMC | CE

ENERGY LABEL ENERGIA ENERGIA ELMARK A+ 5.5 kWh/1000h

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5W	white	500/1	400	4000	65	48	**99LED572**	100
5W	warm white	480/1	400	2700	65	48	**99LED573**	100

12V AC/DC | COB | GU5.3 | 60° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY



LEDCOB GU10

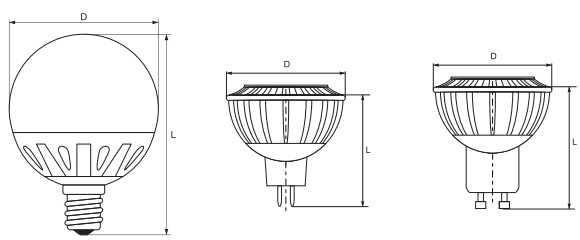
RoHS COMPLIANT | EMC | CE

ENERGY LABEL ENERGIA ENERGIA ELMARK A+ 5 kWh/1000h

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5W	white	500/1	400	4000	72	48	**99LED574**	100
5W	warm white	480/1	400	2700	72	48	**99LED575**	100

~230V | 50/60 Hz | COB | GU10 | 60° | Ra≥80 | >20000 | INSTANT 100% | 30000h | Hg

3 YEAR WARRANTY



LEDCOB MR16



Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
7W	white	700/1	560	4000	50	50	**99LED650**	100
7W	warm white	700/1	560	2700	50	50	**99LED651**	100

12V AC/DC · COB · GU5.3 · 40° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 7,7 kWh/1000h

LEDCOB GU10



Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
7W	white	700/1	560	4000	52	50	**99LED652**	100
7W	warm white	700/1	560	2700	52	50	**99LED653**	100

~230V · 50/60 Hz · COB · GU10 · 40° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 7 kWh/1000h

LEDCOB PAR16



Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
7W	white	700/1	560	4000	75	50	**99LED654**	100
7W	warm white	700/1	560	2700	75	50	**99LED655**	100

~230V · 50/60 Hz · COB · E14 · 40° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 7 kWh/1000h

LEDCOB PAR16

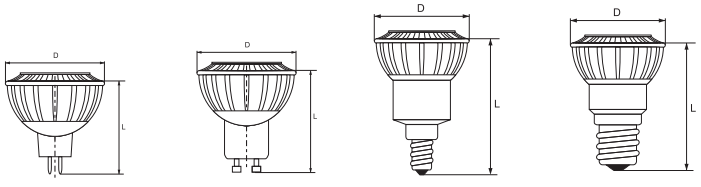


Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
7W	white	700/1	560	4000	75	50	**99LED656**	100
7W	warm white	700/1	560	2700	75	50	**99LED657**	100

~230V · 50/60 Hz · COB · E27 · 40° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 7 kWh/1000h





LED7 HIGH POWER MR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
6W	white	110/7	480	4000	54	50	**99LED520**	100
6W	warm white	110/7	480	2700	54	50	**99LED521**	100

12V AC · High power · GU5.3 · 36° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 6.6 kWh/1000h



LED7 HIGH POWER GU10

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
6W	white	110/7	480	4000	57	50	**99LED522**	100
6W	warm white	110/7	480	2700	57	50	**99LED523**	100

~230V · 50/60 Hz · High power · GU10 · 36° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 6 kWh/1000h



LED7 HIGH POWER PAR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
6W	white	110/7	480	4000	74	50	**99LED524**	100
6W	warm white	110/7	480	2700	74	50	**99LED525**	100

~230V · 50/60 Hz · High power · E14 · 36° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 6 kWh/1000h



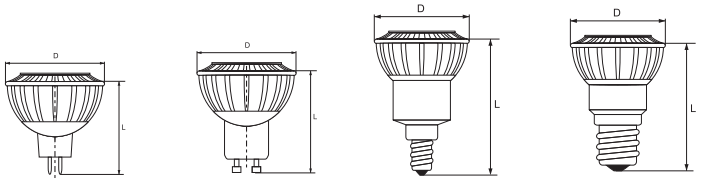
LED7 HIGH POWER PAR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
6W	white	110/7	480	4000	64	50	**99LED526**	100
6W	warm white	110/7	480	2700	64	50	**99LED527**	100

~230V · 50/60 Hz · High power · E27 · 36° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 6 kWh/1000h





LEDSMD MR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5,5W	white	33/19	400	4000	52	50	**99LED417**	100
5,5W	warm white	33/19	400	2700	52	50	**99LED418**	100

12V AC/DC · SMD 2835 · GU5.3 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 6.05 kWh/1000h



LEDSMD GU10

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5,5W	white	33/19	400	4000	55	50	**99LED415**	100
5,5W	warm white	33/19	400	2700	55	50	**99LED416**	100

~230V · 50/60 Hz · SMD 2835 · GU10 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 5.5 kWh/1000h



LEDSMD PAR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5,5W	white	33/19	400	4000	75	50	**99LED419**	100
5,5W	warm white	33/19	400	2700	75	50	**99LED420**	100

~230V · 50/60 Hz · SMD 2835 · E14 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 5.5 kWh/1000h



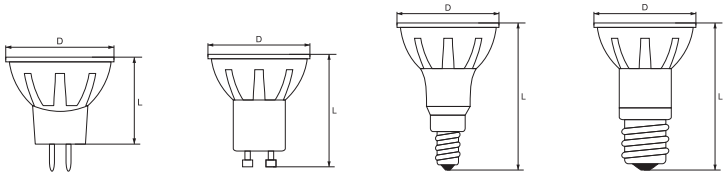
LEDSMD PAR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
5,5W	white	33/19	400	4000	75	50	**99LED421**	100
5,5W	warm white	33/19	400	2700	75	50	**99LED422**	100

~230V · 50/60 Hz · SMD 2835 · E27 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 5.5 kWh/1000h





LEDSMD MR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
3W	white	33/12	240	4000	48	50	**99LED601**	100
3W	warm white	33/12	240	2700	48	50	**99LED600**	100

12V AC · SMD 2835 · GU5.3 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERG Y IJA IE IA · ELMARK · A++ A+ A B C D E · A+ · 3.3 kWh/1000h



LEDSMD GU10

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
3W	white	33/12	240	4000	56	50	**99LED596**	100
3W	warm white	33/12	240	2700	56	50	**99LED595**	100

~230V · 50/60 Hz · SMD 2835 · GU10 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERG Y IJA IE IA · ELMARK · A++ A+ A B C D E · A+ · 3 kWh/1000h



LEDSMD PAR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
3W	white	33/12	240	4000	75	50	**99LED606**	100
3W	warm white	33/12	240	2700	75	50	**99LED605**	100

~230V · 50/60 Hz · SMD 2835 · E14 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERG Y IJA IE IA · ELMARK · A++ A+ A B C D E · A+ · 3 kWh/1000h



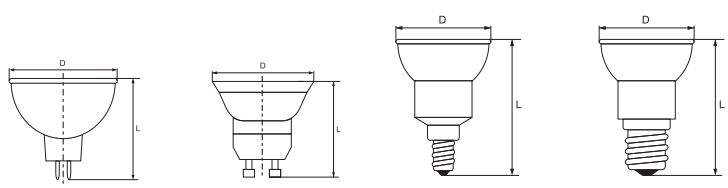
LEDSMD PAR16

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
3W	white	33/12	240	4000	75	50	**99LED608**	100
3W	warm white	33/12	240	2700	75	50	**99LED607**	100

~230V · 50/60 Hz · SMD 2835 · E27 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERG Y IJA IE IA · ELMARK · A++ A+ A B C D E · A+ · 3 kWh/1000h





LEDSMD MR16

Watt	LED (pcs)	Colour	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
3W	12	red	48	50	**99LED602**	100
3W	12	green	48	50	**99LED604**	100
3W	12	blue	48	50	**99LED603**	100

12V AC/DC · SMD 2835 · GU5.3 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 3.3 kWh/1000h



LEDSMD GU10

Watt	LED (pcs)	Colour	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
3W	12	red	56	50	**99LED597**	100
3W	12	green	56	50	**99LED599**	100
3W	12	blue	56	50	**99LED598**	100

~230V · 50/60 Hz · SMD 2835 · GU10 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 3 kWh/1000h



LEDSMD GU10 DIMMABLE

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
6W	white	33/24	480	4000	56	50	**99LED594**	100
6W	warm white	33/24	480	2700	56	50	**99LED593**	100

~230V · 50/60 Hz · SMD 2835 · GU10 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 6 kWh/1000h



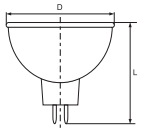
LEDSMD MR11

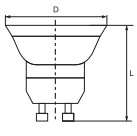
Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
1,5W	white	25/9	120	4000	39	35	**99LED570**	200
1,5W	warm white	25/9	120	2700	39	35	**99LED571**	200

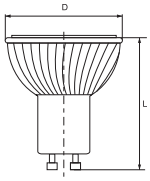
12V AC/DC · SMD 5050 · G4 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

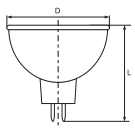
3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 1.65 kWh/1000h











LEDJC

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
1W	white	13/24	80	4000	34	10	**99LED542**	100
1W	warm white	13/24	80	2700	34	10	**99LED543**	100

12V AC/DC · SMD 3014 · G4 · 300° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 1.1 kWh/1000h



LEDJC PLATE

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
2,5W	white	25/12	200	4000	30	38	**99LED368**	100
2,5W	warm white	25/12	200	2700	30	38	**99LED369**	100

12V AC/DC · SMD 5050 · G4 · 120° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 2.75 kWh/1000h



LEDG9

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
2,5W	white	13/64	200	4000	48	15	**99LED510**	100
2,5W	warm white	13/64	200	2700	48	15	**99LED511**	100

~230V · 50/60 Hz · SMD 3014 · G9 · 300° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

ENERGY EFFICIENCY CLASS A+ · 2.5 kWh/1000h



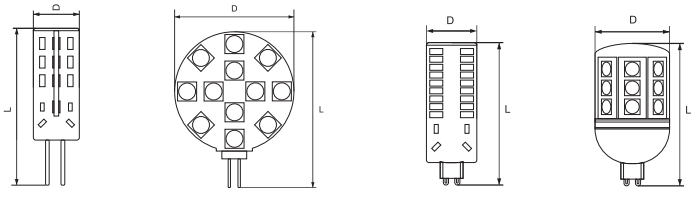
LEDG9 T30

Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
4W	white	25/27	320	4000	69	31	**99LED512**	10
4W	warm white	25/27	320	2700	69	31	**99LED513**	10

~230V · 50/60 Hz · SMD 5050 · G9 · 300° · Ra≥80 · >20000 · INSTANT 100% · 30000h · Hg

3 YEAR WARRANTY

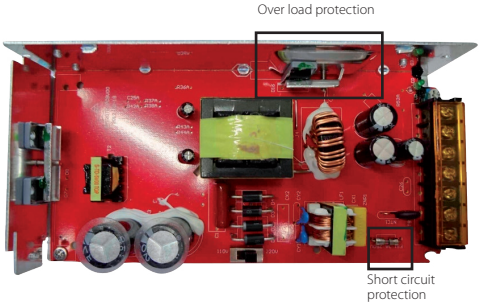
ENERGY EFFICIENCY CLASS A+ · 4 kWh/1000h





LED STRIPS

Drivers features:
· Easy installation
· Low consumption
· Strong compatibility
· Compliance to worldwide safety regulations for lighting
· Certificate: CE, ROHS, EMC, LVD
· Type: constant current (CC/IC)
· Structure: isolated
· International broad voltage AC input
· Protection: short-circuit, overload, overheat
· Natural air cooled
· 100% full-load aged
· Working temperature up to 65°C
· High efficiency, long life span, and high reliability



L3528 LED MODULE



Watt	LEDs (pcs)	LED Type	Colour temp. (K)	Size (mm)			Catalogue number	Packing (pcs)
				Length	Width	Height		
0,36W	3	SMD3528	5500	78	14	7.5	**99LED359**	1

12V DC | Ra>80 | 120° | 30000h | Hg

3 YEAR WARRANTY

L5050 LED MODULE

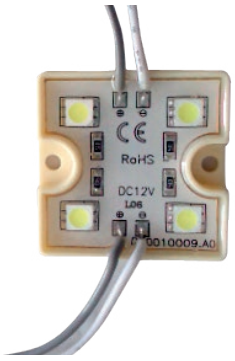


Watt	LEDs (pcs)	LED Type	Colour temp. (K)	Size (mm)			Catalogue number	Packing (pcs)
				Length	Width	Height		
0,72W	3	SMD5050	5500	78	14	7.5	**99LED360**	1

12V DC | Ra>80 | 120° | 30000h | Hg

3 YEAR WARRANTY

S5050 LED MODULE



Watt	LEDs (pcs)	LED Type	Colour temp. (K)	Size (mm)			Catalogue number	Packing (pcs)
				Length	Width	Height		
1,5W	4	SMD5050	5500	36	36	6	**99LED361**	1

12V DC | Ra>80 | 120° | 30000h | Hg

3 YEAR WARRANTY

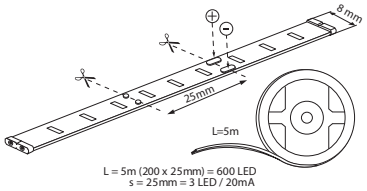


LED 600 - IP20

A++ A | IP 20 | RoHS COMPLIANT | III | F | CE

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-3528-120-WW	120pcs/m	9,6W/m	2700-3000	warm white	**99LED666**	1
LED-3528-120-CW	120pcs/m	9,6W/m	6200-6500	cold white	**99LED667**	1

Luminous efficiency: 6-7Lm/LED, 8mm Flex white PCB, with 3M adhere attached, mark cut.



L = 5m (200 x 25mm) = 600 LED
s = 25mm = 3 LED / 20mA



12V DC | SMD 3528 | REEL 5m | 120° | 30000h | Hg

3 YEAR WARRANTY

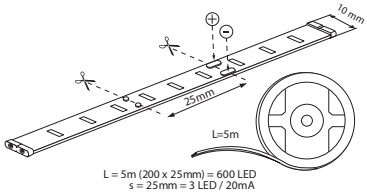


LED 600 - IP65

A++ A | IP 65 | RoHS COMPLIANT | III | F | CE

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-3528-120-WW	120pcs/m	9,6W/m	2700-3000	warm white	**99LED668**	1
LED-3528-120-CW	120pcs/m	9,6W/m	6200-6500	cold white	**99LED669**	1

Luminous efficiency: 6-7Lm/LED, 8mm Flex white PCB, hollow tube waterproof IP65, with 3M adhere attached, mark cut.



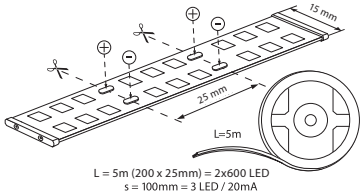
L = 5m (200 x 25mm) = 600 LED
s = 25mm = 3 LED / 20mA



12V DC | SMD 3528 | REEL 5m | 120° | 30000h | Hg

3 YEAR WARRANTY





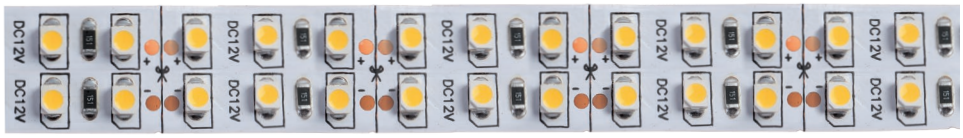
L = 5m (200 x 25mm) = 2x600 LED
s = 100mm = 3 LED / 20mA

LED 1200 - IP20

A++ A | IP 20 | RoHS COMPLIANT | III | F | CE

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-3528-2X120-WW	2X120pcs/m	20W/m	2700-3000	warm white	**99LED684**	1
LED-3528-2X120-CW	2X120pcs/m	20W/m	6200-6500	cold white	**99LED685**	1

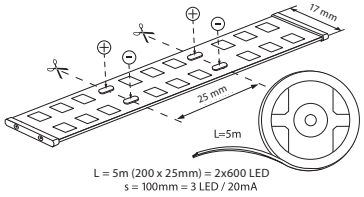
Luminous efficiency: 6-7Lm/LED, 15mm Flex white PCB, with 3M adhere attached, mark cut.



12V DC | SMD 3528 | REEL 5m | 120° | 30000h | Hg

3 YEAR WARRANTY





L = 5m (200 x 25mm) = 2x600 LED
s = 100mm = 3 LED / 20mA

LED 1200 - IP65

A++ A | IP 65 | RoHS COMPLIANT | III | F | CE

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-3528-2X120-WW	2X120pcs/m	20W/m	2700-3000	warm white	**99LED686**	1
LED-3528-2X120-CW	2X120pcs/m	20W/m	6200-6500	cold white	**99LED687**	1

Luminous efficiency: 6-7Lm/LED, 17mm Flex white PCB hollow tube waterproof IP65, with 3M adhere attached, mark cut.



12V DC | SMD 3528 | REEL 5m | 120° | 30000h | Hg

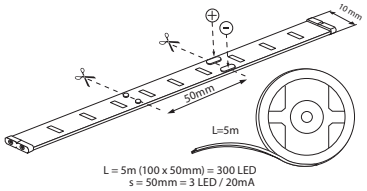
3 YEAR WARRANTY



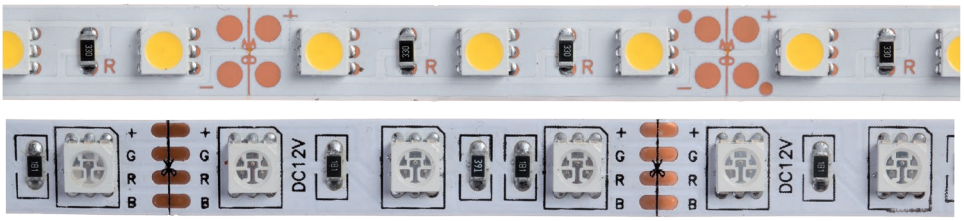
LED 300 - IP20

A++ A | IP 20 | RoHS COMPLIANT | III | F | CE

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-5050-60-WW	60pcs/m	14.4W/m	2700~3000	warm white	**99LED670**	1
LED-5050-60-CW	60pcs/m	14.4W/m	6200~6500	cold white	**99LED671**	1
LED-5050-60-Y	60pcs/m	14.4W/m	587-592	yellow	**99LED672**	1
LED-5050-60-G	60pcs/m	14.4W/m	520-525	green	**99LED673**	1
LED-5050-60-B	60pcs/m	14.4W/m	465-470	blue	**99LED674**	1
LED-5050-60-R	60pcs/m	14.4W/m	620-630	red	**99LED675**	1
LED-5050-60-RGB*	60pcs/m	14.4W/m	-	RGB	**99LED676**	1



Note: *RGB controller suitable for RGB LED strip control could be found on page 342/343
Luminous efficiency: 18-20Lm/LED, 10mm Flex white PCB, with 3M adhere attached, mark cut.



12V DC | SMD 5050 | REEL 5m | 120° | 30000h | Hg

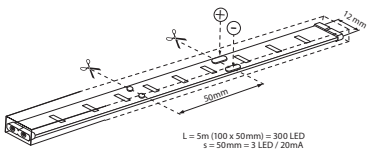
3 YEAR WARRANTY



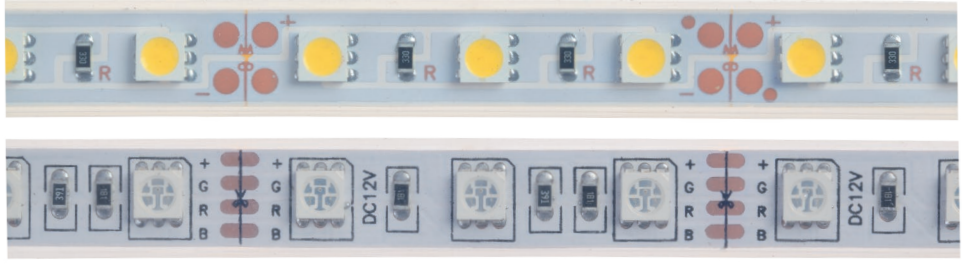
LED 300 - IP65

A++ A | IP 65 | RoHS COMPLIANT | III | F | CE

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-5050-60-WW	60pcs/m	14.4W/m	2700~3000	warm white	**99LED677**	1
LED-5050-60-CW	60pcs/m	14.4W/m	6200~6500	cold white	**99LED678**	1
LED-5050-60-Y	60pcs/m	14.4W/m	587-592	yellow	**99LED679**	1
LED-5050-60-G	60pcs/m	14.4W/m	520-525	green	**99LED680**	1
LED-5050-60-B	60pcs/m	14.4W/m	465-470	blue	**99LED681**	1
LED-5050-60-R	60pcs/m	14.4W/m	620-630	red	**99LED682**	1
LED-5050-60-RGB*	60pcs/m	14.4W/m	-	RGB	**99LED683**	1



Note: *RGB controller suitable for RGB LED strip control could be found on page 342/343.
Luminous efficiency: 18-20Lm/LED, waterproof IP65, with 3M adhere attached, mark cut.

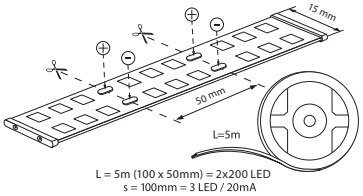


12V DC | SMD 5050 | REEL 5m | 120° | 30000h | Hg

3 YEAR WARRANTY

LED 600 - IP20



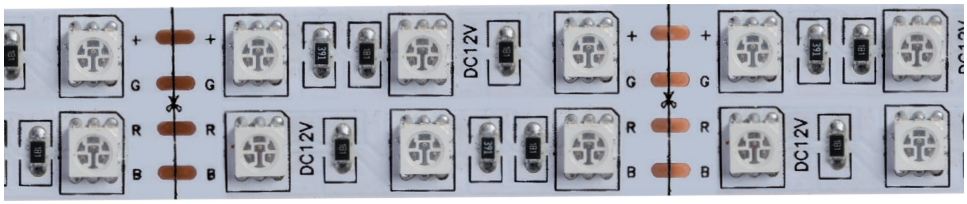


L = 5m (100 x 50mm) = 2x200 LED
s = 100mm = 3 LED / 20mA

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-5050-2X60-WW	2X60pcs/m	29W/m	2700-3000	warm white	**99LED688**	1
LED-5050-2X60-CW	2X60pcs/m	29W/m	6200-6500	cold white	**99LED689**	1
LED-5050-2X60-RGB	2X60pcs/m	29W/m	-	RGB	**99LED690**	1

Note: *RGB controller suitable for RGB LED strip control could be found on page 342/343
Luminous efficiency: 18-20Lm/LED, 15mm Flex white PCB, with 3M adhere attached, mark cut.



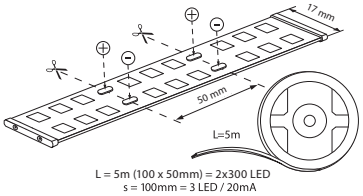


12V DC | SMD 5050 | REEL 5m | 120° | 30000h | Hg

3 YEAR WARRANTY

LED 600 - IP65



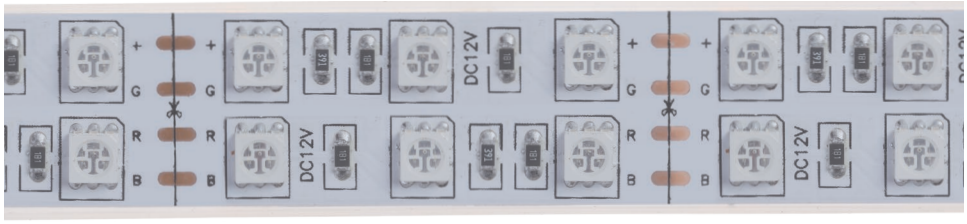


L = 5m (100 x 50mm) = 2x300 LED
s = 100mm = 3 LED / 20mA

Model	LEDs (pcs/m)	Watts / meter	Colour temp. (K)	Colour	Catalogue number	Packing (reel)
LED-5050-2X60-WW	2X60pcs/m	29W/m	2700-3000	warm white	**99LED691**	1
LED-5050-2X60-CW	2X60pcs/m	29W/m	6200-6500	cold white	**99LED692**	1
LED-5050-2X60-RGB	2X60pcs/m	29W/m	-	RGB	**99LED693**	1

Note: *RGB controller suitable for RGB LED strip control could be found on page 342/343
Luminous efficiency: 18-20Lm/LED, 17mm Flex white PCB hollow tube waterproof IP65, with 3M adhere attached, mark cut.





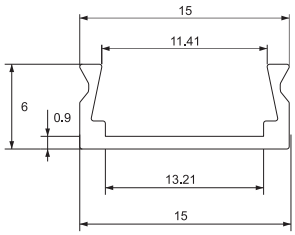
12V DC | SMD 5050 | REEL 5m | 120° | 30000h | Hg

3 YEAR WARRANTY



ELM718/1

	Model		Catalogue number	Packing (pcs)
1.	ELM718/1-1000	Aluminium profile for LED strip with matt PVC cover-1m	**99ACC07**	100
2.	ELM718/1-2000	Aluminium profile for LED strip with matt PVC cover-2m	**99ACC08**	100
3.	ELM718/1-end cap	PVC end cap	**99ACC09**	50
4.	ELM718/1-connector	Fixing bracket	**99ACC10**	50



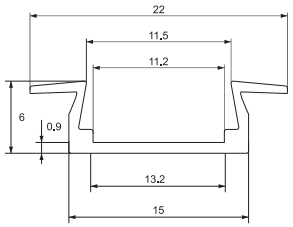
Surface mounted





ELM718/2

	Model		Catalogue number	Packing (pcs)
1.	ELM718/2-1000	Aluminium profile for LED strip with matt PVC cover-1m	**99ACC11**	80
2.	ELM718/2-2000	Aluminium profile for LED strip with matt PVC cover-2m	**99ACC12**	80
3.	ELM718/2-end cap	PVC end cap	**99ACC13**	50



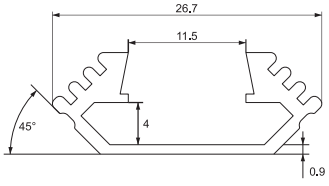
Recessed mounted





ELM9012

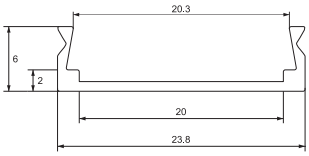
	Model		Catalogue number	Packing (pcs)
1.	ELM9012/2-1000	Aluminium profile for LED strip with matt PVC cover-1m	**99ACC14**	60
2.	ELM9012/2-2000	Aluminium profile for LED strip with matt PVC cover-2m	**99ACC15**	60
3.	ELM9012/2-end cap	PVC end cap	**99ACC16**	50
4.	ELM9012/1-connector	Fixing bracket	**99ACC17**	50



Surface mounted







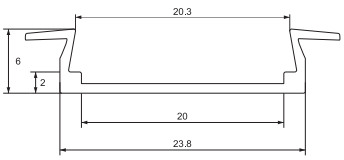
ELM6220/1

	Model		Catalogue number	Packing (pcs)
1.	ELM6220/1-1000	Aluminium profile for LED strip with matt PVC cover-1m	**99ACC23**	1
2.	ELM6220/1-end cap	PVC end cap	**99ACC24**	1
3.	ELM6220/1-connector	Fixing bracket	**99ACC25**	1

Surface mounted





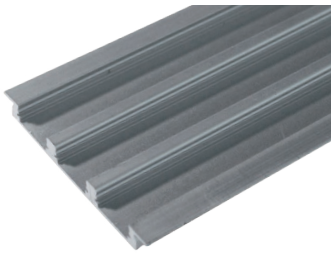


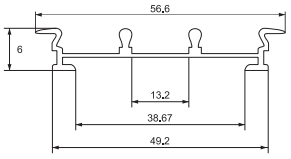
ELM6220/2

	Model		Catalogue number	Packing (pcs)
4.	ELM6220/2-1000	Aluminium profile for LED strip with matt PVC cover-1m	**99ACC26**	1
5.	ELM6220/2-end cap		**99ACC27**	1

Recessed mounted







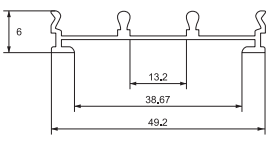
ELM950/1

	Model		Catalogue number	Packing (pcs)
1.	ELM950/1-1000	Aluminium profile for LED strip with matt PVC cover-1m	**99ACC28**	1
2.	ELM950/1-end cap	PVC end cap	**99ACC29**	1
3.	ELM950/1-connector	Fixing bracket	**99ACC30**	1

Surface mounted







ELM950/2

	Model		Catalogue number	Packing (pcs)
4.	ELM950/2-1000	Aluminium profile for LED strip with matt PVC cover-1m	**99ACC31**	1
5.	ELM950/2-end cap	PVC end cap	**99ACC32**	1

Recessed mounted



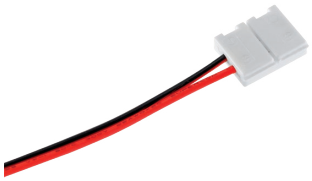
ACCESSORIES FOR LED STRIP



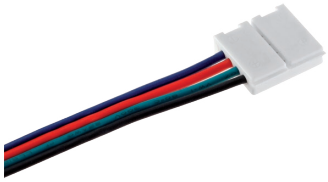
1. ACC01 Silicone clips for LED strip.
Catalogue number: **99ACC01**
Packing (pcs): 50



2. ACC02 One colour LED strip connector,150mm cable
Catalogue number: **99ACC02**
Packing (pcs): 50



3. ACC03 One colour LED strip connector,150mm cable
Catalogue number: **99ACC03**
Packing (pcs): 50



ACC04 RGB LED strip connector,150mm cable
Catalogue number: **99ACC04**
Packing (pcs): 50



5. ACC05 One colour LED strip connector
Catalogue number: **99ACC05**
Packing (pcs): 50



6. ACC06 RGB LED strip connector
Catalogue number: **99ACC06**
Packing (pcs): 50



7. Female connector with cable 15cm
Colour: white
Catalogue number: **99ACC19**
Packing (pcs): 100



8. 4pin connector with cable 20cm
Colour: white
Catalogue number: **99ACC20**
Packing (pcs): 100



9. FRONT CAPS for LED strip SMD3528 IP65
Catalogue number: **99LED450**
Packing (pcs): 500

10. END CAPS for LED strip SMD3528 IP65
Catalogue number: **99LED451**
Packing (pcs): 500



11. FRONT CAPS for LED strip SMD5050 IP65
Catalogue number: **99LED452**
Packing (pcs): 500

12. END CAPS for LED strip SMD5050 IP65
Catalogue number: **99LED453**
Packing (pcs): 500



13. FRONT CAPS for RGB LED strip SMD5050 IP65
Catalogue number: **99LED454**
Packing (pcs): 500

14. END CAPS for RGB LED strip SMD5050 IP65
Catalogue number: **99LED455**
Packing (pcs): 500



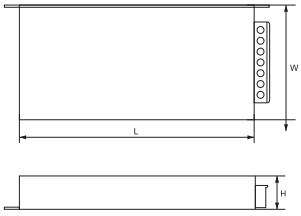
SETDC CONSTANT VOLTAGE DRIVERS FOR LED

IP 20 | RoHS COMPLIANT | EMC | CE

Model	Watt	Voltage Uin / Uout	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
SETDC12PVC	12W	230V AC / 12V DC	90	48	34	**99SETDC12PVC**	25
SETDC24PVC	24W	230V AC / 12V DC	115	48	34	**99SETDC24PVC**	25

3 YEAR WARRANTY





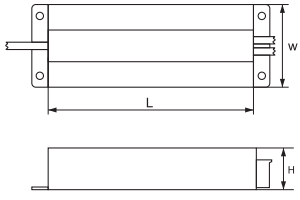
SETDC CONSTANT VOLTAGE DRIVERS FOR LED

IP 20 | RoHS COMPLIANT | EMC | CE

Model	Watt	Voltage Uin / Uout	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
SETDC15	15W	230VAC/12VDC	70	39	31	**99SETDC15IP20**	100
SETDC30	30W	230VAC/12VDC	85	58	38	**99SETDC30IP20**	100
SETDC36	36W	230VAC/12VDC	85	58	38	**99SETDC36IP20**	100
SETDC60	60W	230VAC/12VDC	110	78	38	**99SETDC60IP20**	50
SEDC100	100W	230VAC/12VDC	159	98	38	**99SETDC100IP20**	20
SETDC150	150W	230VAC/12VDC	199	98	38	**99SETDC150IP20**	20
SETDC250	250W	230VAC/12VDC	200	110	50	**99SETDC250IP20**	20
SETDC360	360W	230VAC/12VDC	200	110	50	**99SETDC360IP20**	20

3 YEAR WARRANTY





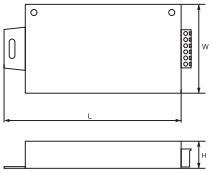
SETDC CONSTANT VOLTAGE DRIVERS FOR LED

IP 67 | RoHS COMPLIANT | EMC | CE

Model	Watt	Voltage Uin / Uout	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
SETDC30I	30W	230VAC/12VDC	200	30	20	**99SETDC30IP67**	50
SETDC60I	60W	230VAC/12VDC	178	68	34	**99SETDC60IP67**	20
SETDC100I	100W	230VAC/12VDC	250	72	45	**99SETDC100IP67**	20
SETDC150I	150W	230VAC/12VDC	250	128	60	**99SETDC150IP67**	20
SETDC200I	200W	230VAC/12VDC	200	120	53	**99SETDC200IP67**	20

3 YEAR WARRANTY





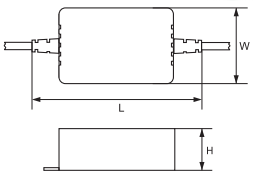
4 KEY RF CONTROLLER FOR RGB STRIP

IP 20 RoHS COMPLIANT EMC CE

Model	Current (A)	Voltage	Length	Width	Height	Catalogue number	Packing (pcs)
RGB controller 4 dynamic modes with regulation	12	12VDC	128	64	25	**99RGBCONTROL**	1

3 YEAR WARRANTY





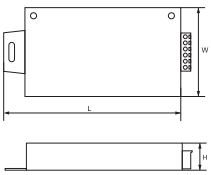
TOUCH SCREEN RF CONTROLLER FOR RGB STRIP

IP 20 RoHS COMPLIANT EMC CE

Model	Current (A)	Voltage	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
Plastic controller and touch screen (The remote can change to white colour).	18	12V	130	75	25	**99RGBCR4**	1

3 YEAR WARRANTY





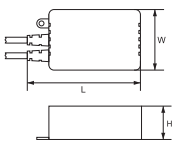
24 KEY IR CONTROLLER FOR RGB STRIP

IP 20 RoHS COMPLIANT EMC CE

Model	Current (A)	Voltage	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
RGB controller 16 stationar colour and 4 dynamic modes with regulation	12	12VDC	128	64	25	**99RGBCR3**	1

3 YEAR WARRANTY





24 KEY IR CONTROLLER FOR RGB STRIP

IP 20 RoHS COMPLIANT EMC CE

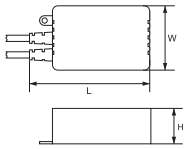
Model	Current (A)	Voltage	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
RGB controller 16 stationar colour and 4 dynamic modes with regulation.	6	12VDC	60	35	25	**99RGBCONTROL1**	1

3 YEAR WARRANTY

44 KEY IR CONTROLLER FOR RGB STRIP

IP 20 RoHS EMC CE



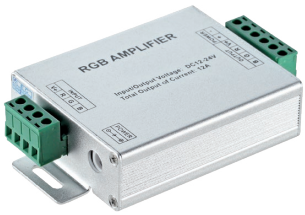


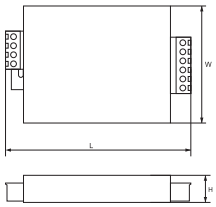
Model	Current (A)	Voltage	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
RGB controller 20 stationar colour and 6 dynamic modes with regulation and RGB mixer mode.	6	12VDC	60	35	25	**99RGBCONTROL2**	1

3 YEAR WARRANTY

RGB AMPLIFIER

IP 20 RoHS EMC CE





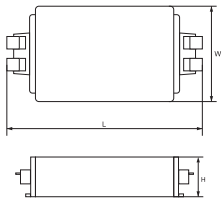
Model	Current (A)	Voltage	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
RGB AMPLIFIER	12	12VDC	107	65	25	**99RGBAMPLIFIER**	1

3 YEAR WARRANTY

LED SINGLE RF COLOUR DIMMER

IP 20 RoHS EMC CE



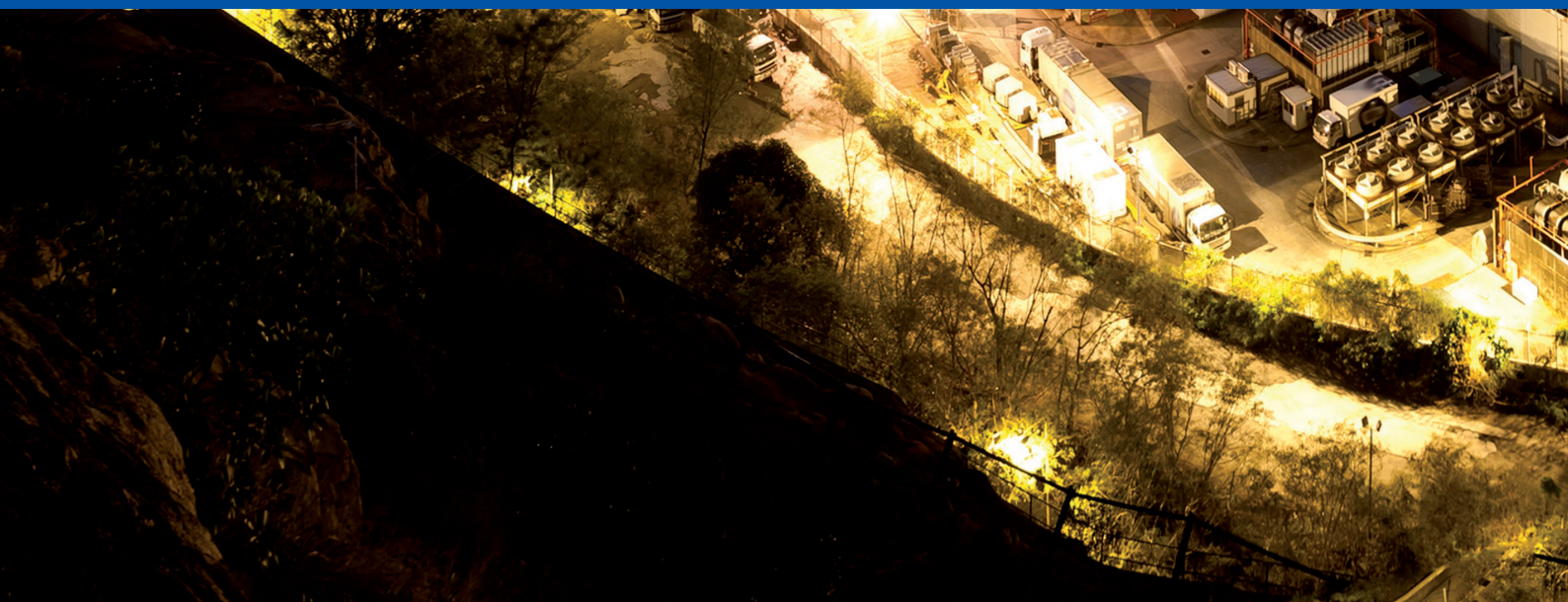


Model	Current (A)	Voltage	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
LED single colour dimmer - DC12V/8A	8	12VDC	107	58	35	**99LEDDIMMER**	1

3 YEAR WARRANTY



INDUSTRIAL LIGHTING





ELMARK lighting

Road fixtures | 347

Floodlights | 352

High bay fixtures | 356

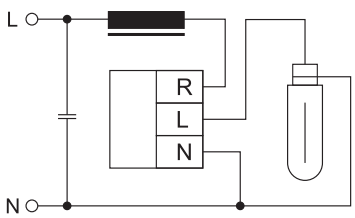




INDUSTRIAL LIGHT

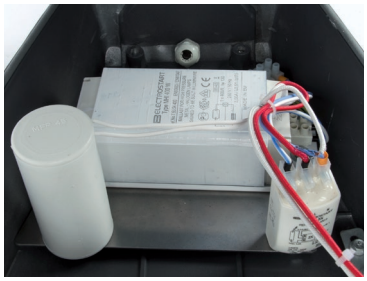
Description of the control gear for metal-halide lamps and high pressure sodium lamps:

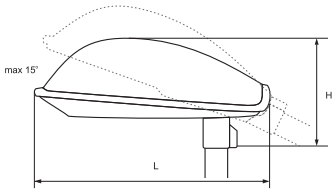
1. Suitable ballast
2. Ignitor
3. Capacitor

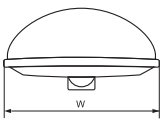




NOVA max







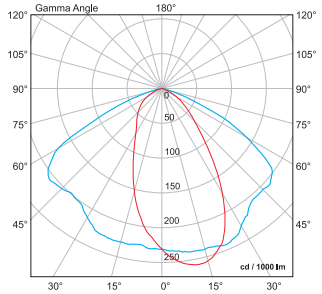
NOVA max

Watt	Current (A)	Lamp	Colour body	Size (mm) Length	Width	Height	Control gear	Catalogue number	Packing (pcs)
100W	1,20	HPSL	dark grey	680	320	220	magnetic	**98NVL100**	1
150W	1,80	HPSL	dark grey	680	320	220	magnetic	**98NVL150**	1
250W	3,00	HPSL	dark grey	680	320	220	magnetic	**98NVL250**	1
400W	4,45	HPSL	dark grey	680	320	220	magnetic	**98NVL400**	1
250W	3,00	MHL	dark grey	680	320	220	magnetic	**98NVLM250**	1
400W	3,50	MHL	dark grey	680	320	220	magnetic	**98NVLM400**	1
			dark grey	680	320	220	empty fixture	**89134**	1

Body: aluminium casting | **Diffuser:** toughened glass | **Control gear:** mounted in the body
Ambient Temperature: -20°C ÷ +65°C | **Diameter of the pole:** 60 mm | **Applicable mounting height:** 8-12 m
With adjustable tube allowing regulation of the mounting direction.

~230V | 50/60 Hz | E40 | 2,5mm² | 5 YEAR WARRANTY

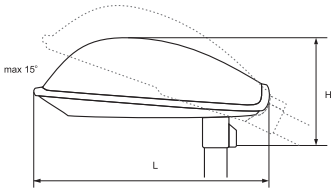
NOVA max

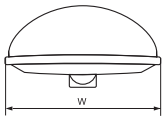




NOVA medium







NOVA medium

A++ C | IP 66 | RoHS COMPLIANT | F | CE

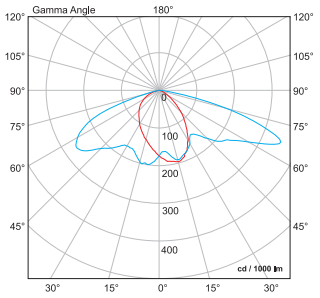
Watt	Current (A)	Lamp	Colour body	Size (mm) Length	Width	Height	Control gear	Catalogue number	Packing (pcs)
100W	1,20	HPSL	dark grey	580	270	165	magnetic	**98NVM100**	1
150W	1,80	HPSL	dark grey	580	270	165	magnetic	**98NVM150**	1
250W	3,00	HPSL	dark grey	580	270	165	magnetic	**98NVM250**	1
250W	3,00	MHL	dark grey	580	270	165	magnetic	**98NVMM250**	1
			dark grey	580	270	165	empty fixture	**89133**	1

Body: aluminium casting | **Diffuser:** toughened glass | **Control gear:** mounted in the body |
Ambient Temperature: -20°C ÷ +65°C | **Diameter of the pole:** 60 mm | **Applicable mounting height:** 6 m
With adjustable tube allowing regulation of the mounting direction.

~230V | 50/60 Hz | E40 | 2,5mm² | IP 66

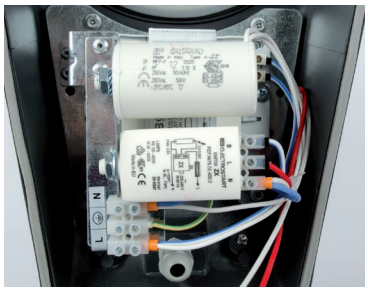
5 YEAR WARRANTY

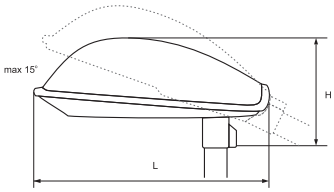
NOVA MEDIUM

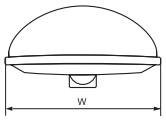




NOVA mini







NOVA mini

Watt	Current (A)	Lamp	Colour body	Size (mm) Length	Width	Height	Control gear	Catalogue number	Packing (pcs)
70W	1.00	HPSL	grey	500	240	150	magnetic	**98NVS70**	1
			grey	500	240	150	empty fixture	**89132**	1

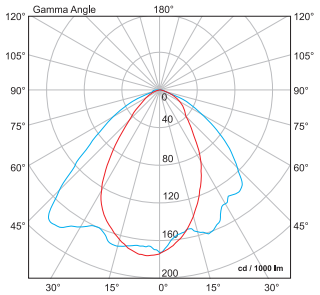
Body: aluminium casting | **Diffuser:** toughened glass | **Control gear:** mounted in the body |
Ambient Temperature: -20°C ÷ +65°C | **Diameter of the pole:** 50 mm | **Applicable mounting height:** 4 m

With adjustable tube allowing regulation of the mounting direction.

~230V | 50/60 Hz | E27 | 2,5mm² | IP

5 YEAR WARRANTY

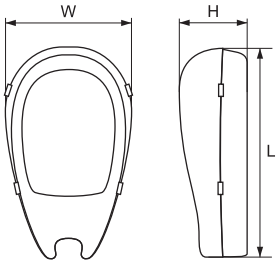
NOVA mini 70W





NIGHT





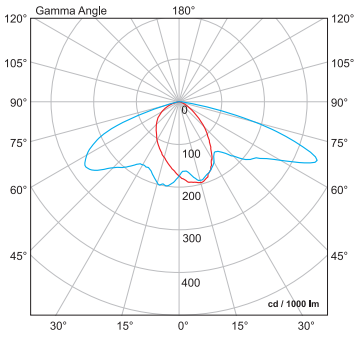
NIGHT

Watt	Colour body	Current (A)	Lamp	Size (mm) Length	Width	Height	Control gear	Catalogue number	Packing (pcs)
100W	grey	1,20	HPSL	688	300	180	magnetic	**98NIG100**	1
150W	grey	1,80	HPSL	688	300	180	magnetic	**98NIG150**	1
250W	grey	3,00	HPSL	688	300	180	magnetic	**98NIG250**	1
	grey			688	300	180	empty fixture	**89131**	1

Body: aluminium casting | **Diffuser:** tempered glass | **Control gear:** mounted in the body
Ambient Temperature: -20°C ÷ +65°C | **Diameter of the pole:** 50 mm | **Applicable mounting height:** 6 m

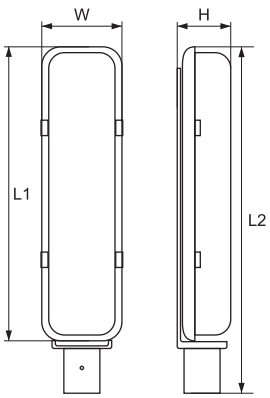
~230V | 50/60 Hz | E40 | 2,5mm² | 5 YEAR WARRANTY

NIGHT





VARNA



VARNA

Watt	Lamp	Size (mm)				Control gear	Catalogue number	Packing (pcs)
		Length 1	Length 2	Width	Height			
1X36W	PL-L	660	780	105	100	electronic	**98VARNA130**	4
2X36W	PL-L	660	780	105	160	electronic	**98VARNA131**	4
1X55W	PL-L	660	780	105	100	electronic	**98VARNA132**	4
2X55W	PL-L	660	780	105	160	electronic	**98VARNA133**	4

Body: polycarbonate PC | **Diffuser:** polycarbonate PC | **Reflector:** steel white | **Control gear:** fixed inside the body
Clips: polycarbonate | **Ambient Temperature:** -20°C ÷ +65°C | **Diameter of the pole:** 60 mm |
Applicable mounting height: 6 m

~230V | 50/60 Hz | PLL | 2G11 | 2,5mm² | 5 YEAR WARRANTY

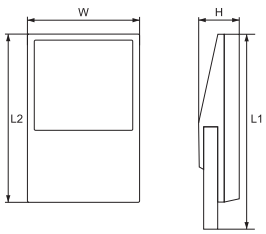


STREET POLE JOINT
Diam.: 45mm
Colour body: grey
Size (mm): Diameter 45 / Width 150 / Height 250
Catalogue number: **98POLE45**
Packing (pcs): 1

STREET POLE JOINT
Diam.: 60mm
Colour body: grey
Size (mm): Diameter 60 / Width 150 / Height 250
Catalogue number: **98POLE60**
Packing (pcs): 1







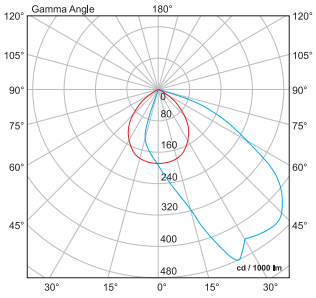
ATLAS 45

Watt	Lamp	Colour	Size (mm) Length 1	Length 2	Width	Height	Current (A)	Control gear	Catalogue number	Packing (pcs)
70W	MHL	black	435	350	232	85	1.00	magnetic	**98AT45102**	4
150W	MHL	black	435	350	232	85	1,80	magnetic	**98AT45104**	4
70W	Rx7s	black	435	350	232	85	-	empty fixture	**98ATLAS45/BL1**	4
150W	Rx7s	black	435	350	232	85	-	empty fixture	**98ATLAS45/BL2**	4

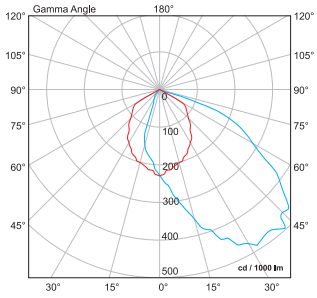
Body: aluminium | **Diffuser:** tempered glass | **Control gear:** mounted in the body
Ambient Temperature: -20°C ÷ +65°C

~230V | 50/60 Hz | MH-7 | Rx7s | 2,5mm² | 5 YEAR WARRANTY

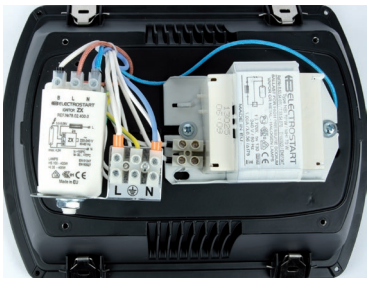
ATLAS 45 / 70W

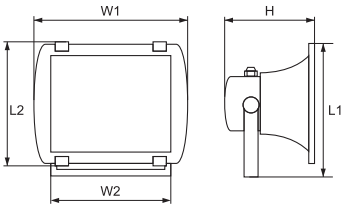


ATLAS 45 / 150W









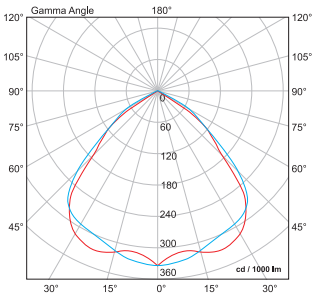
ATLASsim

Watt	Lamp	Colour	Size (mm) L1	L2	W1	W2	H	Current (A)	Control gear	Catalogue number	Packing (pcs)
70W	MHL	black	232	210	280	220	170	1.00	magnetic	**98ATSIM105**	6
150W	MHL	black	232	210	280	220	170	1,80	magnetic	**98ATSIM106**	6
70W	Rx7s	black	232	210	280	220	170		empty fixture	**98ATLASSIM/1**	6
150W	Rx7s	black	232	210	280	220	170		empty fixture	**98ATLASSIM/2**	6

Body: aluminium | **Diffuser:** tempered glass | **Control gear:** mounted in the body
Ambient Temperature: -20°C ÷ +65°C

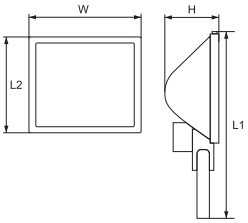
~230V | 50/60 Hz | MH-7 | Rx7s | 2,5mm² | 5 YEAR WARRANTY

ATLAS sim / 70W









ATLAS 105

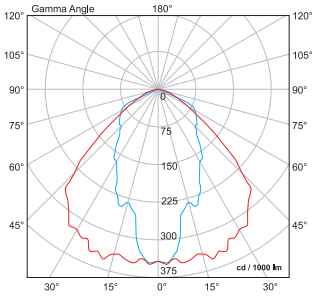
Watt	Lamp	Lamp holder	Colour	Size (mm) Length 1	Length 2	Width	Height	Current (A)	Control gear	Catalogue number	Packing (pcs)
250W	MHL	E40	black	505	290	410	142	3,00	magnetic	**98AT105109**	1
400W	MHL	E40	black	505	290	410	142	3,50	magnetic	**98AT105110**	1
-	-	E40	black	505	290	410	142	-	empty fixture	**98ATLAS105**	1

Body: aluminium | **Diffuser:** tempered glass | **Control gear:** mounted in the body
Ambient Temperature: -20°C ÷ +65°C

~230V | 50/60 Hz | MH-40 | E40 | 2,5mm²

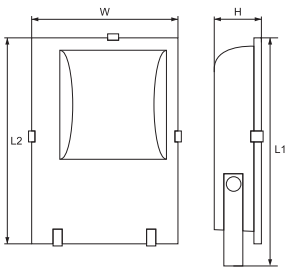
5 YEAR WARRANTY

ATLAS 105 / 400W









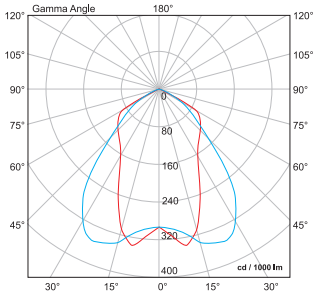
ATLAS 505

Watt	Lamp	Lamp holder	Colour	Size (mm) Length 1	Length 2	Width	Height	Current (A)	Control gear	Catalogue number	Packing (pcs)
250W	MHL	E40	black	420	350	330	120	3,00	magnetic	**98AT505111**	1
400W	MHL	E40	black	510	460	420	150	3,50	magnetic	**98AT505112**	1
400W	-	E40	black	510	460	420	150	-	empty fixture	**98ATLAS505A**	1

Body: aluminium | **Diffuser:** tempered glass | **Control gear:** mounted in the body
Ambient Temperature: -20°C ÷ +65°C

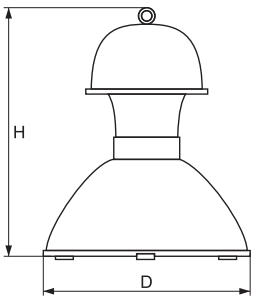
~230V | 50/60 Hz | MH-40 | E40 | 2,5mm² | 5 YEAR WARRANTY

ATLAS 505 / 250W









AVIOR 22

A++ C | IP 65 | RoHS COMPLIANT | CE

Watt	Lamp	Lamp holder	Current (A)	Size (mm) Height	Size (mm) Diameter	Control gear	Catalogue number	Packing (pcs)
100W	HPSL	E40	1,20	650	570	magnetic	**98AV22023**	1
150W	HPSL	E40	1,80	650	570	magnetic	**98AV22024**	1
250W	HPSL	E40	3,00	650	570	magnetic	**98AV22025**	1
400W	HPSL	E40	4,45	650	570	magnetic	**98AV22026**	1
250W	MHL	E40	3,00	650	570	magnetic	**98AV22027**	1
400W	MHL	E40	3,50	650	570	magnetic	**98AV22028**	1
-	-	E40	-	650	570	empty fixture	**98AVIOR22**	1

Reflector: aluminium | **Gear box:** aluminium casting | **Diffuser:** tempered glass cover, heat-resistant silicon rubber seal ring, clips - 4 pcs | **Control gear:** mounted in the gear box | **Ambient Temperature:** -20°C ÷ +65°C

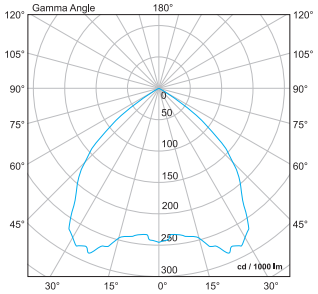
~230V | 50/60 Hz

5 YEAR WARRANTY

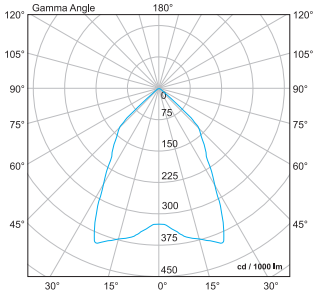
METAL GRID 22"

Catalogue number: **98GRID22** Packing (pcs): 1

AVIOR 22 HPSL 400W

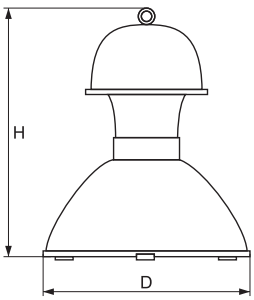


AVIOR 22 MHL 400W









AVIOR 19

A++ C | IP 65 | RoHS COMPLIANT | CE

Watt	Lamp	Lamp holder	Current (A)	Size (mm) Height	Size (mm) Diameter	Control gear	Catalogue number	Packing (pcs)
100W	HPSL	E40	1,20	620	470	magnetic	**98AV19031**	1
150W	HPSL	E40	1,80	620	470	magnetic	**98AV19032**	1
250W	HPSL	E40	3,00	620	470	magnetic	**98AV19033**	1
400W	HPSL	E40	4,45	620	470	magnetic	**98AV19034**	1
250W	MHL	E40	3,00	620	470	magnetic	**98AV19035**	1
400W	MHL	E40	3,50	620	470	magnetic	**98AV19036**	1
-	-	E40	-	620	470	empty fixture	**98AVIOR19**	1

Reflector: strip - line aluminium | **Gear box:** aluminium casting | **Diffuser:** tempered glass cover, heat-resistant silicon rubber seal ring, clips - 4 pcs | **Control gear:** mounted in the gear box | **Ambient Temperature:** -20°C ÷ +65°C

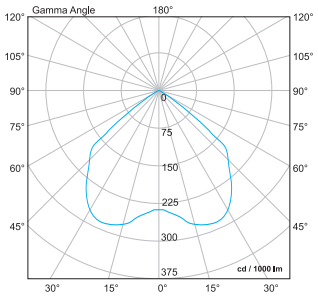
~230V | 50/60 Hz

5 YEAR WARRANTY

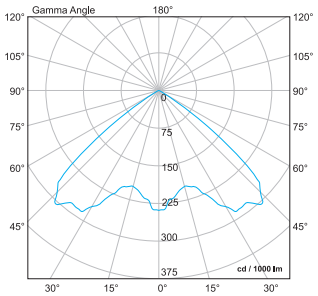
METAL GRID 19”

Catalogue number: **98GRID19** Packing (pcs): 1

AVIOR 19 HPSL 250W

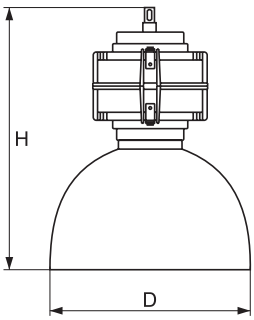


AVIOR 19 MHL 250W









RIGEL 22

A++ C | IP 20 | RoHS COMPLIANT | CE

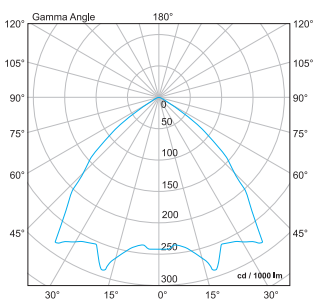
Watt	Lamp	Lamp holder	Current (A)	Size (mm) Height	Size (mm) Diameter	Control gear	Catalogue number	Packing (pcs)
70W	HPSL	E27	1,00	575	570	magnetic	**98RI22040**	1
100W	HPSL	E40	1,20	575	570	magnetic	**98RI22041**	1
150W	HPSL	E40	1,80	575	570	magnetic	**98RI22042**	1
250W	HPSL	E40	3,00	575	570	magnetic	**98RI22043**	1
400W	HPSL	E40	4,45	575	570	magnetic	**98RI22044**	1
70W	MHL	G12	1,00	575	570	magnetic	**98RI22045**	1
150W	MHL	G12	1,80	575	570	magnetic	**98RI22046**	1
250W	MHL	E40	3,00	575	570	magnetic	**98RI22047**	1
400W	MHL	E40	3,50	575	570	magnetic	**98RI22048**	1
-	-	E27	-	575	570	empty fixture	**98RI22E27**	1
-	-	G12	-	575	570	empty fixture	**98RI22G12**	1
-	-	E40	-	575	570	empty fixture	**98RI22E40**	1

Reflector: aluminium | **Gear box:** aluminium casting | **Control gear:** mounted in the gear box
Ambient Temperature: -20°C ÷ +65°C

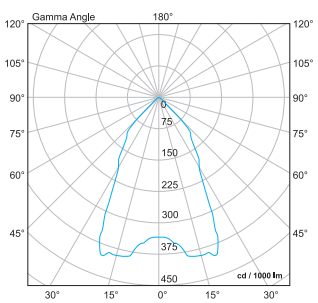
~230V | 50/60 Hz

5 YEAR WARRANTY

RIGEL22 HPSL 400W

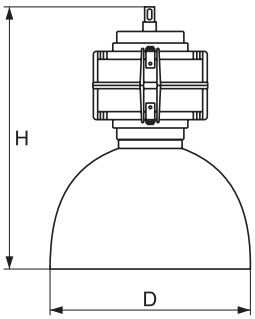


RIGEL22 MHL 400W









RIGEL 19

A++ C | IP 20 | RoHS COMPLIANT | CE

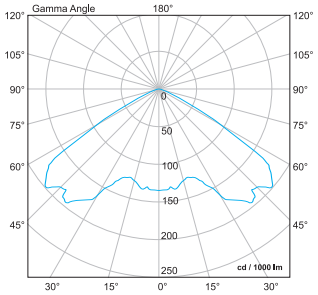
Watt	Lamp	Lamp holder	Current (A)	Size (mm) Height	Size (mm) Diameter	Control gear	Catalogue number	Packing (pcs)
70W	HPSL	E27	1,00	545	470	magnetic	**98RI19052**	1
100W	HPSL	E40	1,20	545	470	magnetic	**98RI19053**	1
150W	HPSL	E40	1,80	545	470	magnetic	**98RI19054**	1
250W	HPSL	E40	3,00	545	470	magnetic	**98RI19055**	1
400W	HPSL	E40	4,45	545	470	magnetic	**98RI19056**	1
70W	MHL	G12	1,00	545	470	magnetic	**98RI19057**	1
150W	MHL	G12	1,80	545	470	magnetic	**98RI19058**	1
250W	MHL	E40	3,00	545	470	magnetic	**98RI19059**	1
400W	MHL	E40	3,50	545	470	magnetic	**98RI19060**	1
-	-	E27	-	545	470	empty fixture	**98RI19E27**	1
-	-	G12	-	545	470	empty fixture	**98RI19G12**	1
-	-	E40	-	545	470	empty fixture	**98RI19E40**	1

Reflector: strip-line aluminium | **Gear box:** aluminium casting | **Control gear:** mounted in the gear box
Ambient Temperature: -20°C ÷ +65°C

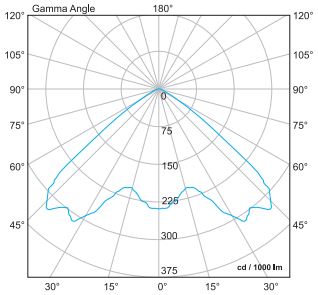
~230V | 50/60 Hz

5 YEAR WARRANTY

RIGEL19 HPML 250W

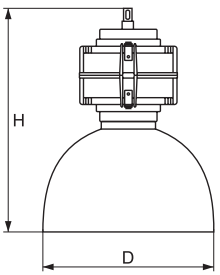


RIGEL19 MHL 250W









ALHENA 19

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Watt	Lamp	Lamp holder	Current (A)	Size (mm) Height	Size (mm) Diameter	Control gear	Catalogue number	Packing (pcs)
70W	HPSL	E27	1,00	635	490	magnetic	**98AL19080**	1
100W	HPSL	E40	1,20	635	490	magnetic	**98AL19081**	1
150W	HPSL	E40	1,80	635	490	magnetic	**98AL19082**	1
250W	HPSL	E40	3,00	635	490	magnetic	**98AL19083**	1
400W	HPSL	E40	4,45	635	490	magnetic	**98AL19084**	1
70W	MHL	G12	1,00	635	490	magnetic	**98AL19085**	1
150W	MHL	G12	1,80	635	490	magnetic	**98AL19086**	1
250W	MHL	E40	3,00	635	490	magnetic	**98AL19087**	1
400W	MHL	E40	3,50	635	490	magnetic	**98AL19088**	1
-	-	E27	-	635	490	empty fixture	**98AL19E27**	1
-	-	G12	-	635	490	empty fixture	**98AL19G12**	1
-	-	E40	-	635	490	empty fixture	**98AL19E40**	1

Reflector: polycarbonate (PC) | **Gear box:** aluminium casting | **Control gear:** mounted in the gear box
Ambient Temperature: -20°C ÷ +65°C

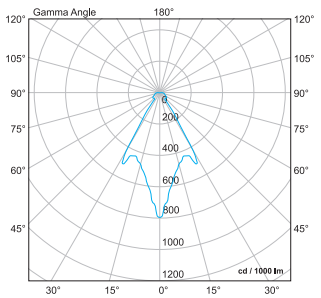
~230V | 50/60 Hz

5 YEAR WARRANTY

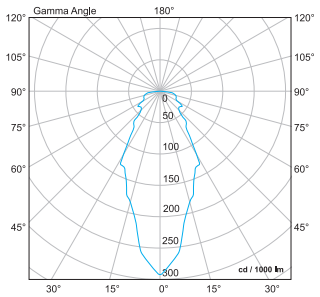
PC COVER 19"

Catalogue number: **89008** Packing (pcs): 1

ALHENA19 HPML 250W

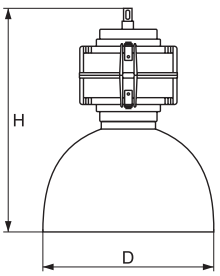


ALHENA19 MHL 250W









ALHENA 16

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Watt	Lamp	Lamp holder	Current (A)	Size (mm) Height	Size (mm) Diameter	Control gear	Catalogue number	Packing (pcs)
70W	HPSL	E27	1,00	580	410	magnetic	**98AL16092**	1
100W	HPSL	E40	1,20	580	410	magnetic	**98AL16093**	1
150W	HPSL	E40	1,80	580	410	magnetic	**98AL16094**	1
250W	HPSL	E40	3,00	580	410	magnetic	**98AL16095**	1
70W	MHL	G12	1,00	580	410	magnetic	**98AL16097**	1
150W	MHL	G12	1,80	580	410	magnetic	**98AL16098**	1
250W	MHL	E40	3,00	580	410	magnetic	**98AL16099**	1
-	-	E27	-	580	410	empty fixture	**98AL16E27**	1
-	-	G12	-	580	410	empty fixture	**98AL16G12**	1
-	-	E40	-	580	410	empty fixture	**98AL16E40**	1

Reflector: polycarbonate (PC) | **Gear box:** aluminium casting | **Control gear:** mounted in the gear box
Ambient Temperature: -20°C ÷ +65°C

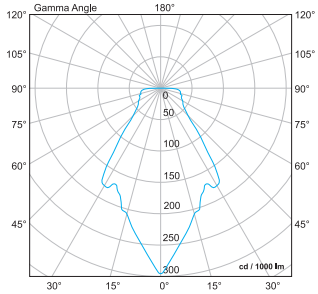
~230V | 50/60 Hz

5 YEAR WARRANTY

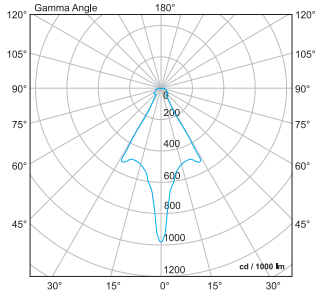
PC COVER 16”

Catalogue number: **89007** Packing (pcs): 1

ALHENA16 HPSL 150W



ALHENA16 MHL 150W

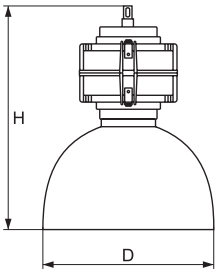




RIGEL 22



RIGEL 19



RIGEL with CFL

A A++ E IP 20 RoHS COMPLIANT

Model	Watt	Lamp	Lamp holder	Size (mm)		Catalogue number	Packing (pcs)
				Height	Diameter		
RIGEL 22	45	CFL	E27	575	570	**98RI22E2745**	1
RIGEL 22	55	CFL	E27	575	570	**98RI22E2755**	1
RIGEL 22	75	CFL	E40	575	570	**98RI22E4075**	1
RIGEL 22	85	CFL	E40	575	570	**98RI22E4085**	1
RIGEL 22	95	CFL	E40	575	570	**98RI22E4095**	1
RIGEL 22	125	CFL	E40	575	570	**98RI22E40125**	1
RIGEL 19	45	CFL	E27	545	470	**98RI19E2745**	1
RIGEL 19	55	CFL	E27	545	470	**98RI19E2755**	1
RIGEL 19	75	CFL	E40	545	470	**98RI19E4075**	1
RIGEL 19	85	CFL	E40	545	470	**98RI19E4085**	1
RIGEL 19	95	CFL	E40	545	470	**98RI19E4095**	1
RIGEL 19	125	CFL	E40	545	470	**98RI19E40125**	1

Reflector: aluminium | **Gear box:** aluminium casting
Ambient Temperature: -20°C ÷ +65°C

~230V 50/60 Hz

3 YEAR WARRANTY

The models of RIGEL 22 and RIGEL 19 are offered in a set with compact fluorescent lamps from page 414/415



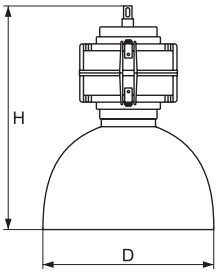




ALHENA 19



ALHENA 16



ALHENA with CFL

A A++ E IP 20 RoHS COMPLIANT

Model	Watt	Lamp	Lamp holder	Size (mm)		Catalogue number	Packing (pcs)
				Height	Diameter		
ALHENA 19	45	CFL	E27	635	490	**98AL19E2745**	1
ALHENA 19	55	CFL	E27	635	490	**98AL19E2755**	1
ALHENA 19	75	CFL	E40	635	490	**98AL19E4075**	1
ALHENA 19	85	CFL	E40	635	490	**98AL19E4085**	1
ALHENA 19	95	CFL	E40	635	490	**98AL19E4095**	1
ALHENA 19	125	CFL	E40	635	490	**98AL19E40125**	1
ALHENA 16	45	CFL	E27	580	410	**98AL16E2745**	1
ALHENA 16	55	CFL	E27	580	410	**98AL16E2755**	1
ALHENA 16	75	CFL	E40	580	410	**98AL16E4075**	1
ALHENA 16	85	CFL	E40	580	410	**98AL16E4085**	1
ALHENA 16	95	CFL	E40	580	410	**98AL16E4095**	1
ALHENA 16	125	CFL	E40	580	410	**98AL16E40125**	1

Reflector: polycarbonate (PC) | **Gear box:** aluminium casting
Ambient Temperature: -20°C ÷ +65°C

~230V 50/60 Hz

3 YEAR WARRANTY

The models of ALHENA 19 and ALHENA 16 are offered in a set with compact fluorescent lamps from page 414/415







INTERIOR LIGHTING



ELMARK®
lighting

Fluorescent lighting | 366

Waterproof fluorescent lighting | 372

Fluorescent cabinet lighting | 376

Spotlight | 378

Cabinet spotlights | 386

Spotlight for bathroom | 388

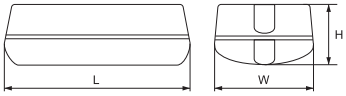
Downlights for bathroom | 389

Downlight fixtures for CFL | 390



FLUORESCENT LIGHTING





EMERGENCY LIGHTING FIXTURES XL201

Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
6W	white	245	75	50	electronic	**99XL201B6**	10
8W	white	325	75	50	electronic	**99XL201C8**	10

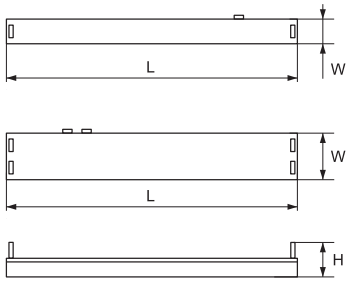
Body: PVC | **Diffuser:** PVC | Duration time approx 1.5 hours | **Battery:** 3.6V/1.2Ah Ni-Cd.
Note: with stickers

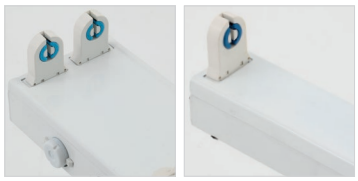


~230V | 50/60 Hz | T5 | G5

3 YEAR WARRANTY







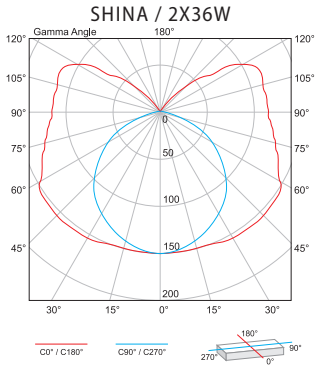
SHINA

Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
1X18W	white	618	46	66	electronic	**910118EB**	12
1X36W	white	1227	46	66	electronic	**910136EB**	12
2X18W	white	618	89	70	electronic	**910218EB**	8
2X36W	white	1227	89	70	electronic	**910236EB**	8

Body: white powder painted steel | **Ballast:** fixed inside the body

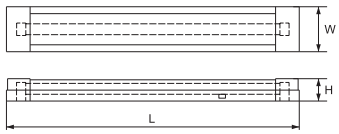
~230V | 50/60 Hz | T8 | G13

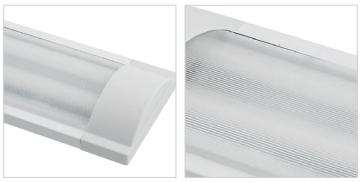
3 YEAR WARRANTY





SANA





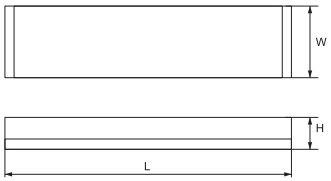
Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
1X18W	white	637	105	40	electronic	**940118**	12
1X36W	white	1245	105	40	electronic	**940136**	12
2X18W	white	637	150	45	electronic	**940218**	6
2X36W	white	1245	150	45	electronic	**940236**	6

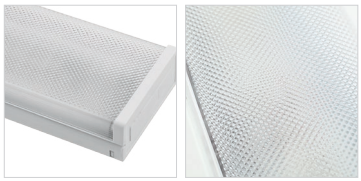
Body: white powder painted steel | **Reflector:** plastic cover | **Ballast:** fixed inside the body

~230V | 50/60 Hz | T8 | G13

3 YEAR WARRANTY







MONA

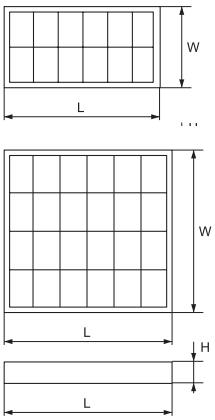
Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
1X18W	white	647	91	75	electronic	**930118EB**	5
1X36W	white	1255	91	75	electronic	**930136EB**	5
2X18W	white	647	160	62	electronic	**930218EB**	5
2X36W	white	1234	160	62	electronic	**930236EB**	5

Body: white powder painted steel | **Reflector:** plastic cover | **Ballast:** fixed inside the body

~230V | 50/60 Hz | T8 | G13

3 YEAR WARRANTY





GALA BM

A++ B | IP 21 | RoHS COMPLIANT | F | CE

Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
2X18W	white	595	295	70	electronic	**9GBME218**	1
4X18W	white	595	595	70	electronic	**9GBME418**	1
2X36W	white	1195	295	70	electronic	**9GBME236**	1

Body: white powder painted steel | **Reflector:** aluminium mirror | **Ballast:** fixed inside the body | **TYPE V**
BM - recessed fixture for mounting in suspended ceiling Armstrong type

~230V | 50/60 Hz | T8 | G13

3 YEAR WARRANTY



GALA OM

A++ B | IP 21 | RoHS COMPLIANT | F | CE

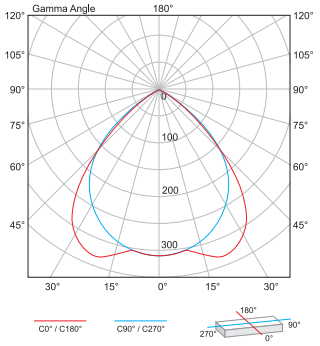
Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
2X18W	white	630	330	70	electronic	**9GOME218**	1
4X18W	white	630	630	70	electronic	**9GOME418**	1
2X36W	white	1230	330	70	electronic	**9GOME236**	1

Body: white powder painted steel | **Reflector:** aluminium mirror | **Ballast:** fixed inside the body | **TYPE V**
OM - surface mounted fixture

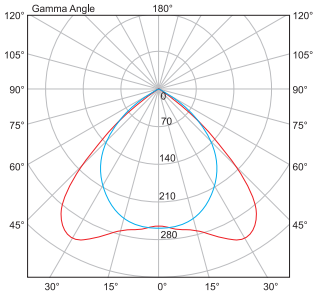
~230V | 50/60 Hz | T8 | G13

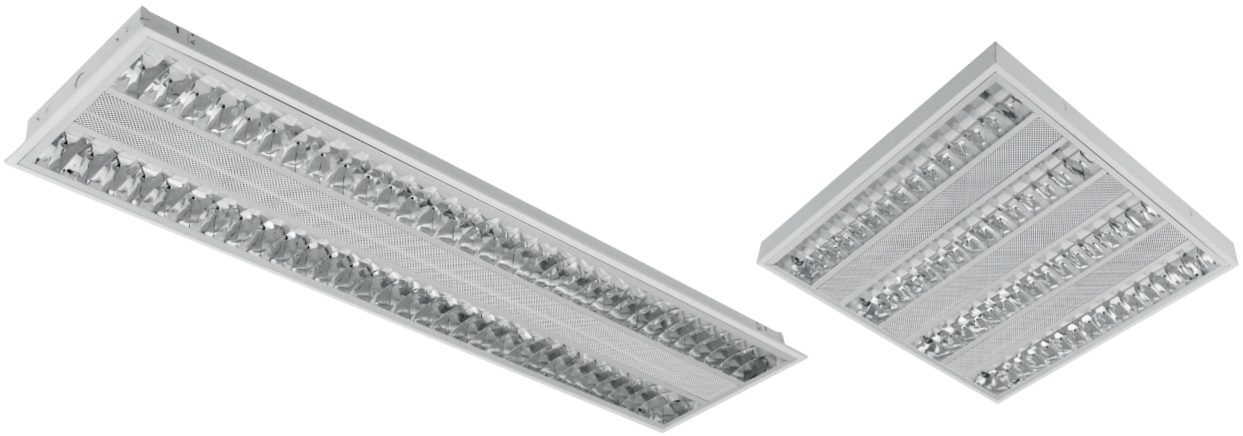
3 YEAR WARRANTY

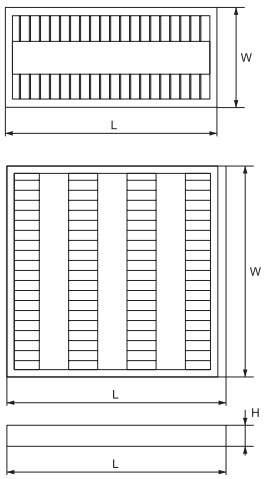
GALA / 4X18W



GALA / 2X36W







VIKI BM

Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
2X14W	white	595	295	55	electronic	**9VBM214**	1
4X14W	white	595	595	55	electronic	**9VBM414**	1
2X28W	white	1195	295	55	electronic	**9VBM228**	1

Body: white powder painted steel | **Reflector:** aluminium mirror | **Ballast:** fixed inside the body
BM - recessed fixture for mounting in suspended ceiling Armstrong type

~230V | 50/60 Hz | T5 | G13

3 YEAR WARRANTY



VIKI OM

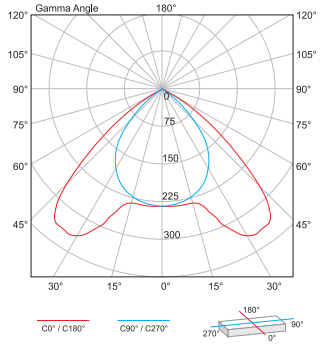
Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
2X14W	white	600	300	55	electronic	**9VOM214**	1
4X14W	white	600	600	55	electronic	**9VOM414**	1
2X28W	white	1200	300	55	electronic	**9VOM228**	1
2X35W	white	1500	300	55	electronic	**9VOM235**	1
2X49W	white	1500	300	55	electronic	**9VOM249**	1

Body: white powder painted steel | **Reflector:** aluminium mirror | **Ballast:** fixed inside the body
OM - surface mounted fixture

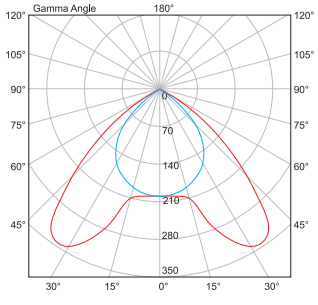
~230V | 50/60 Hz | T8 | G13

3 YEAR WARRANTY

VIKI / 4X14W

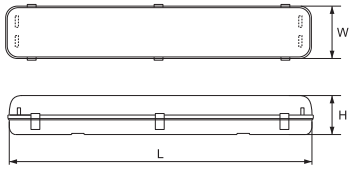


VIKI / 2X28W





BELLA T8





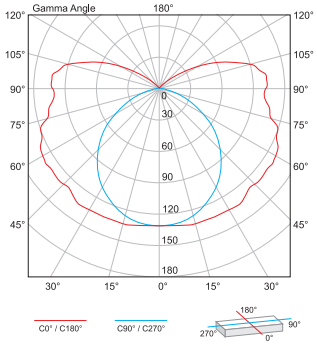
Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
1X18W	grey	670	86	100	electronic	**9BE118**	12
2X18W	grey	670	131	100	electronic	**9BE218**	9
1X36W	grey	1270	86	100	electronic	**9BE136**	9
2X36W	grey	1270	131	100	electronic	**9BE236**	6
1X58W	grey	1570	106	110	electronic	**9BE158**	6
2X58W	grey	1570	166	110	electronic	**9BE258**	4

Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC) | **Reflector:** steel white | **Ballast:** fixed inside the body | **Clamps:** polycarbonate | Cable gland, metal clips for wall fixing.

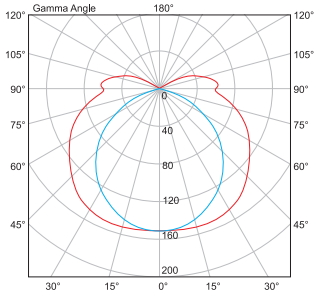
~230V | 50/60 Hz | T8 | G13

3 YEAR WARRANTY

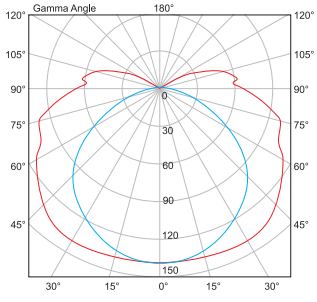
BELLA / 1X18W



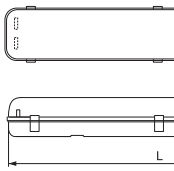
BELLA / 2X36W

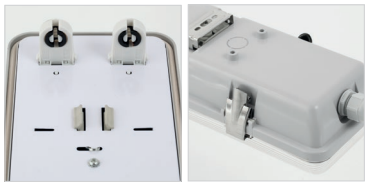


BELLA / 2X58W









BELLA T8 INOX

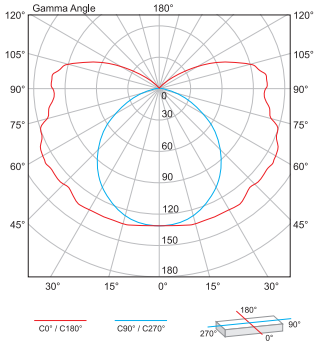
Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
1X18W	grey	670	86	100	electronic	**9BE118I**	12
2X18W	grey	670	131	100	electronic	**9BE218I**	9
1X36W	grey	1270	86	100	electronic	**9BE136I**	9
2X36W	grey	1270	131	100	electronic	**9BE236I**	6
1X58W	grey	1570	106	110	electronic	**9BE158I**	6
2X58W	grey	1570	166	110	electronic	**9BE258I**	4

Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC) | **Reflector:** steel white | **Ballast:** fixed inside the body | **Clamps:** inox | Cable gland, metal clips for wall fixing.

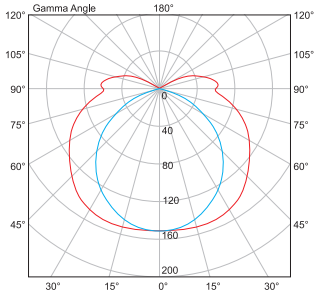
~230V | 50/60 Hz | T8 | G13

3 YEAR WARRANTY

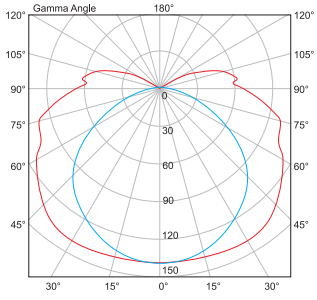
BELLA / 1X18W



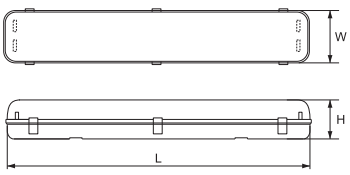
BELLA / 2X36W

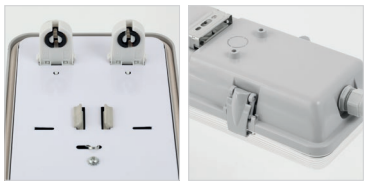


BELLA / 2X58W









BELLA T5

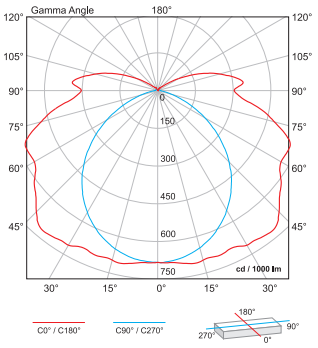
Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
1X14W	grey	670	74	80	electronic	**9BE114**	12
2X14W	grey	670	106	80	electronic	**9BE214**	9
1X28W	grey	1210	64	85	electronic	**9BE128**	9
2X28W	grey	1210	104	85	electronic	**9BE228**	6
1X35W	grey	1510	74	80	electronic	**9BE135**	12
2X35W	grey	1510	106	80	electronic	**9BE235**	8
1X49W	grey	1510	74	80	electronic	**9BE149**	12
2X49W	grey	1510	106	80	electronic	**9BE249**	8
1X54W	grey	1210	64	95	electronic	**9BE154**	9
2X54W	grey	1210	104	95	electronic	**9BE254**	6

Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC) | **Reflector:** steel white | **Ballast:** fixed inside the body | **Clamps:** inox | Cable gland, metal clips for wall fixing.

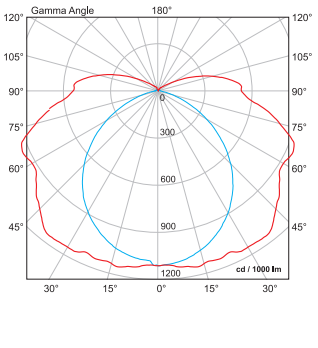
~230V | 50/60 Hz | T5 | G13

3 YEAR WARRANTY

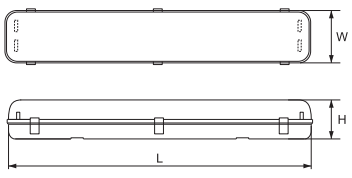
BELLA / 2X28W

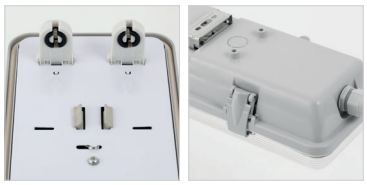


BELLA / 2X54W









ALDO

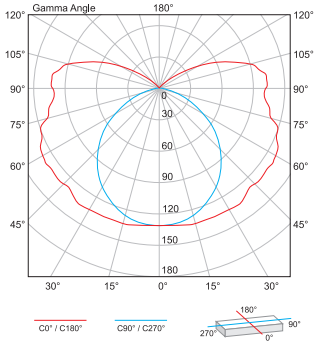
Watt	Colour body	Size (mm)			Ballast	Catalogue number	Packing (pcs)
		Length	Width	Height			
1X18W	grey	670	86	100	magnetic	**9AM118**	12
2X18W	grey	670	131	100	magnetic	**9AM218**	9
1X36W	grey	1270	86	100	magnetic	**9AM136**	9
2X36W	grey	1270	131	100	magnetic	**9AM236**	6
1X18W	grey	670	86	100	electronic	**9AE118**	12
2X18W	grey	670	131	100	electronic	**9AE218**	9
1X36W	grey	1270	86	100	electronic	**9AE136**	9
2X36W	grey	1270	131	100	electronic	**9AE236**	6
1X58W	grey	1570	106	110	electronic	**9AE158**	6
2X58W	grey	1570	166	110	electronic	**9AE258**	4

Body: ABS | **Diffuser:** polystyrene (PS) | **Reflector:** steel white | **Ballast:** fixed inside the body | **Clamps:** polycarbonate | Cable gland, metal clips for wall fixing.

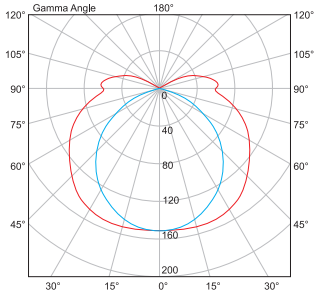
~230V | 50/60 Hz | T8 | G13

3 YEAR WARRANTY

ALDO / 1X18W

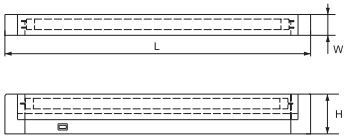


ALDO / 2X36W



CAB-01





Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
6W	white	268	23	44	electronic	**901506**	40
8W	white	343	23	44	electronic	**901508**	40
13W	white	573	23	44	electronic	**901513**	30
14W	white	607	23	44	electronic	**901514**	30
21W	white	905	23	44	electronic	**901521**	20
28W	white	1207	23	44	electronic	**901528**	20

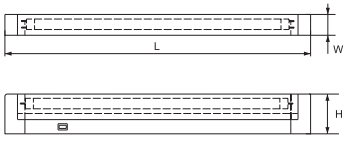
Body: PVC | **Diffuser:** PVC | 1,5 m power cord / 15 cm connector

~230V | 50/60 Hz | T5 | G5 | 6500K | 2,5A/230V | Ra≥80

3 YEAR WARRANTY

CAB-02





Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
6W	white	280	23	44	electronic	**902506**	40
8W	white	359	23	44	electronic	**902508**	40
13W	white	580	23	44	electronic	**902513**	30
21W	white	920	23	44	electronic	**902521**	20

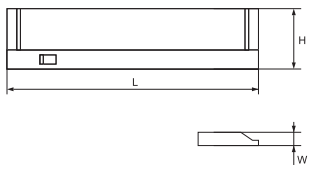
Body: PVC | **Diffuser:** PVC | 1,5 m power cord / 15 cm connector

~230V | 50/60 Hz | T5 | G5 | 6500K | 2,5A/230V | Ra≥80

3 YEAR WARRANTY

CAB-04





Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
8W	grey	357	30	85	electronic	**904508**	20
13W	grey	585	30	85	electronic	**904513**	20
21W	grey	920	30	85	electronic	**904521**	20

Body: Aluminium | **Diffuser:** Glass

~230V | 50/60 Hz | T5 | G5 | 6500K | Ra>80

3 YEAR WARRANTY

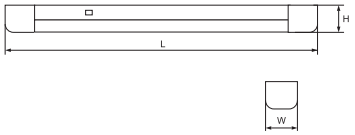


CAB-05

B A++ B IP 21 RoHS F CE

Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
15W	white	500	35	65	electronic	**905815**	20
18W	white	652	35	65	electronic	**905818**	20
36W	white	1263	35	65	electronic	**905836**	20

Body: PVC | **Diffuser:** PVC



~230V | 50/60 Hz | T8 | G13 | 6500K | Ra≥80

3 YEAR WARRANTY

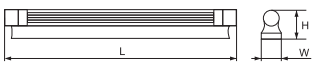


CAB-08

B A++ B IP 21 RoHS F CE

Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
8W	grey	365	58	70	electronic	**908508**	16
13W	grey	595	58	70	electronic	**908513**	16
21W	grey	935	58	70	electronic	**908521**	12

Body: Aluminium | **Diffuser:** PVC



~230V | 50/60 Hz | T5 | G5 | 6500K | Ra≥80

3 YEAR WARRANTY

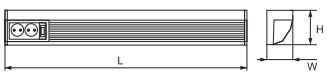


CAB-09

B A++ B IP 21 RoHS F CE

Watt	Colour body	Size (mm) Length	Width	Height	Ballast	Catalogue number	Packing (pcs)
8W	white	455	85	65	electronic	**909508**	12
13W	white	685	85	65	electronic	**909513**	12

Body: PVC | **Diffuser:** PVC



~230V | 50/60 Hz | T5 | G5 | 6500K | Ra≥80

3 YEAR WARRANTY

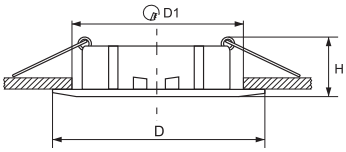




RECESSED LIGHTING

SA-70





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-70	79	25	60	white	**9270/W**	100
SA-70	79	25	60	chrome	**9270/CH**	100
SA-70	79	25	60	satin nickel	**9270/SN**	100
SA-70	79	25	60	pearl chrome	**9270/PCH**	100
SA-70	79	25	60	gold	**9270/G**	100
SA-70	79	25	60	antique brass	**9270/AB**	100

12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

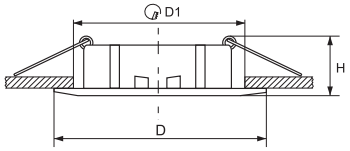
5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.



SA-90





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-90	82	25	73	white	**9290/W**	100
SA-90	82	25	73	chrome	**9290/CH**	100
SA-90	82	25	73	satin nickel	**9290/SN**	100
SA-90	82	25	73	pearl chrome	**9290/PCH**	100
SA-90	82	25	73	gold	**9290/G**	100
SA-90	82	25	73	antique brass	**9290/AB**	100

12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

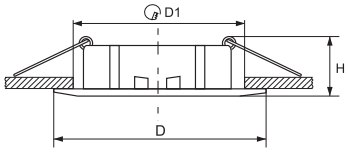
5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.



SA-71





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-71	79	25	60	satin nickel/gold	**9271/SN-G**	100
SA-71	79	25	60	satin nickel/chrome	**9271/SN-CH**	100
SA-71	79	25	60	pearl chrome/chrome	**9271/PCH-CH**	100
SA-71	79	25	60	satin gold/chrome	**9271/SG-CH**	100
SA-71	79	25	60	graphite/chrome	**9271/GR-CH**	100
SA-71	79	25	60	graphite/gold	**9271/GR-G**	100

12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

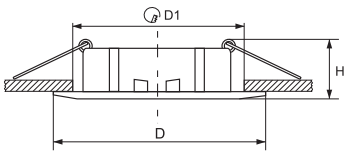
5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.



SA-91





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-91	82	25	73	satin nickel/gold	**9291/SN-G**	100
SA-91	82	25	73	satin nickel/chrome	**9291/SN-CH**	100
SA-91	82	25	73	pearl chrome/chrome	**9291/PCH-CH**	100
SA-91	82	25	73	satin gold/chrome	**9291/SG-CH**	100
SA-91	82	25	73	graphite/chrome	**9291/GR-CH**	100
SA-91	82	25	73	graphite/gold	**9291/GR-G**	100

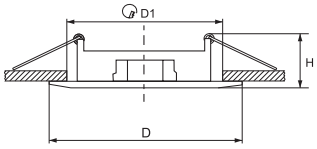
12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.







Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

SA-70V

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-70V	86	29	60	red antique brass	**9270V/AC**	100
SA-70V	86	29	60	antique brass	**9270V/AB**	100
SA-70V	86	29	60	pearl silver	**9270V/PS**	100
SA-70V	86	29	60	chrome	**9270V/CH**	100
SA-70V	86	29	60	gold	**9270V/G**	100

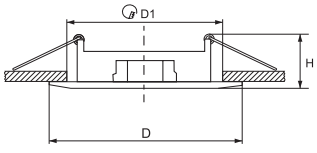
12V | 50/60 Hz | MR-16 | GU5.3 | max. 50W

5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.







Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

SA-90V

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-90V	93	25	75	red antique brass	**9290V/AC**	100
SA-90V	93	25	75	antique brass	**9290V/AB**	100
SA-90V	93	25	75	pearl silver	**9290V/PS**	100
SA-90V	93	25	75	chrome	**9290V/CH**	100
SA-90V	93	25	75	gold	**9290V/G**	100

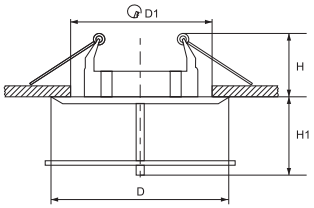
12V | 50/60 Hz | MR-16 | GU5.3 | max. 50W

5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.







Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

SA-702

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-702	79	25/25	60	chrome	**92702/CH**	50
SA-702	79	25/25	60	satin nickel	**92702/SN**	50
SA-702	79	25/25	60	gold	**92702/G**	50

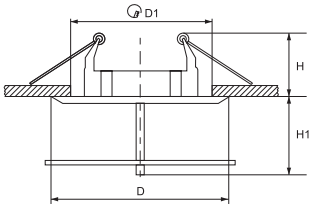
12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.


chrome satin nickel gold





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

SA-702H

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-702H	79	25/25	60	chrome	**92702H/CH**	50
SA-702H	79	25/25	60	satin nickel	**92702H/SN**	50
SA-702H	79	25/25	60	gold	**92702H/G**	50

12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

5 YEAR WARRANTY

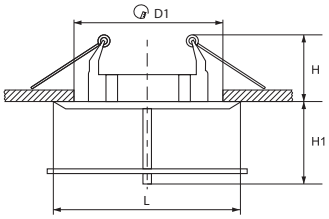
Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.


chrome satin nickel gold



SA-712

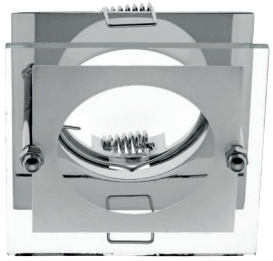
Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length	Height	Diameter 1			
SA-712	78	25/25	60	chrome	**92712/CH**	50
SA-712	78	25/25	60	satin nickel	**92712/SN**	50
SA-712	78	25/25	60	gold	**92712/G**	50



Legend:
L - Outer length
H - Height of the spotlight
D1 - Diameter of the cut

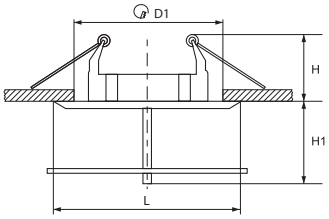
Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.


chrome satin nickel gold



SA-712H

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length	Height	Diameter 1			
SA-712H	78	25/25	60	chrome	**92712H/CH**	50
SA-712H	78	25/25	60	satin nickel	**92712H/SN**	50
SA-712H	78	25/25	60	gold	**92712H/G**	50



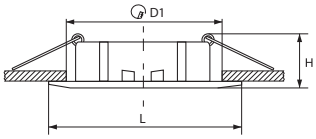
Legend:
L - Outer length
H - Height of the spotlight
D1 - Diameter of the cut

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.


chrome satin nickel gold

SA-710





Legend:
L - Outer length
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length	Height	Diameter 1			
SA-710	78	30	60	white	**9271/W**	100
SA-710	78	30	60	chrome	**9271/CH**	100
SA-710	78	30	60	satin nickel	**9271/SN**	100
SA-710	78	30	60	gold	**9271/G**	100
SA-710	78	30	60	antique brass	**9271/AB**	100

12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

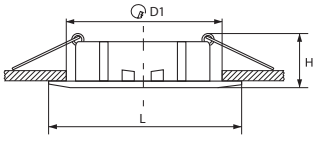
5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.



SA-910





Legend:
L - Outer length
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length	Height	Diameter 1			
SA-910	83	30	73	white	**9291/W**	100
SA-910	83	30	73	chrome	**9291/CH**	100
SA-910	83	30	73	satin nickel	**9291/SN**	100
SA-910	83	30	73	gold	**9291/G**	100
SA-910	83	30	73	antique brass	**9291/AB**	100

12V · 50/60 Hz · MR-16 · GU5.3 · max. 50W

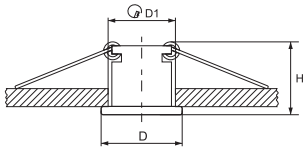
5 YEAR WARRANTY

Body: aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.



SAS-11





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SAS-11	35	38	25	chrome	**9211/CH**	200
SAS-11	35	38	25	satin nickel	**9211/SN**	200
SAS-11	35	38	25	gold	**9211/G**	200
SAS-11	35	38	25	antique brass	**9211/AB**	200

12V | 50/60 Hz | JC | G4 | max. 20W

5 YEAR WARRANTY

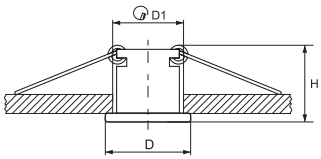
Body: aluminium alloy



chrome | satin nickel | gold | antique brass

SAS-12





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SAS-12	30	29	24	chrome	**9212/CH**	200
SAS-12	30	29	24	satin nickel	**9212/SN**	200
SAS-12	30	29	24	gold	**9212/G**	200
SAS-12	30	29	24	antique brass	**9212/AB**	200

12V | 50/60 Hz | JC | G4 | max. 20W

5 YEAR WARRANTY

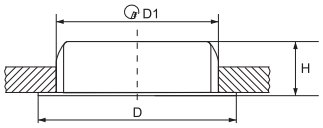
Body: aluminium alloy



chrome | satin nickel | gold | antique brass

SIM-5





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SIM-5	73	19	60	white	**9205/W**	100
SIM-5	73	19	60	chrome	**9205/CH**	100
SIM-5	73	19	60	satin nickel	**9205/SN**	100
SIM-5	73	19	60	pearl chrome	**9205/PCH**	100
SIM-5	73	19	60	gold	**9205/G**	100
SIM-5	73	19	60	antique brass	**9205/AB**	100

12V · 50/60 Hz · JC · G4 · max. 20W

5 YEAR WARRANTY

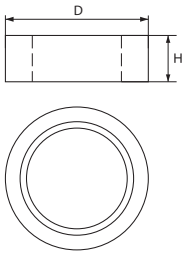
Body: stainless steel



white · chrome · satin nickel · pearl chrome · gold · antique brass

SIM-55





Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SIM-55	77	23	-	chrome	**9255/CH**	100
SIM-55	77	23	-	satin nickel	**9255/SN**	100
SIM-55	77	23	-	gold	**9255/G**	100
SIM-55	77	23	-	antique brass	**9255/AB**	100

12V · 50/60 Hz · JC · G4 · max. 20W

5 YEAR WARRANTY

Body: stainless steel

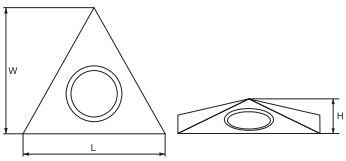


chrome · satin nickel · gold · antique brass



SIM-255

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length	Width	Height			
SIM-255	130	130	40	chrome	**92255/CH**	50
SIM-255	130	130	40	satin nickel	**92255/SN**	50



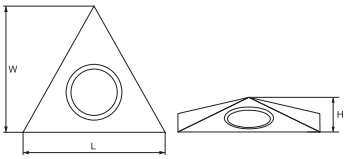
Body: stainless steel | **Model SIM-255** - without switch


chrome satin nickel

SIM-255K



Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length	Width	Height			
SIM-255K	130	130	40	chrome	**92255K/CH**	50
SIM-255K	130	130	40	satin nickel	**92255K/SN**	50



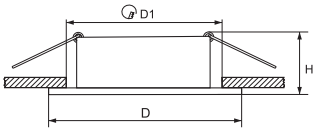
Body: stainless steel | **Model SIM-255K** - with switch


chrome satin nickel



SA-044

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
SA-044	85	40	65	white	**92044/W**	50
SA-044	85	40	65	chrome	**92044/CH**	50
SA-044	85	40	65	satin nickel	**92044/SN**	50
SA-044	85	40	65	gold	**92044/G**	50
SA-044	85	40	65	antique brass	**92044/AB**	50

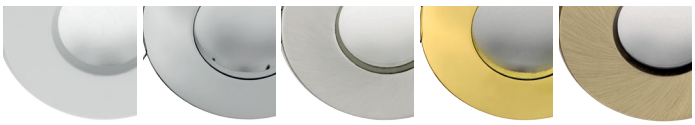


Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

12V | 50/60 Hz | MR-16 | GU5.3 | max. 50W

5 YEAR WARRANTY

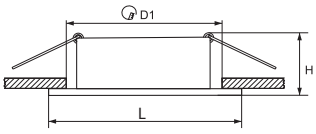
Body: steel | **Diffuser:** glass | **Ring:** aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.





SA-144

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length	Height	Diameter 1			
SA-144	85	48	72	white	**92144/W**	50
SA-144	85	48	72	chrome	**92144/CH**	50
SA-144	85	48	72	satin nickel	**92144/SN**	50
SA-144	85	48	72	red antique brass	**92144/RAB**	50

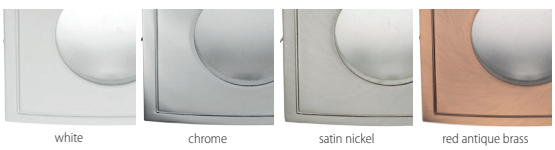


Legend:
D - Outer diameter
H - Height of the spotlight
L - Outer length

12V | 50/60 Hz | MR-16 | GU5.3 | max. 50W

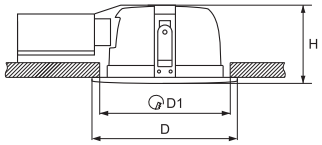
5 YEAR WARRANTY

Body: steel | **Diffuser:** glass | **Ring:** aluminium alloy
With the purchase of additional lampholder GU10, spotlights can be used with 230V GU10 lamps.



GL102 - 5



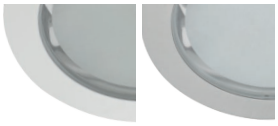


Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Watt	Size (mm)			Colour body	Catalogue number	Packing (pcs)
		Diameter	Height	Diameter 1			
GL102 - 5	2X13W	168	100	150	white	**9299441025/W**	12
GL102 - 5	2X13W	168	100	150	satin nickel	**9299441025/TCH**	12

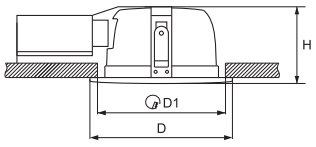
~230V | 50/60 Hz | PLC | G24q | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt round | **Ring:** aluminium


white satin nickel

GL103E



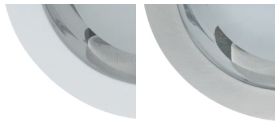


Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL103E	190	100	170	white	**929944103E/W**	12
GL103E	190	100	170	satin nickel	**929944103E/TCH**	12

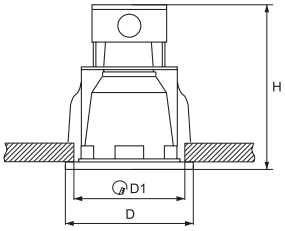
~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt round | **Ring:** aluminium


white satin nickel

GL 120E



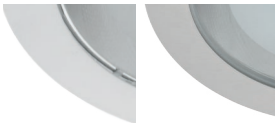


Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

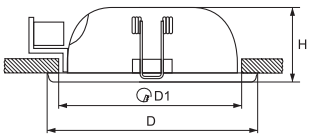
Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL120E-4	140	165	120	white	**929944120E4/W**	40
GL120E-4	140	165	120	satin nickel	**929944120E4/TCH**	40
GL120E-6	190	200	170	white	**929944120E6/W**	24
GL120E-6	190	200	170	satin nickel	**929944120E6/TCH**	24

~230V | 50/60 Hz | E27 | max. 15W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt round | **Ring:** aluminium


white satin nickel





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

GL 201E

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 201E	226	110	210	white	**9299201E/W**	12
GL 201E	226	110	210	satin nickel	**9299201E/SN**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

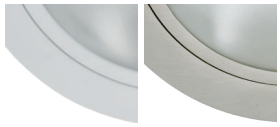
GL 201

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 201	226	110	210	white	**9299201P/W**	12
GL 201	226	110	210	satin nickel	**9299201P/SN**	12

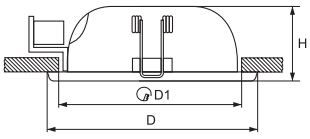
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** matt glass | **Ring:** aluminium alloy | **Reflector:** aluminium mirror



white satin nickel





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

GL 202E

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 202E	226	110	210	white	**9299202E/W**	12
GL 202E	226	110	210	satin nickel	**9299202E/SN**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

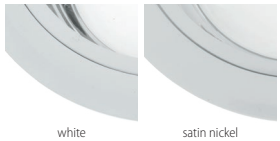
GL 202

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 202	226	110	210	white	**9299202P/W**	12
GL 202	226	110	210	satin nickel	**9299202P/SN**	12

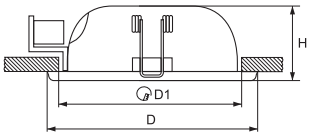
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** transparent glass | **Ring:** aluminium alloy | **Reflector:** aluminium mirror



white satin nickel





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

GL 203E

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 203E	235	110	210	white	**9299203E/W**	12
GL 203E	235	110	210	satin nickel	**9299203E/SN**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

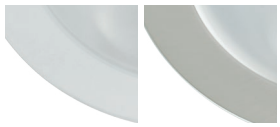
GL 203

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 203	235	110	210	white	**9299203P/W**	12
GL 203	235	110	210	satin nickel	**9299203P/SN**	12

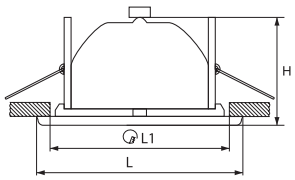
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** matt glass | **Ring:** aluminium alloy | **Reflector:** aluminium mirror



white satin nickel





Legend:
L=W - Outer length
H - Height of the downlight
L1=W1 - Length of the cut

GL 211E

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length/ Width	Height	Length1/ Width1			
GL 211E	230	110	210	white	**9299211E/W**	12
GL 211E	230	110	210	satin nickel	**9299211E/SN**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

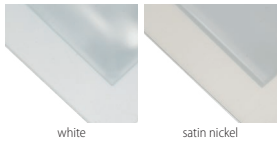
GL 211

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length/ Width	Height	Length1/ Width1			
GL 211	230	110	210	white	**9299211P/W**	12
GL 211	230	110	210	satin nickel	**9299211P/SN**	12

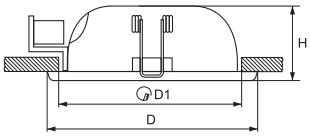
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** matt glass | **Ring:** aluminium alloy | **Reflector:** aluminium mirror



white satin nickel





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

GL 205E

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 205E	225	110	210	white	**9299205E/W**	12
GL 205E	225	110	210	satin nickel	**9299205E/SN**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

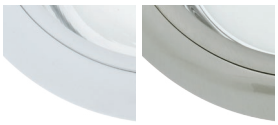
GL 205

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 205	225	110	210	white	**9299205P/W**	12
GL 205	225	110	210	satin nickel	**9299205P/SN**	12

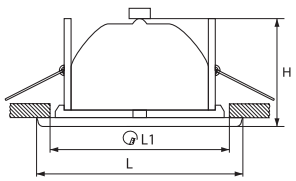
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt round | **Ring:** aluminium alloy | **Reflector:** aluminium mirror



white | satin nickel





Legend:
L=W - Outer length
H - Height of the downlight
L1=W1 - Length of the cut

GL 204E

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length/ Width	Height	Length1/ Width1			
GL 204E	230	110	210	white	**9299204E/W**	12
GL 204E	230	110	210	satin nickel	**9299204E/SN**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

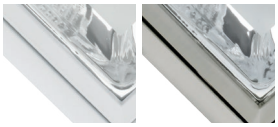
GL 204

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Length/ Width	Height	Length1/ Width1			
GL 204	230	110	210	white	**9299204P/W**	12
GL 204	230	110	210	satin nickel	**9299204P/SN**	12

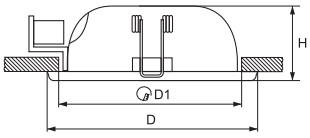
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt square | **Ring:** aluminium alloy | **Reflector:** aluminium mirror



white | satin nickel





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

GL 206E

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 206E	225	110	210	satin nickel / chrome	**9299206E/SH**	12
GL 206E	225	110	210	graphite / chrome	**9299206E/GH**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

GL 206

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 206	225	110	210	satin nickel / chrome	**9299206P/SH**	12
GL 206	225	110	210	graphite / chrome	**9299206P/GH**	12

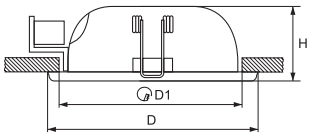
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt round | **Ring:** aluminium | **Reflector:** aluminium mirror


satin nickel / chrome


graphite / chrome





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

GL 210E

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 210E	228	110	210	white	**9299210E/W**	12
GL 210E	228	110	210	satin nickel	**9299210E/SN**	12

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

GL 210

A++ C | IP 20 | RoHS | F | CE

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 210	228	110	210	white	**9299210P/W**	12
GL 210	228	110	210	satin nickel	**9299210P/SN**	12

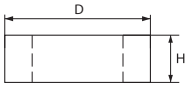
~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

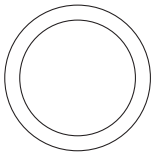
Body: steel | **Diffuser:** glass with matt dots | **Ring:** aluminium | **Reflector:** aluminium mirror


white


satin nickel







GL 213E

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)		Colour body	Catalogue number	Packing (pcs)
	Diameter	Height			
GL 213E	266	65	white	**9299213E/W**	10
GL 213E	266	65	satin nickel	**9299213E/SN**	10

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

GL 213

A++ C | IP 20 | RoHS COMPLIANT | F | CE

Model	Size (mm)		Colour body	Catalogue number	Packing (pcs)
	Diameter	Height			
GL 213	266	65	white	**9299213P/ W**	10
GL 213	266	65	satin nickel	**9299213P/SN**	10

~230V | PLC | G24q | max. 2x26W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt dots | **Reflector:** aluminium mirror


white satin nickel



GL 214E

A++ C | IP 20 | RoHS COMPLIANT | F | CE

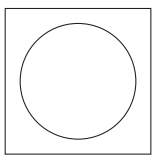
Model	Size (mm)		Colour body	Catalogue number	Packing (pcs)
	Length	Height			
GL214E	240	60	white	**9299214E/W**	10
GL 214E	240	60	satin nickel	**9299214E/SN**	10

~230V | 50/60 Hz | CFL | E27 | max. 2x20W | 2,5mm² | 5 YEAR WARRANTY

Body: steel | **Diffuser:** glass with matt round | **Ring:** aluminium | **Reflector:** aluminium mirror

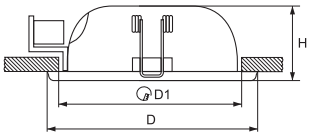

white satin nickel





GL 208





Legend:
D - Outer diameter
H - Height of the spotlight
D1 - Diameter of the cut

Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	Diameter	Height	Diameter 1			
GL 208	225	110	210	white	**9299208M/W**	12
GL208	225	110	210	satin nickel	**9299208M/SN**	12

~230V | 50/60 Hz | MH-7 | Rx7s | max. 150 W | 2,5mm² | 1m

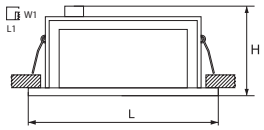
5 YEAR WARRANTY

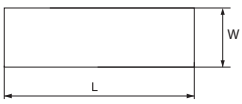
Body: steel | **Diffuser:** glass with matt dots | **Ring:** aluminium | **Reflector:** aluminium


white satin nickel

GL 212







Model	Size (mm)			Colour body	Catalogue number	Packing (pcs)
	L/L1	W/W1	H			
GL 212	230/215	150/125	123	white	**9299212M/W**	20
GL 212	230/215	150/125	123	satin nickel	**9299212M/SN**	20

~230V | 50/60 Hz | MH-7 | Rx7s | max. 150 W | 2,5mm² | 1m

5 YEAR WARRANTY

Body: steel | **Diffuser:** transparent glass | **Ring:** aluminium | **Reflector:** aluminium


white satin nickel



EXTERIOR LIGHTING





ELMARK lighting

Garden lighting | 398

Lanterns | 402

Facade lighting | 404

Wall mounted fixtures | 405



EXTERIOR LIGHTING





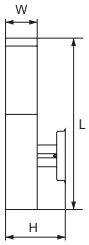
HERA

Model	Watt	Colour body	Size (mm)		Catalogue number	Packing (pcs)
			Length	Width		
HERAW1	max 11W	satin nickel	370	77	**96000001**	20

Body: stainless steel | **Diffuser:** ABS

~230V | 50/60 Hz | CFL | E27 | 2,5mm² | 3 YEAR WARRANTY





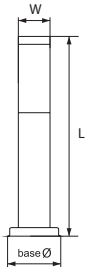
HERA

Model	Watt	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
HERAW2	max 11W	satin nickel	330	77	145	**96000005**	12

Body: stainless steel | **Diffuser:** ABS

~230V | 50/60 Hz | CFL | E27 | 2,5mm² | 3 YEAR WARRANTY





HERA

Model	Watt	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Base Ø		
HERA45	max 11W	satin nickel	450	77	125	**96000002**	12
HERA65	max 11W	satin nickel	650	77	125	**96000003**	12
HERA110	max 11W	satin nickel	1100	77	125	**96000004**	6

Body: stainless steel | **Diffuser:** ABS

~230V | 50/60 Hz | CFL | E27 | 2,5mm² | 3 YEAR WARRANTY

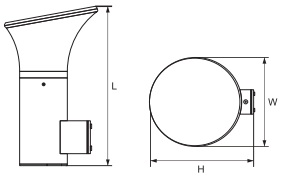


GRF965

Model	Watt	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
GRF965	max 23W	dark grey	200	175	190	**965W200**	8

Body: aluminium | **Diffuser:** polycarbonate (PC) | **Operating temperature:** -20°C÷+65°C

~230V | 50/60 Hz | CFL | E27 | 1,5mm² | 3 YEAR WARRANTY



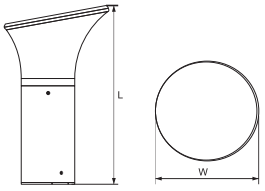


GRF965

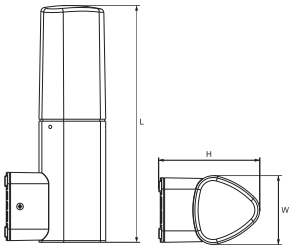
Model	Watt	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
GRF965-30	max 23W	dark grey	300	175	-	**965P300**	8
GRF965-50	max 23W	dark grey	500	175	-	**965P500**	4
GRF965-80	max 23W	dark grey	800	175	-	**965P800**	4

Body: aluminium | **Diffuser:** polycarbonate (PC) | **Operating temperature:** -20°C÷+65°C

~230V | 50/60 Hz | CFL | E27 | 1,5mm² | 3 YEAR WARRANTY







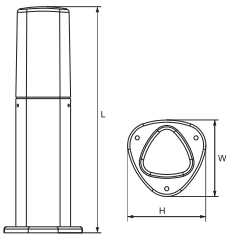
GRF966

Model	Watt	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
GRF966-W	max 18W	dark grey	250	72	107	**966W250**	16

Body: aluminium | **Diffuser:** polycarbonate (PC) | **Operating temperature:** -20°C÷+65°C

~230V | 50/60 Hz | CFL | E27 | 1,5mm² | 3 YEAR WARRANTY





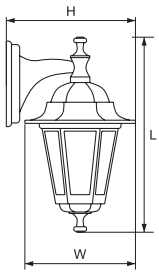
GRF966

Model	Watt	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
GRF966-30	max 18W	dark grey	300	72	72	**966P300**	9
GRF966-50	max 18W	dark grey	500	72	72	**966P500**	9
GRF966-80	max 18W	dark grey	800	72	72	**966P800**	9

Body: aluminium | **Diffuser:** polycarbonate (PC) | **Operating temperature:** -20°C÷+65°C

~230V | 50/60 Hz | CFL | E27 | 1,5mm² | 3 YEAR WARRANTY





LANTERN 50072

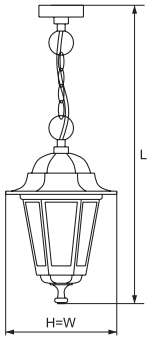
Model	Colour	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
50072 DOWN	black	340	165	200	**9350072BL**	12
50072 DOWN	ancient gold	340	165	200	**9350072AG**	12

Body: aluminium | **Diffuser:** glass

~230V | 50/60 Hz | CFL | E27 | max. 15W

3 YEAR WARRANTY





LANTERN 50073

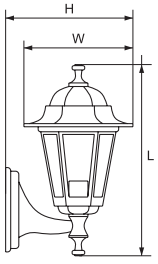
Model	Colour	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
50073 HANGING	black	340	165	165	**9350073BL**	12
50073 HANGING	ancient gold	340	165	165	**9350073AG**	12

Body: aluminium | **Diffuser:** glass

~230V | 50/60 Hz | CFL | E27 | max. 15W

3 YEAR WARRANTY





LANTERN 50071

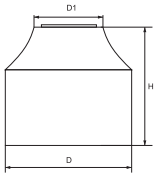
Model	Colour	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
50071 UPWARD	black	340	165	200	**9350071BL**	12
50071 UPWARD	ancient gold	340	165	200	**9350071AG**	12

Body: aluminium | **Diffuser:** glass

~230V | 50/60 Hz | CFL | E27 | max. 15W

3 YEAR WARRANTY





CONNECTOR FOR LANTERN SO63
Colour: black
Size (mm): D63 x D1 30 x H51
Catalogue number: **93SO63BL**
Packing (pcs): 1pack

CONNECTOR FOR LANTERN SO63
Colour: ancient gold
Size (mm): D63 x D1 30 x H51
Catalogue number: **93SO63AG**
Packing (pcs): 1pack



LANTERN 50182

Model	Colour	Size (mm)			Catalogue number	Packing (pcs)
		Length	Width	Height		
50182 DOWN	black	340	165	180	**9350182BL**	12
50182 DOWN	ancient gold	340	165	180	**9350182AG**	12

Body: aluminium | **Diffuser:** glass

~230V | 50/60 Hz | CFL | E27 | max. 15W

3 YEAR WARRANTY



LANTERN 50183

Model	Colour	Size (mm)			Catalogue number	Packing (pcs)
		Length	Width	Height		
50183 HANGING	black	340	165	165	**9350183BL**	12
50183 HANGING	ancient gold	340	165	165	**9350183AG**	12

Body: aluminium | **Diffuser:** glass

~230V | 50/60 Hz | CFL | E27 | max. 15W

3 YEAR WARRANTY



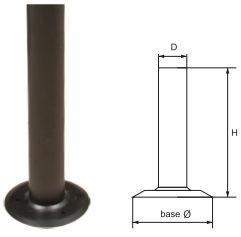
LANTERN 50181

Model	Colour	Size (mm)			Catalogue number	Packing (pcs)
		Length	Width	Height		
50181 UPWARD	black	340	165	180	**9350181BL**	12
50181 UPWARD	ancient gold	340	165	180	**9350181AG**	12

Body: aluminium | **Diffuser:** glass

~230V | 50/60 Hz | CFL | E27 | max. 15W

3 YEAR WARRANTY



SP60 METAL POLE 0,6m
Colour: black
Size (mm):
D60 x Base Ø 145 x H600
Catalogue number:
93SP60BL
Packing (pcs): 1pack

SP80 METAL POLE 0,8m
Colour: black
Size (mm):
D60 x Base Ø 145 x H800
Catalogue number:
93SP80BL
Packing (pcs): 1pack

SP100 METAL POLE 1m
Colour: black
Size (mm):
D60 x Base Ø 145 x H1000
Catalogue number:
93SP100BL
Packing (pcs): 1pack

SP120 METAL POLE 1,2m
Colour: black
Size (mm):
D60 x Base Ø 145 x H1200
Catalogue number:
93SP120BL
Packing (pcs): 1pack

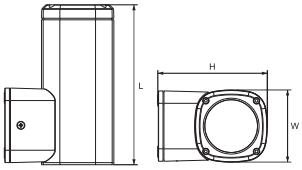


OL9610

Model	Watt	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
OL9610-W1	max 35W	dark grey	157	70	106	**9610W1**	16

Body: aluminium | **Diffuser:** tempered glass | **Operating temperature:** -20°C÷+65°C

~230V | 50/60 Hz | GU10 | GU10 | 1,5mm² | 3 YEAR WARRANTY





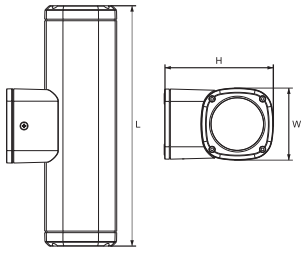


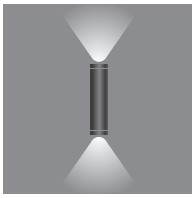
OL9610

Model	Watt	Colour body	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
OL9610-W2	max 35W	dark grey	238	70	106	**9610W2**	16

Body: aluminium | **Diffuser:** tempered glass | **Operating temperature:** -20°C÷+65°C

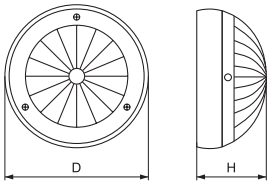
~230V | 50/60 Hz | GU10 | GU10 | 1,5mm² | 3 YEAR WARRANTY





SIRIUS





Model	Watt	Colour	Size (mm) Diameter	Size (mm) Height	Catalogue number	Packing (pcs)
SIRIUS1	max 20W	white	230	110	**91AT1210**	21
SIRIUS1	max 20W	grey	230	110	**91AT1280**	21
SIRIUS2	max 20W	white	280	115	**91AT1209**	14
SIRIUS2	max 20W	grey	280	115	**91AT1289**	14

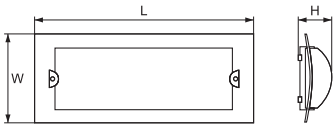
Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC)

~230V | 50/60 Hz | CFL | E27

3 YEAR WARRANTY

ARIA





Model	Watt	Colour	Size (mm) Length	Size (mm) Width	Size (mm) Height	Catalogue number	Packing (pcs)
ARIA	max 23W	white	350	120	80	**91AT5201**	12
ARIA	max 23W	grey	350	120	80	**91AT5202**	12

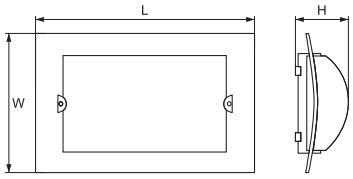
Base: aluminium | **Diffuser:** polycarbonate (PC) | **Frame:** polycarbonate (PC)

~230V | 50/60 Hz | CFL | E27

3 YEAR WARRANTY

LINIA1





Model	Watt	Colour	Size (mm) Length	Size (mm) Width	Size (mm) Height	Catalogue number	Packing (pcs)
LINIA1	max 20W	white	320	137	110	**91AT6117**	26
LINIA1	max 20W	grey	320	137	110	**91AT6119**	26

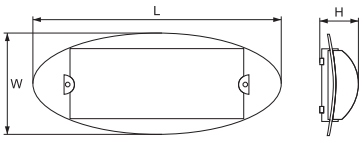
Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC)

~230V | 50/60 Hz | CFL | E27

3 YEAR WARRANTY

LINIA4





Model	Watt	Colour	Size (mm) Length	Size (mm) Width	Size (mm) Height	Catalogue number	Packing (pcs)
LINIA4	max 20W	white	320	200	110	**91AT6126**	18
LINIA4	max 20W	grey	320	200	110	**91AT6127**	18

Body: polycarbonate (PC) | **Diffuser:** polycarbonate (PC)

~230V | 50/60 Hz | CFL | E27

3 YEAR WARRANTY



LAMPS AND COMPONENTS



ELMARK
lighting

Compact fluorescent lamps | 408

Fluorescent tubes | 418

Discharge lamps | 420

Transformers and ballasts | 423

Lamp holders | 426

Sensors | 428





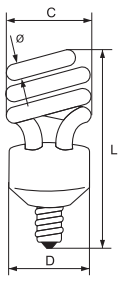


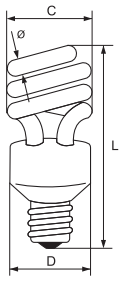
LAMPS AND COMPONENTS

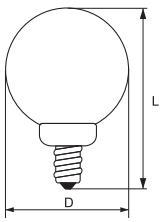














GLOBE

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Size (mm) Length	Catalogue number	Packing (pcs)
GLOBE	15W	800	2700K	80	115	**99280092**	20
GLOBE	15W	800	6400K	80	115	**99280093**	20
GLOBE	20W	1150	2700K	95	130	**99280094**	20
GLOBE	20W	1150	6400K	95	130	**99280095**	20
GLOBE	25W	1400	2700K	105	140	**99280096**	20
GLOBE	25W	1400	6400K	105	140	**99280097**	20

~230V | 50/60 Hz | E27 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY



HALF SPIRAL

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Size (mm) C	Size (mm) Length	Size (mm) Φ	Catalogue number	Packing (pcs)
HALF SPIRAL/T2	9W	405	4000K	40	46	96	8	**99210145**	100
HALF SPIRAL/T2	11W	530	4000K	40	46	100	8	**99210147**	100
HALF SPIRAL/T2	15W	800	4000K	40	46	110	8	**99210149**	100

~230V | 50/60 Hz | E14 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY



HALF SPIRAL

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Size (mm) C	Size (mm) Length	Size (mm) Φ	Catalogue number	Packing (pcs)
HALF SPIRAL/T2	9W	405	4000K	40	46	90	8	**99210144**	100
HALF SPIRAL/T2	11W	530	4000K	40	46	95	8	**99210146**	100
HALF SPIRAL/T2	15W	800	4000K	40	46	105	8	**99210148**	100
HALF SPIRAL/T3	20W	1150	4000K	48	60	125	9	**99210150**	50
HALF SPIRAL/T3	25W	1520	4000K	48	60	135	9	**99210151**	50

~230V | 50/60 Hz | E27 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY

FULL SPIRAL D2



Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
FULL SPIRAL	5W	175	2700K	32	78	7	**99210046**	100
FULL SPIRAL	9W	405	2700K	32	96	7	**99210048**	100
FULL SPIRAL	11W	530	2700K	32	100	7	**99210050**	100
FULL SPIRAL	11W	530	6400K	32	100	7	**99210051**	100

~230V | 50/60 Hz | E14 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY

FULL SPIRAL D2



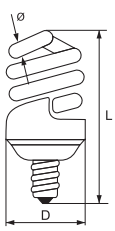


Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
FULL SPIRAL	5W	175	2700K	32	78	7	**99210047**	100
FULL SPIRAL	9W	405	2700K	32	98	7	**99210049**	100
FULL SPIRAL	11W	530	2700K	32	105	7	**99210052**	100
FULL SPIRAL	11W	530	6400K	32	105	7	**99210053**	100
FULL SPIRAL	15W	800	2700K	42	106	7	**99210054**	100
FULL SPIRAL	15W	800	6400K	42	106	7	**99210055**	100
FULL SPIRAL	20W	1150	2700K	54	108	7	**99210056**	100
FULL SPIRAL	20W	1150	6400K	54	108	7	**99210057**	100
FULL SPIRAL	24W	1445	2700K	54	119	7	**99210058**	100
FULL SPIRAL	24W	1445	6400K	54	119	7	**99210059**	100
FULL SPIRAL	28W	1600	6400K	65	120	10	**99210060**	50
FULL SPIRAL	32W	1920	6400K	65	140	10	**99210061**	50
FULL SPIRAL	36W	2160	6400K	75	155	12	**99210062**	50

~230V | 50/60 Hz | E27 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY









G9/SPIRAL

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
G9/SPIRAL	9W	405	2700K	31	86	7	**99211420**	100
G9/SPIRAL	9W	405	4000K	31	86	7	**99211154**	100
G9/SPIRAL	11W	530	2700K	31	96	7	**99211421**	100
G9/SPIRAL	11W	530	4000K	31	96	7	**99211155**	100

~230V | 50/60 Hz | G9 | Ra≥82 | >10000 | < 2 s | 8000h | < 2mg

2 YEAR WARRANTY



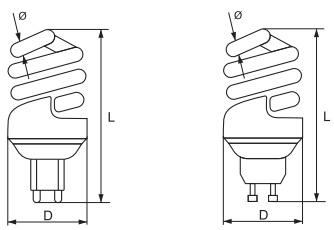
GU10/SPIRAL

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
GU10/SPIRAL	9W	405	2700K	31	88	7	**99212423**	100
GU10/SPIRAL	9W	405	4000K	31	88	7	**99212157**	100
GU10/SPIRAL	11W	530	2700K	31	98	7	**99212424**	100
GU10/SPIRAL	11W	530	4000K	31	98	7	**99212158**	100

~230V | 50/60 Hz | GU10 | Ra≥82 | >10000 | < 2 s | 8000h | < 2mg

2 YEAR WARRANTY







3U

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	C	Length	Φ	Catalogue number	Packing (pcs)
3U/T2	7W	285	4000K	33	-	100	7	**99216166**	100
3U/T2	11W	530	4000K	33	-	110	7	**99216168**	100

~230V | 50/60 Hz | E14 | Ra≥82 | >10000 | <2s | 8000h | Hg <2mg

2 YEAR WARRANTY



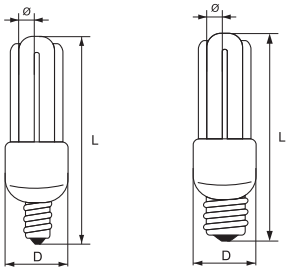
3U

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
3U/T2	7W	285	4000K	33	100	7	**99216165**	100
3U/T2	11W	530	4000K	33	110	7	**99216167**	100

~230V | 50/60 Hz | E27 | Ra≥82 | >10000 | <2s | 8000h | Hg <2mg

2 YEAR WARRANTY







3U

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	C	Length	Φ	Catalogue number	Packing (pcs)
4U/T2	15W	800	4000K	40	-	115	7	**99216170**	100

~230V | 50/60 Hz | E14 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY



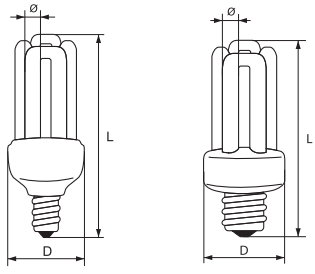
4U

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	C	Length	Φ	Catalogue number	Packing (pcs)
4U/T2	15W	800	4000K	40	-	115	7	**99216169**	100
4U/T3	20W	1150	4000K	47	-	137	9	**99216171**	100
4U/T3	23W	1370	4000K	47	-	148	9	**99216172**	100

~230V | 50/60 Hz | E27 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY







4U

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
4U/T5	75W	4350	6400K	88	330	17	**99216269**	20
4U/T5	85W	4700	6400K	88	350	17	**99216270**	20

~230V | 50/60 Hz | E40 | Ra≥82 | >10000 | <2 s | 8000h | Hg <2mg

2 YEAR WARRANTY



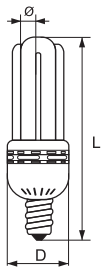
5U

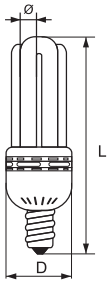
Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
5U/T5	95W	5100	6400K	88	305	17	**99216271**	20

~230V | 50/60 Hz | E40 | Ra≥82 | >10000 | <2 s | 8000h | Hg <2mg

2 YEAR WARRANTY









6U

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	Length	Φ	Catalogue number	Packing (pcs)
6U/T5	125W	6510	6400K	105	315	17	**99216272**	20

~230V | 50/60 Hz | E40 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY



HALF SPIRAL

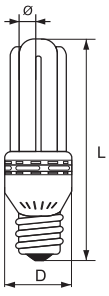
Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Diameter	C	Length	Φ	Catalogue number	Packing (pcs)
HALF SPIRAL/T5	45W	3080	6400K	72	78	230	14	**99210267**	20
HALF SPIRAL/T5	55W	3890	6400K	72	78	250	14	**99210268**	20

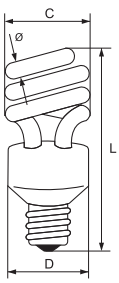
~230V | 50/60 Hz | E27 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY

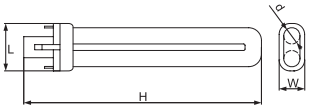












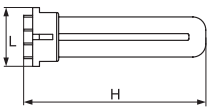
PLS

Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Length	Width	Height	d	Catalogue number	Packing (pcs)
PLS	7W	350	2700K	31	16	135	12	**99240361**	50
PLS	7W	350	4000K	31	16	135	12	**99240362**	50
PLS	7W	350	6400K	31	16	135	12	**99240080**	50
PLS	9W	540	2700K	31	16	165	12	**99240363**	50
PLS	9W	540	4000K	31	16	165	12	**99240364**	50
PLS	9W	540	6400K	31	16	165	12	**99240081**	50
PLS	11W	820	2700K	31	16	235	12	**99240365**	50
PLS	11W	820	4000K	31	16	235	12	**99240366**	50
PLS	11W	820	6400K	31	16	235	12	**99240082**	50

~230V | 50/60 Hz | G23 | Ra≥82 | >10000 | <2s | 8000h | Hg <2mg

2 YEAR WARRANTY





PLL

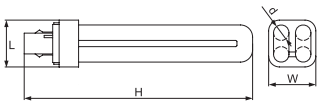
Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Length	Width	Height	d	Catalogue number	Packing (pcs)
PLL	36W	2500	4000K	35	23	410	18	**99260381**	50
PLL	36W	2500	6400K	35	23	410	18	**99260087**	50
PLL	55W	3950	4000K	35	23	540	18	**99260382**	50
PLL	55W	3950	6400K	35	23	540	18	**99260088**	50

~230V | 50/60 Hz | 2G11 | Ra≥82 | >10000 | <2s | 8000h | Hg <2mg

2 YEAR WARRANTY

PLC2P





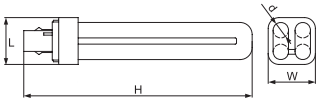
Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Length	Width	Height	d	Catalogue number	Packing (pcs)
PLC2P	10W	530	2700K	35	35	110	12	**99250367**	100
PLC2P	10W	530	4000K	35	35	110	12	**99250368**	100
PLC2P	10W	530	6400K	35	35	110	12	**99250083**	100
PLC2P	13W	780	2700K	35	35	136	12	**99250369**	100
PLC2P	13W	780	4000K	35	35	136	12	**99250370**	100
PLC2P	13W	780	6400K	35	35	136	12	**99250084**	100
PLC2P	18W	1120	2700K	35	35	151	12	**99250371**	100
PLC2P	18W	1120	4000K	35	35	151	12	**99250372**	100
PLC2P	18W	1120	6400K	35	35	151	12	**99250085**	100
PLC2P	26W	1500	2700K	35	35	171	12	**99250373**	100
PLC2P	26W	1500	4000K	35	35	171	12	**99250374**	100
PLC2P	26W	1500	6400K	35	35	171	12	**99250086**	100

~230V · 50/60 Hz · G24q · Ra≥82 · >10000 · <2s · 8000h · Hg <2mg

2 YEAR WARRANTY

PLC4P



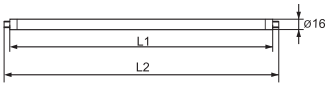


Model	Watt	Lumen (lm)	Colour temp.	Size (mm) Length	Width	Height	d	Catalogue number	Packing (pcs)
PLC4P	13W	780	2700K	35	35	136	12	**99270375**	100
PLC4P	13W	780	4000K	35	35	136	12	**99270376**	100
PLC4P	13W	780	6400K	35	35	136	12	**99270089**	100
PLC4P	18W	1120	2700K	35	35	151	12	**99270377**	100
PLC4P	18W	1120	4000K	35	35	151	12	**99270378**	100
PLC4P	18W	1120	6400K	35	35	151	12	**99270090**	100
PLC4P	26W	1500	2700K	35	35	171	12	**99270379**	100
PLC4P	26W	1500	4000K	35	35	171	12	**99270380**	100
PLC4P	26W	1500	6400K	35	35	171	12	**99270091**	100

~230V · 50/60 Hz · G24q · Ra≥82 · >10000 · <2s · 8000h · Hg <2mg

2 YEAR WARRANTY





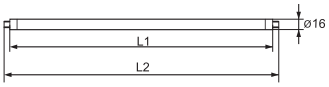
EST-T5 TRIPHOSPHOR

Model	Watt	Lumen (lm)	Colour temp.	Size (mm)		Catalogue number	Packing (pcs)
				Length 1	Length 2		
EST-T5	4W	195	2700K	144	150	**99220383**	500
EST-T5	4W	195	4000K	144	150	**99220384**	500
EST-T5	4W	195	6400K	144	150	**99220063**	500
EST-T5	6W	380	2700K	210	220	**99220385**	500
EST-T5	6W	380	4000K	210	220	**99220386**	500
EST-T5	6W	380	6400K	210	220	**99220064**	500
EST-T5	8W	495	2700K	287	303	**99220387**	500
EST-T5	8W	495	4000K	287	303	**99220388**	500
EST-T5	8W	495	6400K	287	303	**99220065**	500
EST-T5	13W	955	2700K	515	531	**99220389**	200
EST-T5	13W	955	4000K	515	531	**99220390**	200
EST-T5	13W	955	6400K	515	531	**99220066**	200
EST-T5	14W	1120	2700K	547	563	**99220391**	100
EST-T5	14W	1120	4000K	547	563	**99220392**	100
EST-T5	14W	1120	6400K	547	563	**99220067**	100
EST-T5	21W	1850	2700K	847	863	**99220393**	100
EST-T5	21W	1850	4000K	847	863	**99220394**	100
EST-T5	21W	1850	6400K	847	863	**99220068**	100
EST-T5	28W	2550	2700K	1148	1200	**99220395**	100
EST-T5	28W	2550	4000K	1148	1200	**99220396**	100
EST-T5	28W	2550	6400K	1148	1200	**99220069**	100
EST-T5	35W	3250	2700K	1445	1500	**99220397**	100
EST-T5	35W	3250	4000K	1445	1500	**99220398**	100
EST-T5	35W	3250	6400K	1445	1500	**99220399**	100
EST-T5	49W	3850	2700K	1445	1500	**99220400**	100
EST-T5	49W	3850	4000K	1445	1500	**99220401**	100
EST-T5	49W	3850	6400K	1445	1500	**99220402**	100
EST-T5	54W	4250	2700K	1148	1200	**99220425**	100
EST-T5	54W	4250	4000K	1148	1200	**99220426**	100
EST-T5	54W	4250	6400K	1148	1200	**99220427**	100

~230V | 50/60 Hz | G5 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY





EST3F-T8 TRIPHOSPHOR

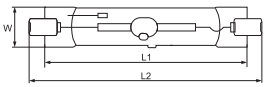
Model	Watt	Lumen (lm)	Colour temp.	Size (mm)		Catalogue number	Packing (pcs)
				Length 1	Length 2		
EST3F-T8	10W	600	2700K	328	344	**992304083F**	100
EST3F-T8	10W	600	4000K	328	344	**992304093F**	100
EST3F-T8	10W	600	6400K	328	344	**992300703F**	100
EST3F-T8	15W	1225	2700K	435	450	**992304103F**	100
EST3F-T8	15W	1225	4000K	435	450	**992304113F**	100
EST3F-T8	15W	1225	6400K	435	450	**992300713F**	100
EST3F-T8	18W	1500	2700K	590	605	**992304123F**	25
EST3F-T8	18W	1500	4000K	590	605	**992304133F**	25
EST3F-T8	18W	1500	6400K	590	605	**992300723F**	25
EST3F-T8	36W	3200	2700K	1200	1215	**992304143F**	25
EST3F-T8	36W	3200	4000K	1200	1215	**992304153F**	25
EST3F-T8	36W	3200	6400K	1200	1215	**992300733F**	25
EST3F-T8	58W	4450	2700K	1500	1515	**992304163F**	25
EST3F-T8	58W	4450	4000K	1500	1515	**992304173F**	25
EST3F-T8	58W	4450	6400K	1500	1515	**992300743F**	25

~230V | 50/60 Hz | G5 | Ra≥82 | >10000 | < 2 s | 8000h | Hg < 2 mg

2 YEAR WARRANTY

MHL





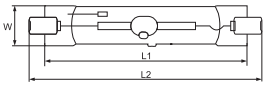
Watt	Lumen (lm)	Colour temp. (K)	Colour	Size (mm) Length 1	Length 2	Width	Catalogue number	Packing (pcs)
70W	5600	4200	transparent	104	117	20	**99410126**	20
150W	12000	4200	transparent	121	134	24	**99410127**	20

~230V · 50/60 Hz · Rx7s · Ra≥82 · 10000h

2 YEAR WARRANTY

MHL GR





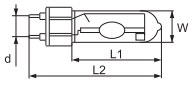
Watt	Colour	Size (mm) Length 1	Length 2	Width	Catalogue number	Packing (pcs)
70W	green	104	117	20	**99410132**	20
150W	green	121	134	24	**99410133**	20

~230V · 50/60 Hz · Rx7s · Ra≥82 · 10000h

2 YEAR WARRANTY

MHL





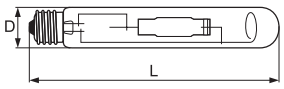
Watt	Lumen (lm)	Colour temp. (K)	Colour	Size (mm) Length 1	Length 2	Width	Distance (d)	Catalogue number	Packing (pcs)
70W	5600	4200	transparent	66	97	23	12	**99410128**	240
150W	12000	4200	transparent	79	110	23	12	**99410129**	240

~230V · 50/60 Hz · G12 · Ra≥80 · 10000h

2 YEAR WARRANTY

MHL T





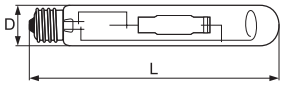
Watt	Lumen (lm)	Colour temp. (K)	Colour	Size (mm)		Catalogue number	Packing (pcs)
				Length	Diameter		
250W	21000	4200	transparent	210	46	**99410130**	45
400W	36000	4200	transparent	265	46	**99410131**	35

~230V | 50/60 Hz | E40 | Ra≥80 | 16000h

2 YEAR WARRANTY

MHLGR T



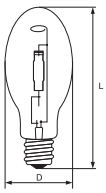


Watt	Colour	Size (mm)		Catalogue number	Packing (pcs)
		Length	Diameter		
250W	green	210	46	**99410134**	45
400W	green	265	46	**99410135**	35

~230V | 50/60 Hz | E40 | Ra≥80 | 16000h

2 YEAR WARRANTY





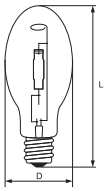
BML

Watt	Lumen (lm)	Colour temp. (K)	Lamp holder	Colour	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
160W	3000	4200	E27	matt	165	78	**99420136**	25
250W	5800	4200	E27	matt	210	90	**99420137**	20
250W	5800	4200	E40	matt	220	90	**99420138**	20

~230V | 50/60 Hz | Ra>45 | 8000h

2 YEAR WARRANTY





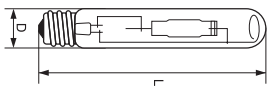
HPML

Watt	Lumen (lm)	Colour temp. (K)	Lamp holder	Colour	Size (mm) Length	Size (mm) Diameter	Catalogue number	Packing (pcs)
125W	6500	4200	E27	matt	165	78	**99430139**	25
250W	13500	4200	E40	matt	220	90	**99430140**	20
400W	23000	4200	E40	matt	280	120	**99430141**	10

~230V | 50/60 Hz | Ra>45 | 20000h

2 YEAR WARRANTY





HPSL

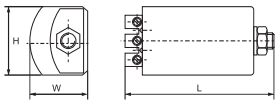
Watt	Lumen (lm)	Colour temp. (K)	Lamp holder	Colour	Size (mm) Length	Size (mm) Diameter	Current (A)	Catalogue number	Packing (pcs)
70W	5500	2000	E27	transparent	155	37	0,98	**99400075**	50
100W	8200	2000	E40	transparent	200	46	1,2	**99400076**	50
150W	14000	2000	E40	transparent	210	46	1,8	**99400077**	50
250W	23000	2000	E40	transparent	230	46	3	**99400078**	50
400W	42000	2000	E40	transparent	270	46	4,6	**99400079**	50

~230V | 50/60 Hz | Ra<25 | 24000h

2 YEAR WARRANTY

ELECTRONIC SUPERIMPOSED PULSE IGNITORS





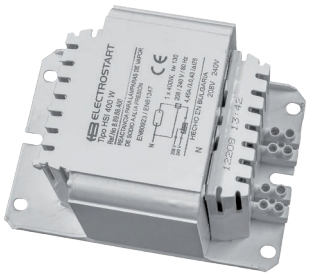
Type	HPSL	MHL	Ignition voltage (kV)	IMax.con-tin.lamp current(A)	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
ZX	70 ÷ 400W	35 ÷ 400W	3 ÷ 5	4.5	75	34	30	**991078400**	
ZX 1000	600 ÷ 1000W	600 ÷ 1000W	3.5 ÷ 5	12	95	43	35	**991078010**	

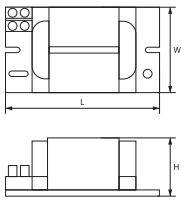
~230V 50Hz

3 YEAR WARRANTY

MAGNETIC BALLAST FOR HIGH PRESSURE SODIUM LAMPS (HPSL)

EEI=A3





Model	Watt	Current (A)	cos φ	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
BALLAST	70W	1,00	0,36	112	69	53	**990553071**	8
BALLAST	100W	1,20	0,45	112	69	53	**990653101**	8
BALLAST	150W	1,80	0,38	145	69	53	**990553151**	8
BALLAST	250W	3,00	0,40	180	69	53	**990553255**	6
BALLAST	400W	4,45	0,42	148	104	91	**990954402**	6
BALLAST	1000W	10,30	0,46	248	104	91	**990954010**	2

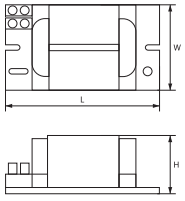
~230V 50Hz

3 YEAR WARRANTY

MAGNETIC BALLAST FOR METAL HALIDE LAMPS (MHL)

EEI=A3



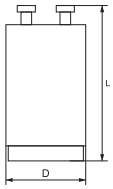


Model	Watt	Current (A)	cos φ	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
BALLAST	70W	1,00	0,36	112	69	53	**990553071**	8
BALLAST	150W	1,80	0,38	145	69	53	**990553151**	8
BALLAST	250W	3,00	0,40	180	69	53	**990553255**	6
BALLAST	400W	3,50	0,53	180	69	53	**990553401**	6
BALLAST	1000W	9,50	0,51	248	104	91	**990853010**	2

~230V 50Hz

3 YEAR WARRANTY





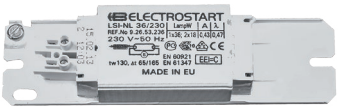
STARTER FOR FLUORESCENT LAMPS - TYPE T8

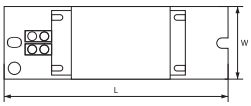
CE

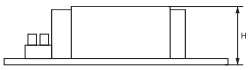
Model	Watt	Size (mm)		Catalogue number	Packing (pcs)
		Length	Diameter		
STARTER S2	4-22W	35	20	**990S2**	50
STARTER S10	4-65W	35	20	**990S10**	50

~230V | 50/60 Hz

3 YEAR WARRANTY







MAGNETIC BALLAST FOR FLUORESCENT LAMPS - TYPE T8

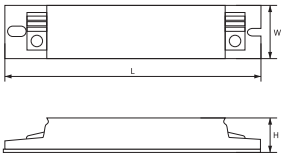
EEI=B2 CE

Model	Watt	Current (A)	cos φ	Size (mm)			Catalogue number	Packing (pcs)
				Length	Width	Height		
BALLAST 18W	1X18W	0,370	0.32	155	41	26	**990153818**	1
BALLAST 36W	1X36W / 2X18W	0,430	0.45	155	41	26	**990153033**	1

~230V | 50Hz

3 YEAR WARRANTY





ELECTRONIC BALLAST FOR FLUORESCENT LAMPS

EEI=A2 CE

Model	Watt	Lamp type	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
EB118	1X18	T8	274	27	27	**99EB0118**	50
EB218	2X18	T8	274	27	27	**99EB0218**	50
EB136	1X36	T8	274	27	27	**99EB0136**	50
EB236	2X36	T8	320	32	28	**99EB0236**	50
EB158	1X58	T8	320	32	28	**99EB0158**	50
EB258	2X58	T8	320	32	28	**99EB0258**	50
EB418	4X18	T8	330	33	29	**99EB0418**	50
EB114	1X14	T5	274	27	27	**99EB0114**	50
EB214	2X14	T5	250	25	25	**99EB0214**	50
EB128	1X28	T5	274	27	27	**99EB0128**	50
EB228	2X28	T5	250	25	25	**99EB0228**	50
EB135	1X35	T5	320	30	27	**99EB0135**	50
EB235	2X35	T5	322	30	27	**99EB0235**	50
EB149	1X49	T5	320	30	27	**99EB0149**	50
EB249	2X49	T5	320	30	27	**99EB0249**	50
EB154	1X54	T5	320	30	27	**99EB0154**	50
EB254	2X54	T5	320	30	27	**99EB0254**	50
EB414	4X14	T5	250	25	25	**99EB0414**	50

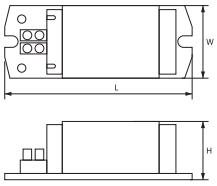
~230V | 50/60 Hz

3 YEAR WARRANTY

MAGNETIC BALLAST FOR COMPACT FLUORESCENT LAMPS (TC-D)

EEI=B2 CE





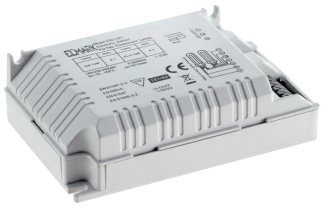
Model	Watt	Current (A)	cos φ	Size (mm)			Catalogue number	Packing (pcs)
				Length	Width	Height		
BALLAST	18W	0,220	0.48	105	41	26	**990153008**	40
BALLAST	26W	0,315	0.47	129	41	26	**990153026**	40

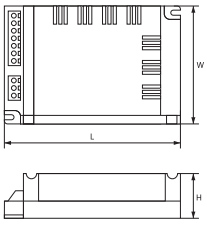
~230V 50Hz

3 YEAR WARRANTY

ELECTRONIC BALLAST FOR FLUORESCENT LAMPS - TYPE PLC4P

EEI=A2 CE





Model	Watt	Lamp type	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
EB213PL	2X13W	PLC4P	103	67	30	**99EB0213PL**	100
EB218PL	2X18W	PLC4P	103	67	30	**99EB0218PL**	100
EB226PL	2X26W	PLC4P	103	67	30	**99EB0226PL**	100

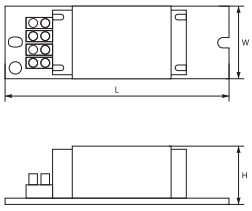
~230V 50/60 Hz

3 YEAR WARRANTY

ELECTROMAGNETIC TRANSFORMERS FOR LOW VOLTAGE LAMPS 12VAC

CE





Model	Uinput	Uoutput	Watt	Size (mm)			Catalogue number	Packing (pcs)
				Length	Width	Height		
TR 50/12	230v	11.5VAC	50W	155	41	32	**990253050**	1
TR 105/12	230v	11.5VAC	105W	235	41	32	**990253105**	1

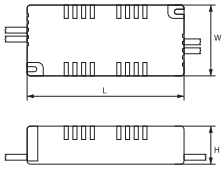
~230V 50/60 Hz

3 YEAR WARRANTY

ELECTRONIC TRANSFORMER FOR HALOGEN LAMPS

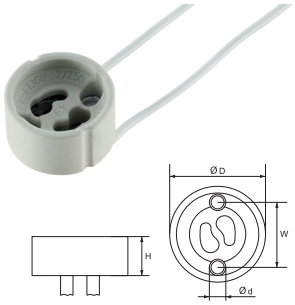
CE





Model	Watt	Voltage	Size (mm)			Catalogue number	Packing (pcs)
			Length	Width	Height		
SET60	60W	230V AC / 12V AC	96	42	22	**99SET60**	100
SET105	105W	230V AC / 12V AC	96	42	22	**99SET105**	100
SET120	120W	230V AC / 12V AC	110	46	25	**99SET120**	100
SET160	160W	230V AC / 12V AC	110	46	25	**99SET160**	100
SET200	200W	230V AC / 12V AC	150	55	33	**99SET200**	100

3 YEAR WARRANTY

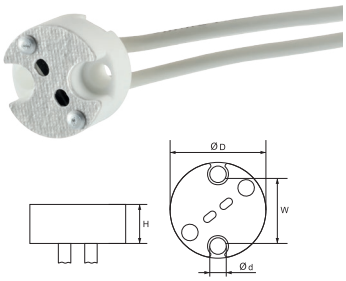


LAMP HOLDER

Model	Lamp	Material	Size (mm)				Catalogue number	Packing (pcs)
			Diameter	Width	Height	d		
Lamp holder	GU 10	ceramic	27	20	16	3.4	**99292**	100

Length of the cable: 140 mm

3 YEAR WARRANTY



LAMP HOLDER

Model	Lamp	Material	Size (mm)				Catalogue number	Packing (pcs)
			Diameter	Width	Height	d		
Lamp holder	G 4 / G 5.3 / GY 6.35	ceramic	16	11	10	3.4	**99293**	200

Length of the cable: 90 mm

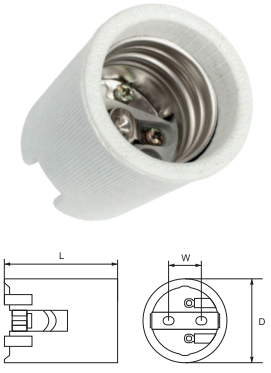
3 YEAR WARRANTY



LAMP HOLDER E14

Model	Lamp	Material	Size (mm)				Catalogue number	Packing (pcs)
			Length	Diameter	Width	d		
Lamp holder	E 14	ceramic	44	33	20	4,3	**99296**	40/400
Lamp holder with support	E 14	ceramic	44	33	20	4,3	**99297**	40/400

3 YEAR WARRANTY



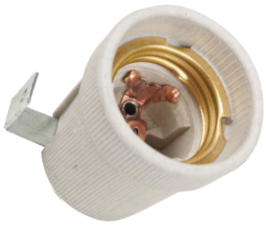
LAMP HOLDER E40

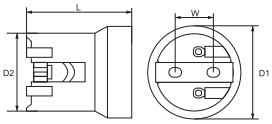
Model	Lamp	Material	Size (mm)				Catalogue number	Packing (pcs)
			Length	Diameter	Width	d		
Lamp holder	E 40	ceramic	72	56	23	4,3	**99298**	100

3 YEAR WARRANTY

LAMP HOLDER E27





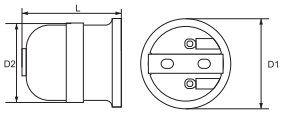


Model	Lamp	Material	Size (mm) Length	Diameter 1	Diameter 2	Width	d	Catalogue number	Packing (pcs)
Lamp holder	E 27	ceramic	48	41	35	20	4,3	**99294**	40/400
Lamp holder with support	E 27	ceramic	48	41	35	20	4,3	**99295**	16/320

3 YEAR WARRANTY

LAMP HOLDER HANGING



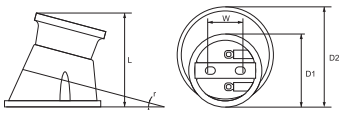


Model	Lamp	Material	Size (mm) Length	Diameter 1	Diameter 2	Catalogue number	Packing (pcs)
Lamp holder hanging	E 27	bakelite	55	42	40	**19216301**	240

3 YEAR WARRANTY

LAMP HOLDER CURVED



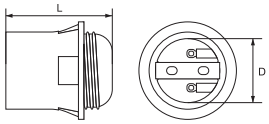


Model	Lamp	Material	Size (mm) Length	Diameter 1	Diameter 2	Width	d	r	Catalogue number	Packing (pcs)
Lamp holder curved	E 27	bakelite	50	42	63	50	4,3	45°	**192166**	240

3 YEAR WARRANTY

LAMP HOLDER PENDANT



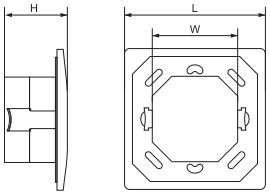


Model	Lamp	Material	Size (mm) Length	Diameter	Catalogue number	Packing (pcs)
Lamp holder pendant	E 27	bakelite	60	38	**192165**	240

3 YEAR WARRANTY

INFRARED MOTION SENSOR ST02A





Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
ST02A	160°	ESL - 200W IL - 500W	max. 9m	white	80	48.5	24.7	**99DS100**	100

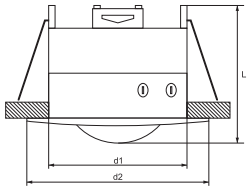
~230V 50/60 Hz

3 YEAR WARRANTY

Time-Delay: 10sec ± 3sec to 7min ± 2min (adjustable)
Ambient light: <3-2000lux (adjustable)
Detection motion speed: 0.6 - 1.5m/s
Two wire line
Installation height: 1 - 1.8m

INFRARED MOTION SENSOR ST42





Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Length	d1	d2	Catalogue number	Packing (pcs)
ST42	360°	ESL - 300W IL - 1200W	max.6m	white	75,6	76	100	**99DS104**	50

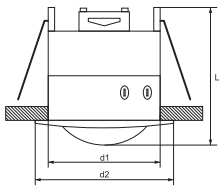
~230V 50/60 Hz

3 YEAR WARRANTY

Time-Delay: 10sec ± 3sec to 7min ± 2min (adjustable)
Ambient light: <3 - 2000lux (adjustable)
Detection motion speed: 0.6 - 1.5m/s
Installation height: 2.2 - 4m

INFRARED MOTION SENSOR ST41





Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Length	d1	d2	Catalogue number	Packing (pcs)
ST41	360°	ESL - 300W IL - 1200W	max.6m	white	75,6	61,5	76	**99DS103**	50

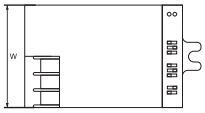
~230V 50/60 Hz

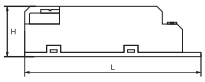
3 YEAR WARRANTY

Time-Delay: 10sec ± 3sec to 7min ± 2min (adjustable)
Ambient light: <3 - 2000lux (adjustable)
Detection motion speed: 0.6 - 1.5m/s
Installation height: 2.2 - 4m

MICROWAVE SENSOR ST701F







Type	Detection range	Rated load	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
ST701F	180°/360°	ESL - 200W IL - 500W	white	58	40.5	25.5	**99DS400**	100

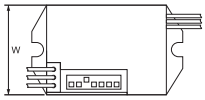
~230V 50/60 Hz

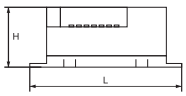
3 YEAR WARRANTY

Time Delay: 10sec ± 3sec to 12min ± 1min (adjustable)
Ambient Light: <3 - 2000LUX (adjustable)
HF System: 5.8GHz CW radar,ISM band
Detection Distance: Wall: 5 - 15m (adjustable)
Ceilling: 2 - 8m(radius), adjustable
Installation Height: Wall:1.5 - 3.5m
Ceiling: 2 - 10m

INFRARED MOTION SENSOR ST24







Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
ST24	120°/360°	ESL - 200W IL - 800W	max.6m	white	55.8	34	24.6	**99DS109**	100

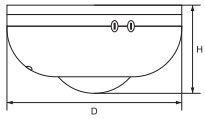
~230V 50/60 Hz

3 YEAR WARRANTY

Time Delay: 5s, 30s, 1min, 3min, 5min, 8min(choice)
Ambient Light: 10LUX/2000LUX (choice)
Detection Distance: 3m/6m(choice) (<24oC)
Detection motion speed: 0.6 - 1.5m/s

INFRARED MOTION SENSOR ST07





Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Height	Diameter	Catalogue number	Packing (pcs)
ST07	360°	ESL - 300W IL - 1200W	max.6m	white	58	115	**99DS101**	50
ST07	360°	ESL - 300W IL - 1200W	max.6m	black	58	115	**99DS102**	50

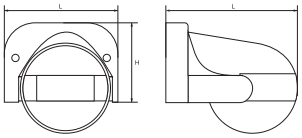
~230V 50/60 Hz

3 YEAR WARRANTY

Time-Delay: 10sec ± 3sec to 7min ± 2min (adjustable)
Ambient light: <3 - 2000lux (adjustable)
Detection motion speed: 0.6 - 1.5m/s
Installation height: 2.2 - 4m

INFRARED MOTION SENSOR ST09





Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
ST09	180°	ESL - 300W IL - 1200W	max.12m	white	86,4	100	60,4	**99DS105**	50
ST09	180°	ESL - 300W IL - 1200W	max.12m	black	86,4	100	60,4	**99DS106**	50

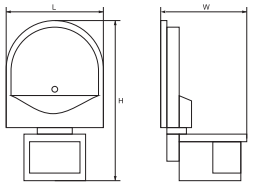
~230V 50/60 Hz

3 YEAR WARRANTY

Time-Delay: 10sec ± 3sec to 7min ± 2min (adjustable)
Ambient light: <3 - 2000lux (adjustable)
Detection motion speed: 0.6 - 1.5m/s
Installation height: 2.2 - 4m IP44

INFRARED MOTION SENSOR ST10A





Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
ST10A	180°	ESL - 300W IL - 1200W	5-12m	white	87,4	120	144	**99DS107**	50

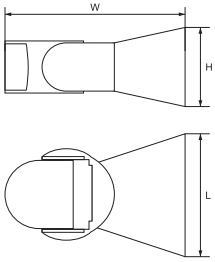
~230V 50/60 Hz

3 YEAR WARRANTY

Time-Delay: 10sec ± 3sec to 7min ± 2min (adjustable)
Ambient light: <3 - 2000lux (adjustable)
Detection motion speed: 0.6 - 1.5m/s
Installation height: 2.2 - 4m IP44

INFRARED MOTION SENSOR ST15





Type	Detection range	Rated load	Detection distance	Colour body	Size (mm) Length	Width	Height	Catalogue number	Packing (pcs)
ST15	180°	ESL - 300W IL - 1200W	max.12m	white	80	117,2	31,5	**99DS108**	50

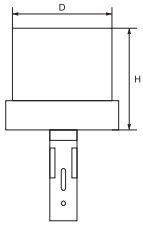
~230V 50/60 Hz

3 YEAR WARRANTY

Time-Delay: 10sec ± 3sec to 7min ± 2min (adjustable)
Ambient light: <3 - 2000lux (adjustable)
Detection motion speed: 0.6 - 1.5m/s
Installation height: 2.2 - 4m IP65

LIGHT-CONTROL SENSOR ST303





Type	Rated current	Colour body	Size (mm) Height	Size (mm) Diameter	Catalogue number	Packing (pcs)
ST303	25A	white	70,5	78,3	**99DS300**	50

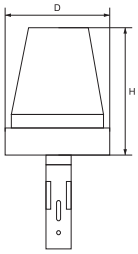
~230V 50/60 Hz

3 YEAR WARRANTY

Ambient light: <5 - 50lux (adjustable) IP44

LIGHT-CONTROL SENSOR ST302





Type	Rated current	Colour body	Size (mm) Height	Size (mm) Diameter	Catalogue number	Packing (pcs)
ST302	10A	white	76,7	63	**99DS301**	100

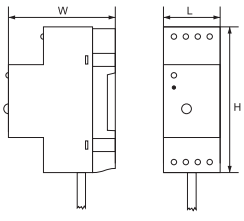
~230V 50/60 Hz

3 YEAR WARRANTY

Ambient light: <5 - 50lux (adjustable) IP44

LIGHT-CONTROL SENSOR ST308





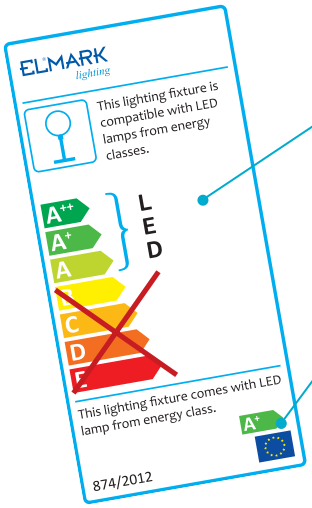
Type	Rated current	Colour body	Size (mm) Length	Size (mm) Width	Size (mm) Height	Catalogue number	Packing (pcs)
ST308	20A	white	35	66	90	**99DS302**	100

~230V 50/60 Hz

3 YEAR WARRANTY

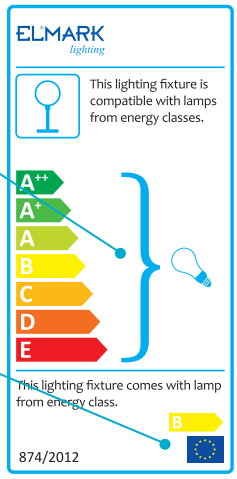
Ambient light: <2 - 100lux (adjustable) IP65

ENERGY EFFICIENCY LABELS



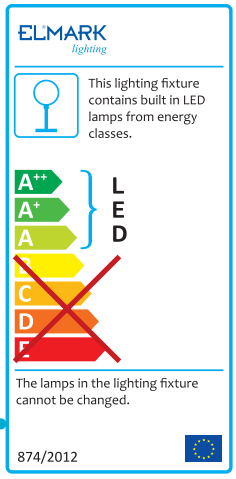
The information in brackets at the centre of the label indicates which lamps may be used for the luminaire. In this case, the product is only compatible with lamps with an energy efficiency rating of better than B.

If lamps are included with the luminaire, their energy classes are indicated at the bottom of the label.

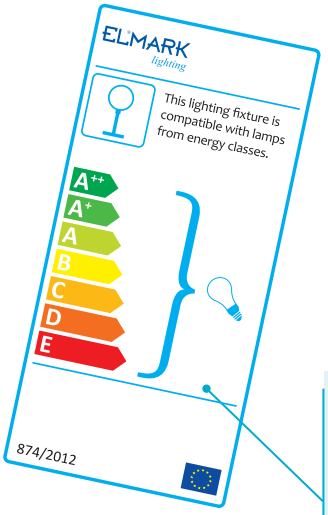


The information in brackets at the centre of the label indicates which lamps (which EEI) may be used for the luminaire. In this case, the product is compatible with lamps with all energy efficiency ratings.

If lamps are included with the luminaire, their energy classes are indicated at the bottom of the label.



This label indicates that the luminaire is sold with built-in LED lamps that cannot be replaced by the consumer himself.



This label indicates that no lamps are included with the luminaire. Consumers are free to choose their preferred lamp within the indicated energy classes.

Indicates, which lamps may be used for the luminaire.

A++ A

The product is compatible with LED boards with energy efficiency - A...A++. The Luminaire contains highly efficient LED boards (cannot be replaced by the end consumer)

A++ A+ A

incl. efficient LED lamps

B C

incl. efficient fluorescent lamps

D E

incl. halogen lamps

A+ A++ A

The product is compatible with LED boards with an energy efficiency rating - A...A++. The Luminaire contains highly efficient lamp A+.

A++ C

The product is compatible with lamps with an energy efficiency rating - C...A++.

A++ B

The product is compatible with lamps with an energy efficiency rating - B...A++.

A A++ E

The product is compatible with lamps with an energy efficiency rating - E...A++. The Luminaire contains highly efficient lamp A.

B A++ B

The product is compatible with lamps with an energy efficiency rating - B...A++. The Luminaire contains highly efficient lamp B.

A++ E

The product is compatible with lamps with an energy efficiency rating - E...A++.

HOW TO USE OUR CATALOGUE

LED INTERIOR LIGHTING

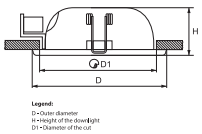
LED Downlight fixtures

ELMARK lighting



GL210LED

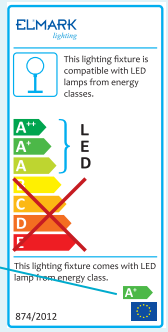
Watt	Whole fixture lumens (lm)	Colour temp. (K)	Colour body	Size (mm) D	H	D1	Catalogue number	Packing (pcs)
2X10W	1600	4000-4300	white	228	110	210	**92210LED01**	1
2X10W	1600	2700-3000	white	228	110	210	**92210LED03**	1
2X10W	1600	4000-4300	satin nickel	228	110	210	**92210LED02**	1
2X10W	1600	2700-3000	satin nickel	228	110	210	**92210LED04**	1



Legend:
D = Outer diameter
H = Height of the downlight
D1 = Diameter of the cut

Body: aluminium alloy | **Light source:** LED lamp PLC | LED recessed round downlight. Easy installation due to handy clips. Lumens of the LED lamps (lm): 10W - 890lm; 15W - 1360lm.





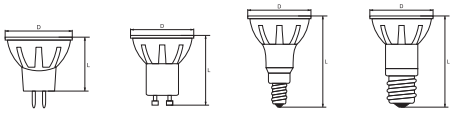
incl. highly efficient LED lamps from energy class A+
This luminaire can be used with lamps from the indicated energy classes.

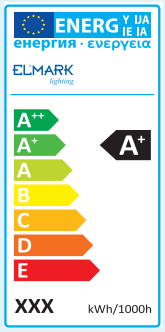


LEDSMD PAR16

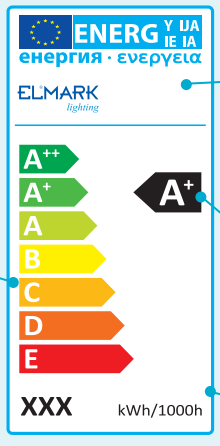
Watt	Colour	LED chip lumens (lm)/ LED (pcs)	LED lamp lumens (lm)	Colour temp. (K)	Size (mm) Length	Diameter	Catalogue number	Packing (pcs)
5,5W	white	33/19	400	4000	75	50	**99LED421**	100
5,5W	warm white	33/19	400	2700	75	50	**99LED422**	100

3 YEAR WARRANTY





Energy efficiency labels



Supplier's name or trade mark
Supplier's model identifier

Coloured arrows are used to differentiate energy efficient from less energy efficient products: dark green indicates a highly efficient product and red a low efficiency product.

Energy efficiency class of the appliance

Annual energy consumption in kWh

SYMBOLS USED IN THE CATALOGUE

Protection class

The protection class indicates to what extent the lamp is protected against electric shock. All lamps in this catalogue are at least protected with the protection class 1 - a higher class is specified in the information box of the respective lamp.

protection class 1:
protective earthing

protection class 2:
protective insulation

protection class 3:
protective low voltage

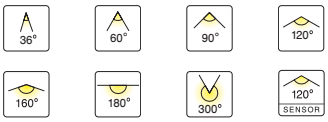
Protection rating

The protection rating ensures the operational safety of luminaires. The first number specifies the extent of the protection against the ingress of foreign bodies; the second number identifies the humidity protection grade. All luminaires in this catalogue are at least protected with the rating IP20 – a higher rating is specified in the information box of the luminaire.

IP 20 IP 21 IP 30 IP 44
IP 54 IP 64 IP 65 IP 67

Beam angle

The beam angle describes the „light cone" emitted by a directional illuminant. It corresponds to the angle at which the luminous intensity is 50% of the centre beam intensity. An illuminant is called directional if at least 80% of its light output is within a cone with an angle of 120°.



Average lifetime

The average lifetime of illuminants describes the time after which 50% of a number of illuminants has failed. For LED illuminants, the average lifetime is defined by a lumen maintenance of 70%.

30000h Average lifetime

Colour rendering index

Colour rendering index (CRI) is a measure of a light source's ability to show object colours "realistically" or "naturally". Can take values from 0 to 100.

Ra>70 Ra>80 Ra≥80 Ra≥82

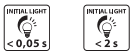
Dimmable

Light sources labelled as "dimmable" can be dimmed with a suitable commercially available dimmer. The dimmable range for LED might be restricted. If the sign is crossed the illuminant is not dimmable.

Dimmable Non-dimmable

Warm-up time (60 %) (s)

Time for warming the lamp up to 60% of its full luminous flux (if the time is less than 1 second, it can be indicated as„instant full light").



Number of switches

Number of commutations until the untimely failure of lamp.



Mercury content

The content of Mercury in the lamp. If there is Mercury, this is shown as follows <X.X mg.



SMD LED

SMD is a type of LED module that use Surface mount technology (SMT) to mount LED chips on printed circuit boards (PCB). SMD LED modules are widely used for backlighting, home illumination, shop-windows, advertising, automobile interior lighting, Christmas lights etc.

SMD SMD 3014 SMD 3528 SMD 5050

COB LED

COB (Chips on Board) , is a new technology of LED packaging for LED light engine. Multi LED chips are packaged together as one lighting module. When it light up, it looks like a lighting panel.

COB COB BRACKET Type of diode

High power LED

HIGH POWER LED - a certain number of single diodes with small power - usually 1W, connected in a specific way, and mounted in one body covered by optics (lens). They are used in light sources and lighting fixtures with small beam angle and high luminous intensity.

High power Type of diode

LAMP BASE


E14

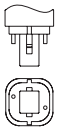

E27

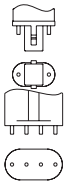

E40


GU10


G4


GU5.3


G24d


G23
2G11


G9


G13


G5


G12


R7s


Rx7s

IMPORTANT: LED luminaires and lamps must not be connected in an electrical circuit, together with luminaires for discharge lamps

EU directive compatibility mark

Mounting on the normal flammable base

Restriction of Hazardous Substances Directive

Electromagnetic compatibility

Adapted for 230V power supply

Adapted for 230V direct current power supply

Adapted for 230V via suitable power supply (transformer/ ballast/driver)

Adapted for 12V power supply

Adapted for 12V direct current power supply

Adapted for 12V alternating current power supply

Adapted for 12V alternating/ direct current power supply

Power supply frequency

Power supply (transformer/ ballast/driver) included

Power supply (transformer/ ballast/driver) not included

The plug is included in the set

Light source power

Light source current

PLC LED lamp

PLC non - integrated compact fluorescent lamp 2 pin

PLC non - integrated compact fluorescent lamp

Compact fluorescent lamp

GU10 LED lamp

GU10 halogen bulb

MR16 LED lamp

MR-16 halogen bulb

G-9 halogen bulb

JC halogen bulb

MH-7 metal halide lamp

MH-40 metal halide lamp

T5 linear fluorescent lamp

T5 linear fluorescent lamp included in the product

T8 linear LED lamp

T8 linear fluorescent lamp

T8 linear fluorescent lamp included in the product

Minimum distance from the illuminated object

Ground mounting

Wall mounting

Ceiling mounting

Wall and ceiling mounting

For outdoor use

For indoor use

For outdoor and indoor use

Fixed fitting

Movable fitting

Reel length

Triple rail terminal block 2.5mm²

Triple rail terminal block 2.5mm²

Switch ON / OFF

Do not touch with bare hands

COLOUR TEMPERATURE

KITCHEN & BATH | WORK SPACES | GARAGE & BASEMENT | CLOSET & LAUNDRY | ACTIVE SPACES



WARM — COOL

3000K	3500K	4100K	5000K	6500K
warm white colour	**natural white colour**	**neutral white colour**	**sunshine colour**	**daylight colour**
warm colour tone	natural colour tone	neutral colour tone	cool colour tone	cold colour tone

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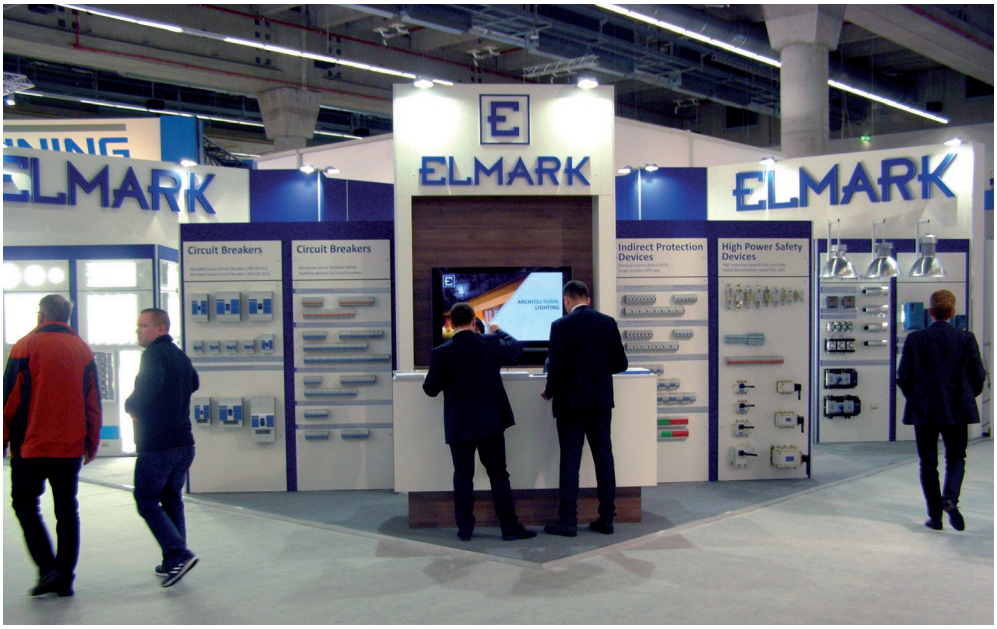

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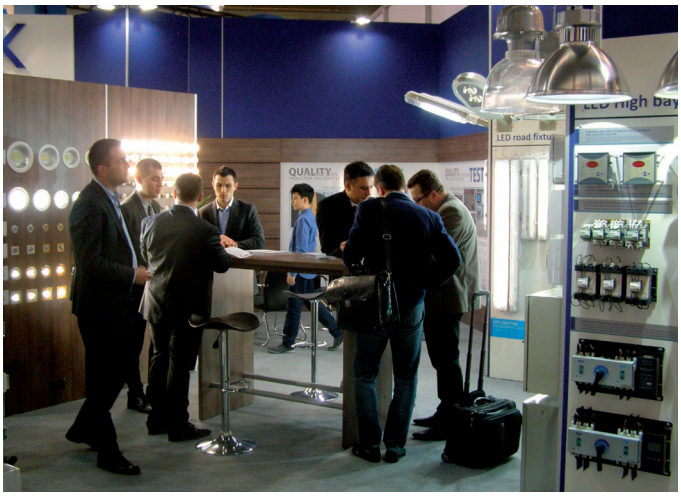

DUBAI

UAE, 2014









JAKARTA

Indonesia, 2013











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