

LZ Position Switches

- Metal housing, two conduit entries
- Protection degree IP67 according to EN 60529
- 17 contact blocks available
- 42 actuators available
- M12 assembled connector versions
- Silver contacts gold plated versions
- Other versions available (see LM, LR, LZ datasheets)



Approvals



General data

Ambient temperature:	-25°C ... +80°C
Max. actuation frequency:	3600 operating cycles ¹ /hour
Mechanical endurance:	20 million operating cycles ¹
Mounting position:	any
Safety parameters:	
B _{10d} :	40,000,00 for NC contacts
Mechanical interlock, not coded:	type 1 according to EN ISO 14119

(1) One operation cycle means two movements, one to close and one to open contacts, as defined in EN 60947-5-1.

Cable cross section (flexible copper strands)

Contact blocks C20, C21, C22, C33, C34:	min. 1 x 0.34 mm ² (1 x AWG 22)	max. 2 x 1.5 mm ² (2 x AWG 16)
Contact block C5, C6, C7, C9, C10, C11, C12, C13, C14, C15, C16, C18:	min. 1 x 0.5 mm ² (1 x AWG 20)	max. 2 x 2.5 mm ² (2 x AWG 14)
Contact block C2:	min. 1 x 0.5 mm ² (1 x AWG 20)	max. 2 x 1.5 mm ² (2 x AWG 16)

In conformity with standards:

IEC 60947-5-1, EN 60947-5-1, EN 60947-1, EN 50047, IEC 60204-1, EN 60204-1, EN ISO 14119, EN ISO 12100, IEC 60529, EN 60529, UL 508, CSA 22.2 No. 14.

Approvals:

IEC 60947-5-1, UL 508, CSA 22.2 No.14, GB14048.5-2001.

In conformity with the requirements of:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and EMC Directive 2004/108/EC.

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1.

Installation for safety applications:

Use only switches marked with the symbol ⊕ aside the product code. Always connect the safety circuit to the **NC contacts** (normally closed contacts: C11-C12, C21-C22 or C31-C32) as stated in **standard EN 60947-5-1, encl. K, par. 2**. Actuate the switch **at least up to the positive opening travel** shown in the travel diagrams. Operate the switch **at least with the positive opening force**, indicated between brackets below each article, aside the minimum force value.

Electrical data		Utilization category			
without connector	Thermal current (I _{th}):	10 A	Alternating current: AC15 (50 ÷ 60 Hz)		
	Rated insulation voltage (U _i):	500 Vac 600 Vdc	U _e (V)	250	400
		400 Vac 500 Vdc (contact blocks 2, 11, 12, 20, 21, 22, 33, 34)	I _e (A)	6	4
	Rated impulse withstand voltage (U _{imp}):	6 kV			1
with M12 connector 5 poles		4 kV (contact blocks 20, 21, 22, 33, 34)	Direct current: DC13		
	Conditional short circuit current:	1000 A according to EN 60947-5-1	U _e (V)	24	125
	Protection against short circuits:	type aM fuse 10 A 500 V	I _e (A)	6	1.1
	Pollution degree:	3			0.4
with M12 connector 8 poles	Thermal current (I _{th}):	4 A	Alternating current: AC15 (50 ÷ 60 Hz)		
	Rated insulation voltage (U _i):	250 Vac 300 Vdc	U _e (V)	24	120
	Protection against short circuits:	type gG fuse 4 A 500 V	I _e (A)	4	4
	Pollution degree:	3	Direct current: DC13		
with M12 connector 8 poles			U _e (V)	24	125
	Thermal current (I _{th}):	2 A	I _e (A)	4	1.1
	Rated insulation voltage (U _i):	30 Vac 36 Vdc			0.4
	Protection against short circuits:	type gG fuse 2 A 500 V	Direct current: DC13		
with M12 connector 8 poles			U _e (V)	24	
	Pollution degree:	3	I _e (A)	2	

Specifications

Rated insulation voltage (U_i): 500 Vac
400 Vac (for contact blocks C2, C11, C12, C20, C21, C22, C33, C34)

Conventional free air thermal current (I_{th}): 10 A

Protection against short circuits: type aM fuse 10 A 500 V

Rated impulse withstand voltage (U_{imp}): 6 kV
4 kV (for contact blocks C20, C21, C22, C33, C34)

Protection degree of the housing: IP67

MV terminals (screw terminals)

Pollution degree 3

Utilization category: AC15

Operating voltage (U_e): 400 Vac (50 Hz)

Operating current (I_e): 3 A

Forms of the contact element: Za, Zb, Za+Za, Y+Y, X+X, Y+Y+X, Y+Y+Y, Y+X+X

Positive opening of contacts on contact blocks C5, C6, C7, C9, C11, C13, C14, C16, C18, C20, C21, C22, C33, C34

In conformity with standards: EN 60947-1, EN 60947-5-1 + A1:2009, fundamental requirements of the Low Voltage Directive 2006/95/EC.

Please contact our technical service for the list of approved products.

UL Approval

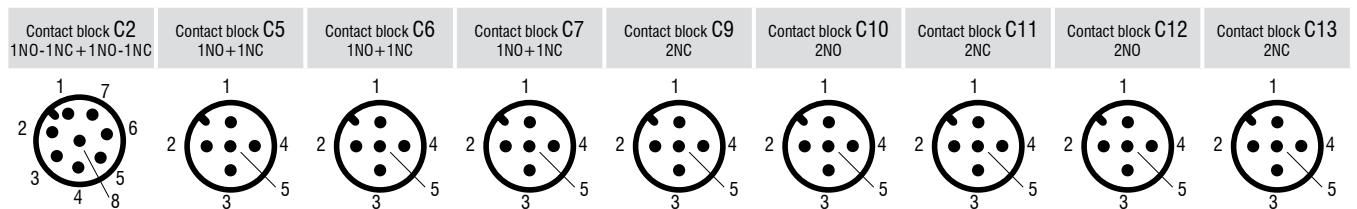
Utilization categories Q300 (69 VA, 125 ... 250 Vdc)
A600 (720 VA, 120 ... 600 Vac)

Data of housing type 1, 4X "indoor use only", 12, 13
For all contact blocks except C2 and C3 use 60 or 75°C copper (Cu) conductor, rigid or flexible, wire size AWG 12/14. Terminal tightening torque of 7.1 lb in (0.8 Nm).
For contact blocks C2 and C3 use 60 or 75 °C copper (Cu) conductor, rigid or flexible, wire size AWG 14. Terminal tightening torque of 12 lb in (1.4 Nm).

In conformity with standard: UL 508, CSA 22.2 No.14

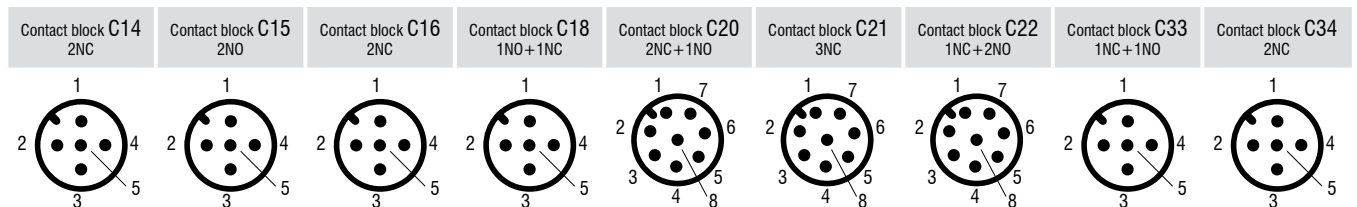
Please contact our technical service for the list of approved products.

Connection diagram for M12 connectors



M12 connector, 8 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles

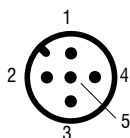
Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.
NO	3-4	NC	1-2	NC	1-2	NC	1-2	NC	1-2	NO	1-2	NC	1-2	NC (1°)	1-2
NC	5-6	NO	3-4	NO	3-4	NO	3-4	NC	3-4	NO	3-4	NC	3-4	NC (2°)	3-4
NC	7-8	ground	5	ground	5	ground	5	ground	5	ground	5	ground	5	ground	5
NO	1-2														



M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 5 poles M12 connector, 8 poles M12 connector, 8 poles M12 connector, 8 poles M12 connector, 5 poles M12 connector, 5 poles

Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.	Contacts	Pin no.
NC (1°)	1-2	NO (1°)	1-2	NC, lever at the right 1-2	1-2	NC	1-2	NC	3-4	NC	3-4	NC	3-4	NC	1-2
NC (2°)	3-4	NO (2°)	3-4	NC, lever to the left 3-4	3-4	NO	3-4	NC	5-6	NC	5-6	NO	5-6	NO	3-4
ground	5	ground	5	ground	5	ground	5	NO	7-8	NC	7-8	NO	7-8	ground	5
								ground	1	ground	1	ground	1		

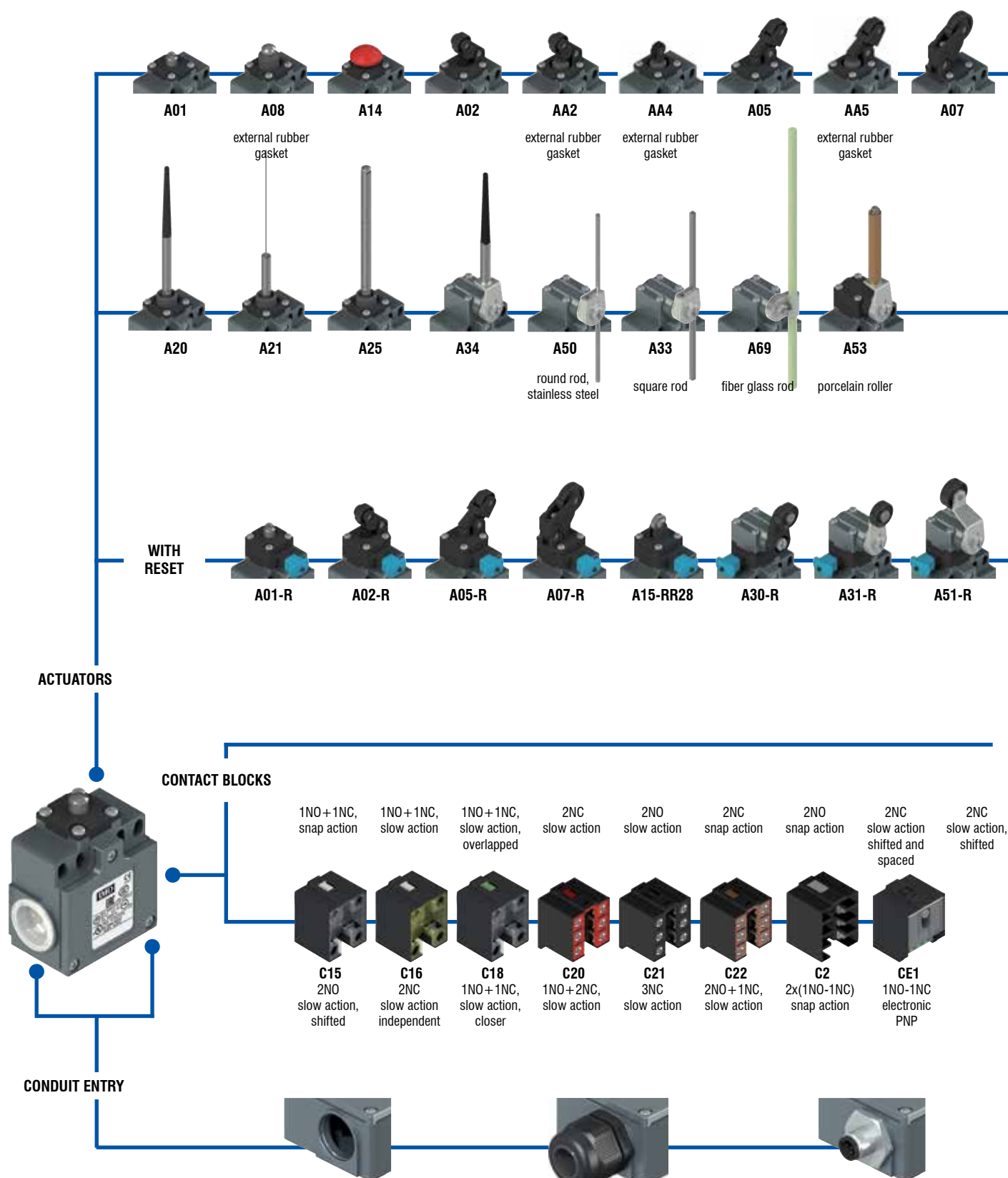
Contact block CE1
PNP



M12 connector, 5 poles

Contacts	Pin no.
+	1
-	3
NC	2
NO	4
ground	5

Selection diagram



Threaded conduit entries	
20	M20x1.5 (standard)
	PG 13.5

With cable gland	
X123	for cables from Ø 6 to Ø 12 mm from the right
X223	for cables from Ø 6 to Ø 12 mm from the left
X127	for cables from Ø 3 to Ø 7 mm from the right
X227	for cables from Ø 3 to Ø 7 mm from the left

With M12 metal connector	
X41	8 poles, right
X42	8 poles, left
X51	5 poles, right
X52	5 poles, left

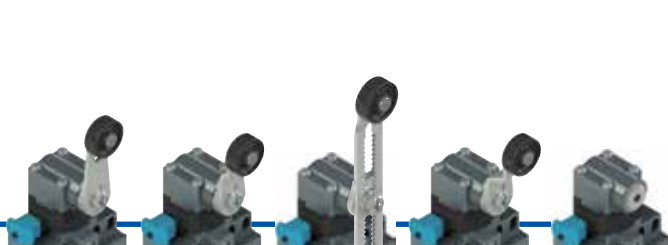
—●— product options
 —→— accessory sold separately



AA7 external rubber gasket
A15-R28 roller Ø 12 mm, stainless steel
A16 roller Ø 20 mm
A12
A13 roller Ø 12 mm, stainless steel
A76 rope switch for signalling



A30 **A31** **A51** **A52** **A54** **A55** adjustable lever
A56 adjustable safety lever
A57 **A38** without actuator



A52-R **A54-R** **A56-R** **A57-R** **A38-R** without actuator



Options & Ordering Codes

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

Housing		Contact Blocks		Actuators		Suffix		Preinstalled Cable Gland or Connectors		Threaded Conduit Entry		Contact Type		Reset Hooking	
metal, two conduit entries	LZ	1NO+1NC, snap action	C5	short plunger	A01	no suffix (standard)			no cable gland or connector (standard)	PG 13.5 (standard)		silver (standard)		without reset (standard)	
		1NO+1NC, slow action	C6	roller lever	A02	with stainless steel roller:	1	X121	assembled cable gland from right			G	silver, gold plated 1 µm (contact block 2 excluded)	R	simultaneous reset
		1NO+1NC, slow action, overlapped	C7	offset roller lever	A05	- Ø 14mm for actuators A2, A02, A5, A05		X51	5 poles M12 assembled metal connector from right	20	M20 x 1.5			RI	simultaneous reset with increased force
			...			- Ø 20mm for actuators A30, A31, A51, A52, A54, A55, A56, A57	2								
		Other contact blocks available upon request					3								
							4								

Contact type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
- △** = electronic PNP

Contact blocks

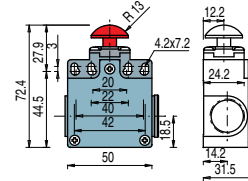
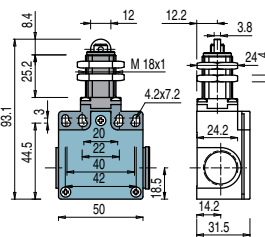
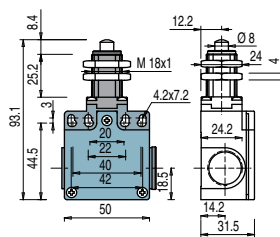
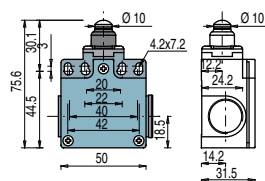
		With stainless steel roller on request	With external rubber gasket With stainless steel roller on request	With external rubber gasket
C5	R	LZC5A01-20 → 1NO+1NC	LZC5A02-20 → 1NO+1NC	LZC5AA2-20 → 1NO+1NC
C6	L	LZC6A01-20 → 1NO+1NC	LZC6A02-20 → 1NO+1NC	LZC6AA2-20 → 1NO+1NC
C7	LO	LZC7A01-20 → 1NO+1NC	LZC7A02-20 → 1NO+1NC	LZC7AA2-20 → 1NO+1NC
C9	L	LZC9A01-20 → 2NC	LZC9A02-20 → 2NC	LZC9AA2-20 → 2NC
C10	L	LZC10A01-20 2NO	LZC10A02-20 2NO	LZC10AA2-20 2NO
C11	R	LZC11A01-20 → 2NC	LZC11A02-20 → 2NC	LZC11AA2-20 → 2NC
C12	R	LZC12A01-20 2NO	LZC12A02-20 2NO	LZC12AA2-20 2NO
C13	LV	LZC13A01-20 → 2NC	LZC13A02-20 → 2NC	LZC13AA2-20 → 2NC
C14	LS	LZC14A01-20 → 2NC	LZC14A02-20 → 2NC	LZC14AA2-20 → 2NC
C15	LS	LZC15A01-20 2NO	LZC15A02-20 2NO	LZC15AA2-20 2NO
C18	LA	LZC18A01-20 → 1NO+1NC	LZC18A02-20 → 1NO+1NC	LZC18AA2-20 → 1NO+1NC
C20	L	LZC20A01-20 → 1NO+2NC	LZC20A02-20 → 1NO+2NC	LZC20AA2-20 → 1NO+2NC
C21	L	LZC21A01-20 → 3NC	LZC21A02-20 → 3NC	LZC21AA2-20 → 3NC
C22	L	LZC22A01-20 → 2NO+1NC	LZC22A02-20 → 2NO+1NC	LZC22AA2-20 → 2NO+1NC
C2	R	LZC2A01-20 2x(1NO-1NC)	LZC2A02-20 2x(1NO-1NC)	LZC2AA2-20 2x(1NO-1NC)
CE1	△	LZCE1A01-20 1NO-1NC	LZCE1A02-20 1NO-1NC	LZCE1AA2-20 1NO-1NC
Max. speed		Type 4	Type 3	Type 3
Min. force		8 N (25 N →)	6 N (25 N →)	4.3 N (25 N →)
Travel diagrams		Group 1	Group 2	Group 2

		With stainless steel roller on request	With external rubber gasket With stainless steel roller on request	With external rubber gasket
C5	R	LZC5A05-20 → 1NO+1NC	LZC5AA5-20 → 1NO+1NC	LZC5A07-20 → 1NO+1NC
C6	L	LZC6A05-20 → 1NO+1NC	LZC6AA5-20 → 1NO+1NC	LZC6A07-20 → 1NO+1NC
C7	LO	LZC7A05-20 → 1NO+1NC	LZC7AA5-20 → 1NO+1NC	LZC7A07-20 → 1NO+1NC
C9	L	LZC9A05-20 → 2NC	LZC9AA5-20 → 2NC	LZC9A07-20 → 2NC
C10	L	LZC10A05-20 2NO	LZC10AA5-20 2NO	LZC10A07-20 2NO
C11	R	LZC11A05-20 → 2NC	LZC11AA5-20 → 2NC	LZC11A07-20 → 2NC
C12	R	LZC12A05-20 2NO	LZC12AA5-20 2NO	LZC12A07-20 2NO
C13	LV	LZC13A05-20 → 2NC	LZC13AA5-20 → 2NC	LZC13A07-20 → 2NC
C14	LS	LZC14A05-20 → 2NC	LZC14AA5-20 → 2NC	LZC14A07-20 → 2NC
C15	LS	LZC15A05-20 2NO	LZC15AA5-20 2NO	LZC15A07-20 2NO
C18	LA	LZC18A05-20 → 1NO+1NC	LZC18AA5-20 → 1NO+1NC	LZC18A07-20 → 1NO+1NC
C20	L	LZC20A05-20 → 1NO+2NC	LZC20AA5-20 → 1NO+2NC	LZC20A07-20 → 1NO+2NC
C21	L	LZC21A05-20 → 3NC	LZC21AA5-20 → 3NC	LZC21A07-20 → 3NC
C22	L	LZC22A05-20 → 2NO+1NC	LZC22AA5-20 → 2NO+1NC	LZC22A07-20 → 2NO+1NC
C2	R	LZC2A05-20 2x(1NO-1NC)	LZC2AA5-20 2x(1NO-1NC)	LZC2A07-20 2x(1NO-1NC)
CE1	△	LZCE1A05-20 1NO-1NC	LZCE1AA5-20 1NO-1NC	LZCE1A07-20 1NO-1NC
Max. speed		Type 3	Type 3	Type 3
Min. force		6 N (25 N →)	4.3 N (25 N →)	4 N (25 N →)
Travel diagrams		Group 2	Group 2	Group 3

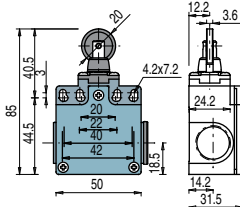
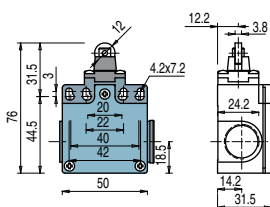
All measures in the drawings are in mm

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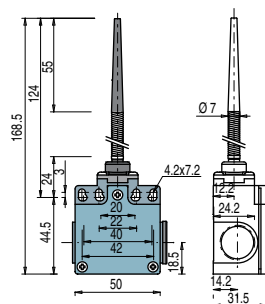
Contact blocks



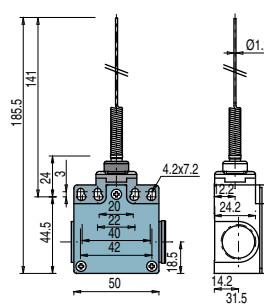
Roller Ø 12 mm stainless steel



With external rubber gasket



With external rubber gasket



All measures in the drawings are in mm

Contact type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
- ⚡** = electronic PNP

Contact blocks

C5	R	LZC5A25-20	1NO+1NC	LZC5A30-20	↻ 1NO+1NC	LZC5A31-20	↻ 1NO+1NC	LZC5A33-20	1NO+1NC
C6	L			LZC6A30-20	↻ 1NO+1NC	LZC6A31-20	↻ 1NO+1NC	LZC6A33-20	1NO+1NC
C7	LO			LZC7A30-20	↻ 1NO+1NC	LZC7A31-20	↻ 1NO+1NC	LZC7A33-20	1NO+1NC
C9	L			LZC9A30-20	↻ 2NC	LZC9A31-20	↻ 2NC	LZC9A33-20	2NC
C10	L	LZC10A25-20	2NO	LZC10A30-20	2NO	LZC10A31-20	2NO	LZC10A33-20	2NO
C11	R			LZC11A30-20	↻ 2NC	LZC11A31-20	↻ 2NC	LZC11A33-20	2NC
C12	R	LZC12A25-20	2NO	LZC12A30-20	2NO	LZC12A31-20	2NO	LZC12A33-20	2NO
C13	LV			LZC13A30-20	↻ 2NC	LZC13A31-20	↻ 2NC	LZC13A33-20	2NC
C14	LS			LZC14A30-20	↻ 2NC	LZC14A31-20	↻ 2NC	LZC14A33-20	2NC
C15	LS			LZC15A30-20	2NO	LZC15A31-20	2NO	LZC15A33-20	2NO
C16	LI			LZC16A30-20	↻ 2NC	LZC16A31-20	↻ 2NC	LZC16A33-20	2NC
C18	LA	LZC18A25-20	1NO+1NC	LZC18A30-20	↻ 1NO+1NC	LZC18A31-20	↻ 1NO+1NC	LZC18A33-20	1NO+1NC
C20	L	LZC20A25-20	1NO+2NC	LZC20A30-20	↻ 1NO+2NC	LZC20A31-20	↻ 1NO+2NC	LZC20A33-20	1NO+2NC
C21	L	LZC21A25-20	3NC	LZC21A30-20	↻ 3NC	LZC21A31-20	↻ 3NC	LZC21A33-20	3NC
C22	L	LZC22A25-20	2NO+1NC	LZC22A30-20	↻ 2NO+1NC	LZC22A31-20	↻ 2NO+1NC	LZC22A33-20	2NO+1NC
C2	R	LZC2A25-20	2x(1NO-1NC)	LZC2A30-20	2x(1NO-1NC)	LZC2A31-20	2x(1NO-1NC)	LZC2A33-20	2x(1NO-1NC)
CE1	⚡	LZCE1A25-20	1NO-1NC	LZCE1A30-20	1NO-1NC	LZCE1A31-20	1NO-1NC	LZCE1A33-20	1NO-1NC
Max. speed		1 m/s		Type 1		Type 1		1.5 m/s	
Min. force		0.12 Nm		0.06 Nm (0.25 Nm ↻)		0.06 Nm (0.25 Nm ↻)		0.06 Nm	
Travel diagrams		Group 4		Group 5		Group 5		Group 5	

Contact blocks

		Round rod, Ø 3 mm, stainless steel			
C5	R	LZC5A34-20 1NO+1NC	LZC5A50-20 1NO+1NC	LZC5A51-20 1NO+1NC	LZC5A52-20 1NO+1NC
C6	L	LZC6A34-20 1NO+1NC	LZC6A50-20 1NO+1NC	LZC6A51-20 1NO+1NC	LZC6A52-20 1NO+1NC
C7	LO	LZC7A34-20 1NO+1NC	LZC7A50-20 1NO+1NC	LZC7A51-20 1NO+1NC	LZC7A52-20 1NO+1NC
C9	L	LZC9A34-20 2NC	LZC9A50-20 2NC	LZC9A51-20 2NC	LZC9A52-20 2NC
C10	L	LZC10A34-20 2NO	LZC10A50-20 2NO	LZC10A51-20 2NO	LZC10A52-20 2NO
C11	R	LZC11A34-20 2NC	LZC11A50-20 2NC	LZC11A51-20 2NC	LZC11A52-20 2NC
C12	R	LZC12A34-20 2NO	LZC12A50-20 2NO	LZC12A51-20 2NO	LZC12A52-20 2NO
C13	LV	LZC13A34-20 2NC	LZC13A50-20 2NC	LZC13A51-20 2NC	LZC13A52-20 2NC
C14	LS	LZC14A34-20 2NC	LZC14A50-20 2NC	LZC14A51-20 2NC	LZC14A52-20 2NC
C15	LS	LZC15A34-20 2NO	LZC15A50-20 2NO	LZC15A51-20 2NO	LZC15A52-20 2NO
C16	LI	LZC16A34-20 2NC	LZC16A50-20 2NC	LZC16A51-20 2NC	LZC16A52-20 2NC
C18	LA	LZC18A34-20 1NO+1NC	LZC18A50-20 1NO+1NC	LZC18A51-20 1NO+1NC	LZC18A52-20 1NO+1NC
C20	L	LZC20A34-20 1NO+2NC	LZC20A50-20 1NO+2NC	LZC20A51-20 1NO+2NC	LZC20A52-20 1NO+2NC
C21	L	LZC21A34-20 3NC	LZC21A50-20 3NC	LZC21A51-20 3NC	LZC21A52-20 3NC
C22	L	LZC22A34-20 2NO+1NC	LZC22A50-20 2NO+1NC	LZC22A51-20 2NO+1NC	LZC22A52-20 2NO+1NC
C2	R	LZC2A34-20 2x(1NO-1NC)	LZC2A50-20 2x(1NO-1NC)	LZC2A51-20 2x(1NO-1NC)	LZC2A52-20 2x(1NO-1NC)
CE1	⚡	LZCE1A34-20 1NO-1NC	LZCE1A50-20 1NO-1NC	LZCE1A51-20 1NO-1NC	LZCE1A52-20 1NO-1NC
Max. speed		1.5 m/s	1.5 m/s	Type 1	Type 1
Min. force		0.06 Nm	0.06 Nm	0.06 Nm (0.25 Nm ⤴)	0.06 Nm (0.25 Nm ⤴)
Travel diagrams		Group 5	Group 5	Group 5	Group 5

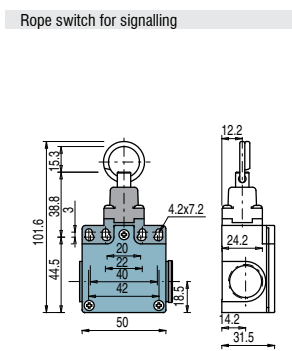
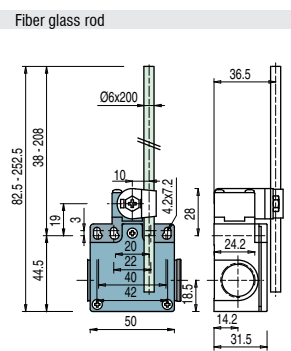
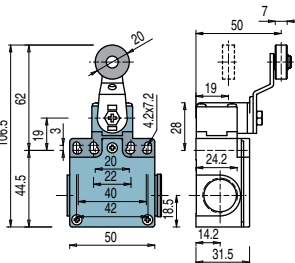
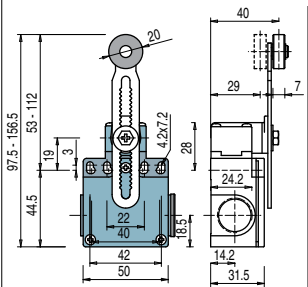
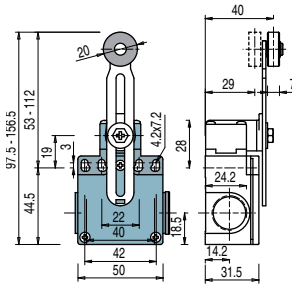
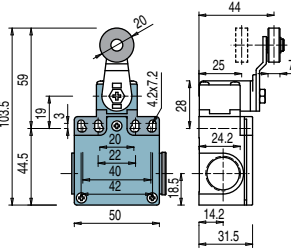
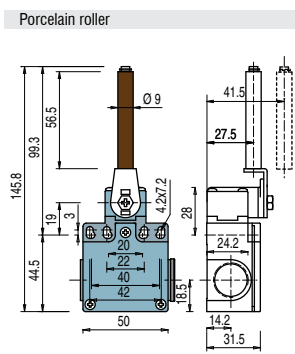
All measures in the drawings are in mm

Contact type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
-  = electronic PNP

Contact blocks

C5									
C6		LZC6A53-E020V9	1NO+1NC	LZC6A54-20	1NO+1NC	LZC6A55-20	1NO+1NC	LZC6A56-20	1NO+1NC
C7									
C9		LZC9A53-E020V9	2NC	LZC9A54-20	2NC	LZC9A55-20	2NC	LZC9A56-20	2NC
C10									
C11				LZC11A54-20	2NC	LZC11A55-20	2NC	LZC11A56-20	2NC
C12									
C13		LZC13A53-E020V9	2NC	LZC13A54-20	2NC	LZC13A55-20	2NC	LZC13A56-20	2NC
C14									
C15		LZC15A53-E020V9	2NO	LZC15A54-20	2NO	LZC15A55-20	2NO	LZC15A56-20	2NO
C16									
C18		LZC18A53-E020V9	1NO+1NC	LZC18A54-20	1NO+1NC	LZC18A55-20	1NO+1NC	LZC18A56-20	1NO+1NC
C20									
C21		LZC21A53-E020V9	3NC	LZC21A54-20	3NC	LZC21A55-20	3NC	LZC21A56-20	3NC
C22									
C2		LZC2A53-E020	2x(1NO-1NC)	LZC2A54-20	2x(1NO-1NC)	LZC2A55-20	2x(1NO-1NC)	LZC2A56-20	2x(1NO-1NC)
CE1									
Max. speed		0.5 m/s		Type 1		Type 1		Type 1	
Min. force		0.03 Nm (0.25 Nm)		0.06 Nm (0.25 Nm)		0.06 Nm (0.25 Nm)		0.06 Nm (0.25 Nm)	
Travel diagrams		Group 6		Group 5		Group 5		Group 5	



Contact blocks

C5	R							
C6	L	LZC6A57-20	➔ 1NO+1NC	LZC6A69-20	1NO+1NC	LZC6A76-20	1NO+1NC	
C7	LO							
C9	L	LZC9A57-20	➔ 2NC	LZC9A69-20	2NC	LZC9A76-20	2NO	
C10	L							
C11	R	LZC11A57-20	➔ 2NC	LZC11A69-20	2NC	LZC11A76-20	2NO	
C12	R							
C13	LV	LZC13A57-20	➔ 2NC	LZC13A69-20	2NC	LZC13A76-20	2NO	
C14	LS							
C15	LS	LZC15A57-20	2NO	LZC15A69-20	2NO	LZC15A76-20	2NC	
C16	LI							
C18	LA	LZC18A57-20	➔ 1NO+1NC	LZC18A69-20	1NO+1NC	LZC18A76-20	1NO+1NC	
C20	L							
C21	L	LZC21A57-20	➔ 3NC	LZC21A69-20	3NC	LZC21A76-20	3NO	
C22	L							
C2	R	LZC2A57-20	2x(1NO-1NC)	LZC2A69-20	2x(1NO-1NC)	LZC2A76-20	2x(1NO-1NC)	
CE1								
Max. speed		Type 1		1.5 m/s		0.5 m/s		
Min. force		0.06 Nm (0.25 Nm ➔)		0.06 Nm		initial 20 N - final 40 N		
Travel diagrams		Group 5		Group 5		Group 7		

(1) Positive opening only with actuator set to max.

All measures in the drawings are in mm

Position switches LZ series with reset



IMO Precision Controls has developed a range of position switches that incorporate a Reset device. This is denoted by the addition of the suffix R to the part numbers. The Reset device is a block inserted between the switch body and the head, and it can be rotated and positioned in four locations independent to the head. Some of the features of the Reset device are as follows:

- Easy integration in to almost all standard heads
- No need to use snap action contact blocks as the tripping movement is defined by the Reset device
- Rotation for ease of installation
- Two driving forces are available - standard and increased for use in applications where vibration is present
- Mechanical endurance - up to 1 million operating cycles.

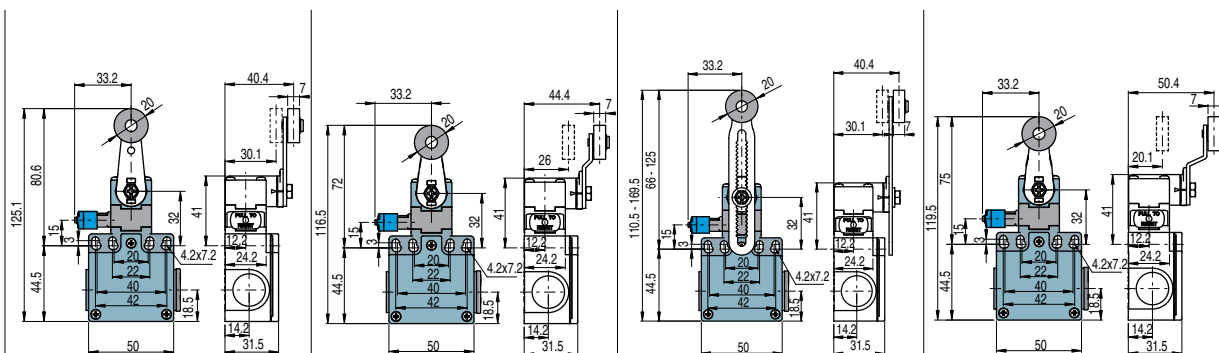
Contact type:		With stainless steel roller on request		With stainless steel roller on request		With stainless steel roller on request	
R = snap action L = slow action							
Contact blocks							
C6	L	LZC6A01-R20	➔ 1NO+1NC	LZC6A02-R20	➔ 1NO+1NC	LZC6A05-R20	➔ 1NO+1NC
C9	L	LZC9A01-R20	➔ 2NC	LZC9A02-R20	➔ 2NC	LZC9A05-R20	➔ 2NC
C10	L	LZC10A01-R20	2NO	LZC10A02-R20	2NO	LZC10A05-R20	2NO
C20	L	LZC20A01-R20	➔ 1NO+2NC	LZC20A02-R20	➔ 1NO+2NC	LZC20A05-R20	➔ 1NO+2NC
C21	L	LZC21A01-R20	➔ 3NC	LZC21A02-R20	➔ 3NC	LZC21A05-R20	➔ 3NC
C22	L	LZC22A01-R20	➔ 2NO+1NC	LZC22A02-R20	➔ 2NO+1NC	LZC22A05-R20	➔ 2NO+1NC
C2	R	LZC2A01-R20	2NO+2NC	LZC2A02-R20	2NO+2NC	LZC2A05-R20	2NO+2NC
Max. speed	Type 4			Type 3		Type 3	
Min. force	4.5 N (25 N ➔)			4 N (25 N ➔)		4 N (25 N ➔)	
Travel diagrams	Group 1			Group 2		Group 2	
							Group 3

With Ø 12 mm stainless steel roller on request		With Ø 20 mm stainless steel roller on request		With Ø 20 mm stainless steel roller on request		With Ø 20 mm stainless steel roller on request	
Contact blocks							
C6	L	LZC6A15-R20R28	➔ 1NO+1NC	LZC6A30-R20	➔ 1NO+1NC	LZC6A31-R20	➔ 1NO+1NC
C9	L	LZC9A15-R20R28	➔ 2NC	LZC9A30-R20	➔ 2NC	LZC9A31-R20	➔ 2NC
C10	L	LZC10A15-R20R28	2NO	LZC10A30-R20	2NO	LZC10A31-R20	2NO
C20	L	LZC20A15-R20R28	➔ 1NO+2NC	LZC20A30-R20	➔ 1NO+2NC	LZC20A31-R20	➔ 1NO+2NC
C21	L	LZC21A15-R20R28	➔ 3NC	LZC21A30-R20	➔ 3NC	LZC21A31-R20	➔ 3NC
C22	L	LZC22A15-R20R28	➔ 2NO+1NC	LZC22A30-R20	➔ 2NO+1NC	LZC22A31-R20	➔ 2NO+1NC
C2	R	LZC2A15-R20R28	2NO+2NC	LZC2A30-R20	2NO+2NC	LZC2A31-R20	2NO+2NC
Max. speed	Type 2			Type 1		Type 1	
Min. force	4.5 N (25 N ➔)			0.07 Nm (0.25 Nm ➔)		0.07 Nm (0.25 Nm ➔)	
Travel diagrams	Group 1			Group 4		Group 4	
							Group 4

All measures in the drawings are in mm

Contact type:

R = snap action
L = slow action

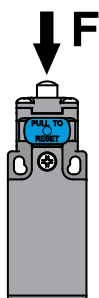


Contact blocks

C6	L	LZC6A52-R20	➔ 1NO+1NC	LZC6A54-R20	➔ 1NO+1NC	LZC6A56-R20	➔ 1NO+1NC	LZC6A57-R20	➔ 1NO+1NC
C9	L	LZC9A52-R20	➔ 2NC	LZC9A54-R20	➔ 2NC	LZC9A56-R20	➔ 2NC	LZC9A57-R20	➔ 2NC
C10	L	LZC10A52-R20	2NO	LZC10A54-R20	2NO	LZC10A56-R20	2NO	LZC10A57-R20	2NO
C20	L	LZC20A52-R20	➔ 1NO+2NC	LZC20A54-R20	➔ 1NO+2NC	LZC20A56-R20	➔ 1NO+2NC	LZC20A57-R20	➔ 1NO+2NC
C21	L	LZC21A52-R20	➔ 3NC	LZC21A54-R20	➔ 3NC	LZC21A56-R20	➔ 3NC	LZC21A57-R20	➔ 3NC
C22	L	LZC22A52-R20	➔ 2NO+1NC	LZC22A54-R20	➔ 2NO+1NC	LZC22A56-R20	➔ 2NO+1NC	LZC22A57-R20	➔ 2NO+1NC
C2	R	LZC2A52-R20	2NO+2NC	LZC2A54-R20	2NO+2NC	LZC2A56-R20	2NO+2NC	LZC2A57-R20	2NO+2NC
Max. speed		Type 1		Type 1		Type 1		Type 1	
Min. force		0.07 Nm (0.25 Nm ➔)		0.07 Nm (0.25 Nm ➔)		0.07 Nm (0.25 Nm ➔)		0.07 Nm (0.25 Nm ➔)	
Travel diagrams		Group 4		Group 4		Group 4		Group 4	

All measures in the drawings are in mm

Increased actuating force



The switch can be delivered with increased actuating force (option RI). Ideal for applications with vibrations.

Actuators	Min. force
01, 14, 15, 16	7 N
02, 05	6 N
07	3.5 N
30 ... 57	0.08 Nm

Contact type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
-  = electronic PNP

Contact blocks

C5		LZC5A38-20	 1NO+1NC	
C6		LZC6A38-20	 1NO+1NC	LZC6A38-R20  1NO+1NC
C7		LZC7A38-20	 1NO+1NC	
C9		LZC9A38-20	 2NC	LZC9A38-R20  2NC
C10		LZC10A38-20	2NO	LZC10A38-R20 2NO
C11		LZC11A38-20	 2NC	
C12		LZC12A38-20	2NO	
C13		LZC13A38-20	 2NC	
C14		LZC14A38-20	 2NC	
C15		LZC15A38-20	2NO	
C16		LZC16A38-20	 2NC	
C18		LZC18A38-20	 1NO+1NC	
C20		LZC20A38-20	 1NO+2NC	LZC20A38-R20  1NO+2NC
C21		LZC21A38-20	 3NC	LZC21A38-R20  3NC
C22		LZC22A38-20	 2NO+1NC	LZC22A38-R20  2NO+1NC
C2		LZC2A38-20	2x(1NO-1NC)	LZC2A38-R20 2NO+2NC
CE1		LZCE1A38-20	1NO-1NC	
Min. force		0.06 Nm (0.25 Nm 		0.07 Nm (0.25 Nm 
Travel diagrams		Group 5		Group 4

All measures in the drawings are in mm

All measures in the drawings are in mm

IMPORTANT

For safety applications: join only switches and actuators marked with symbol  aside the product code.

For more information about safety applications see details on page 235.

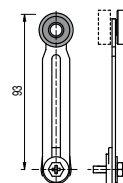
Loose actuators

All measures in the drawings are in mm

IMPORTANT: These loose actuators can be used with items of series LR, LM, LX, LZ and LK only.

Technopolymer roller Ø 18 mm	Technopolymer roller Ø 18 mm	Adjustable square rod, 3x3x125 mm	Flexible rod with pointed end	Adjustable round rod Ø 3x125 mm	Technopolymer roller Ø 20 mm	
AC-CAE30 ➔	AC-CAE31 ➔	AC-CAE33	AC-CAE34	AC-CAE50	AC-CAE51 ➔	
Technopolymer roller Ø 20 mm	Porcelain roller	Technopolymer roller Ø 20 mm	Adjustable actuator with technopolymer roller	Adjustable safety actuator with technopolymer roller	Technopolymer roller Ø 20 mm	Adjustable fiber glass rod
AC-CAE52 ➔	AC-CAE53 ➔ (2)	CA-CAE54 ➔	AC-CAE55 ➔ (1)	AC-CAE56 ➔	AC-CAE57 ➔	AC-CAE69

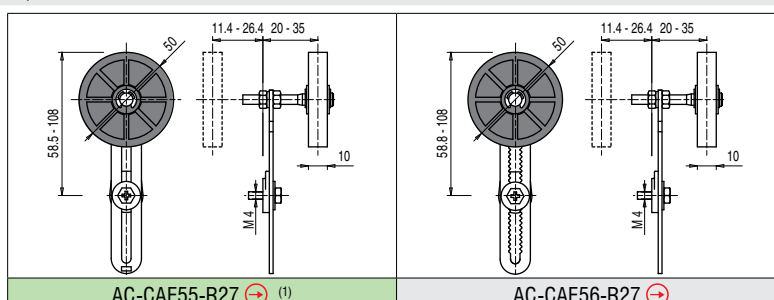
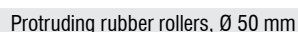
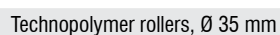
- ⁽¹⁾ Actuator AC-CAE55 can only be used in safety applications if adjusted to its max. length, as shown in figure beside. If you need an adjustable lever for safety applications, use the adjustable safety lever AC-CAE56.
- ⁽²⁾ The position switch obtained by assembling switch LZ • A38-20 (e.g. LZC5A38-20, LZC6A38-20...) with actuator AC-CAE53 will not present the same travel diagrams and actuating forces as switch LZ • A53-JOST (e.g. LZC5A53-JOST, LZC6A53-JOST...).
- ⁽⁴⁾ The actuator cannot be rotated to the inside because it will mechanically interfere with the switch head.



All measures in the drawings are in mm

IMPORTANT: These loose actuators can be used with items of series LR, LM, LX, LZ and LK only.

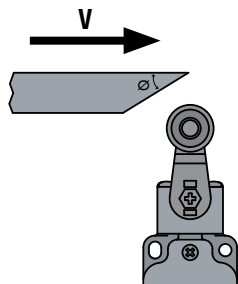
Stainless steel rollers, Ø 20 mm



Maximum and minimum actuation speed

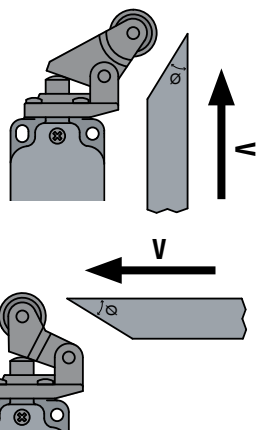
Lever with roller - Type 1

Ø	Vmax (m/s)	Vmin (mm/s) [L]	Vmin (mm/s) [R]
15°	2.5	9	0.07
30°	1.5	8	
45°	1	7	
60°	0.75	7	



Lever with roller - Type 3

Ø	Vmax (m/s)	Vmin (mm/s) [L]	Vmin (mm/s) [R]
15°	1	5	0.05
30°	0.5	2.5	0.025
45°	0.3	1.5	0.015



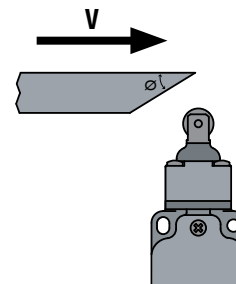
Contacts Type:

[R] = snap action

[L] = slow action

Plunger with roller - Type 2

Ø	Vmax (m/s)	Vmin (mm/s) [L]	Vmin (mm/s) [R]
15°	1	4	0.04
30°	0.5	2	0.02
45°	0.3	1	0.01

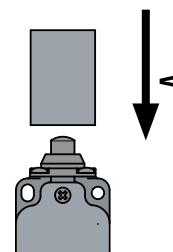


Plunger with roller - Type 5

Ø	Vmax (m/s)	Vmin (mm/s) [L]	Vmin (mm/s) [R]
15°	0.3	4	0.04
30°	0.2	2	0.02

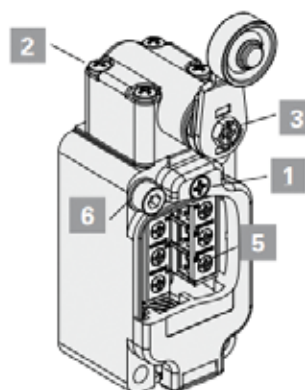
Plunger with roller - Type 4

Vmax (m/s)	Vmin (mm/s) [L]	Vmin (mm/s) [R]
0.5	1	0.01

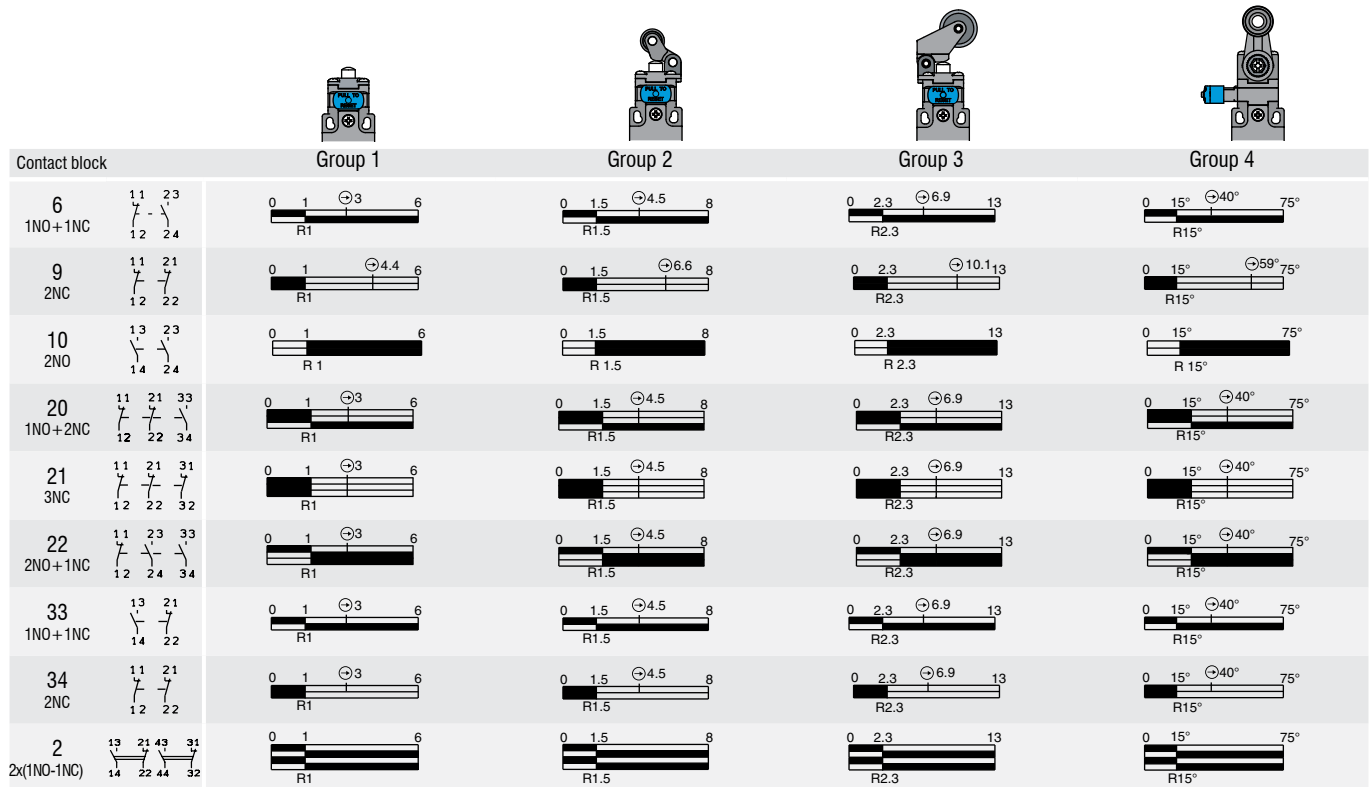


Driving Torques For LR and LX series only

1	Cover screws	0.8...1.2Nm
2	Head screws	0.8...1.2Nm
3	Lever screws	0.8...1.2Nm
4	Protection plugs	1.2...1.6Nm (conduit entry M20/PG13.5) (conduit entry M16/PG11)
5	Contact block screws	1.0...1.4Nm 0.6...0.8Nm
6	M5 screws of the housing fastening with washer	2.0...3.0Nm



Travel Diagrams



Legend

Closed contact |
 Opened contact |
 Positive opening travel |
 Pushing the switch /
 Releasing the switch

Contact block		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7 inverted contacts
2 2x(1NO-1NC)								
3 1NO-1NC								
5 1NO+1NC								
6 1NO+1NC					/			
7 1NO+1NC					/			
9 2NC					/			
10 2NO								
11 2NC					/		/	
12 2NO								
13 2NC					/			
14 2NC					/			
15 2NO					/			
16 2NC		/	/	/	/		/	/
18 1NO+1NC								
20 1NO+2NC								
21 3NC								
22 2NO+1NC								
28 1NO+2NC					/			
29 3NC					/			
30 3NC					/			
33 1NO+1NC								
34 2NC								
37 1NO+1NC					/			
66 1NC								
67 1NO								

Legend

Closed contact |
 Opened contact |
 Positive opening travel |
 Pushing the switch /
 Releasing the switch