

# MC Contactors 3 Pole



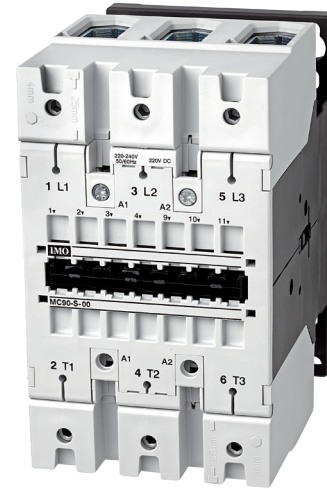
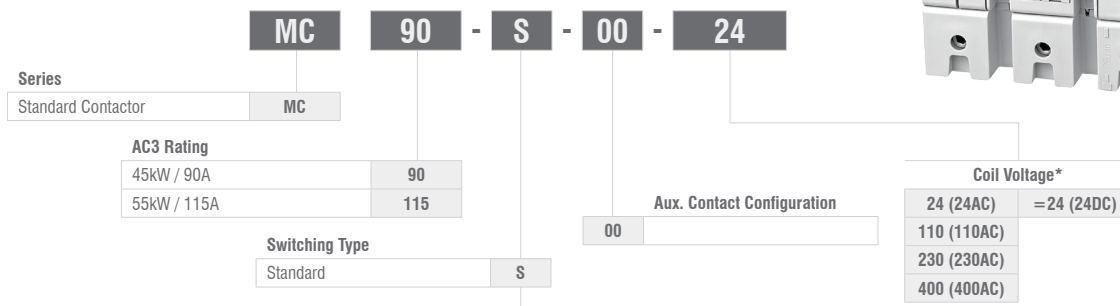
Technical Datasheet

## Key Features

- Up to 115A AC3
- Up to 200A AC1
- International Approvals
- Data according to IEC 947 / EN 60947



## Options & Ordering Codes



\* Other coil voltages available. Please contact IMO for more information.

## Technical Data acc. to IEC / EN 60947-4-1

Part Number	MC90-S-00	MC115-S-00	
Main Contact Ratings	AC1 690V $I_e (=I_{th})$ open at 40°C	160A	200A
	AC2, AC3, 380-440V	45kW / 90A	55kW / 115A
	AC2, AC3, 500-690V	55kW	55kW
	Fuse "Typ1" gl. (gG)	250A max.	250A max.
	Rated Insulation Voltage $U_i^{*4}$	1000V~	1000V~
	Making Capacity $I_{eff}$ at $U_e=690V\sim$	1100A	1200A
	Breaking Capacity $I_{br}$ 400V~	950A	1100A
	$\cos\theta=0.35$ 500V~	850A	1000A
Max. Ambient Temp	Operation Open	-40 to +60°C (+90°C)*1	
	Operation Enclosed	-40 to +40°C	
	with Thermal Overload Relay Open	-25 to +60°C	
	with Thermal Overload Relay Enclosed	-25 to +40°C	
	Storage	-50 to +90°C	
Frequency of Operations z Ops/hr	Switching Without Load	3,000	
	AC3, $I_e$	300	
	AC4, $I_e$	120	
	DC3, $I_e$	300	
Switching Time at Control Voltage $U_c \pm 10\%^{*2,*3}$	AC Operated	Make Time	20 - 35ms
		Release Time	35 - 50ms
		Arc Duration	10 - 15ms
	DC Operated	Make Time	20 - 35ms
		Release Time	35 - 50ms
		Arc Duration	10 - 15ms
Mech. Life	AC Operated	5 x 10 <sup>6</sup>	
	DC Operated	5 x 10 <sup>6</sup>	
Curr. Heat Loss	Power Loss Per Pole ( $I_e/AC3$ 400V)	4.8W	7.9W
	Contact Resistance Per Pole	0.6mΩ	0.5mΩ
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NO		7g	
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NC		5g	

\*1 With reduced control voltage range 0.9 up to 1.0 x  $U_c$  and with reduced rated current  $I_e$  / AC1 according to  $I_e$  / AC3

\*2 Total breaking time = release time + arc duration

\*3 Values for delay of the release time of the make contact and the make time of the break contact will be increased if magnet coils are protected against voltage peaks with integrated suppressor

\*4 Suitable at 690V for earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard industry);  $U_{imp}=8kV$ . Data for other conditions upon request

# MC Contactors 3 Pole

## Technical Data continued acc. to IEC / EN 60947-4-1

Part Number	MC90-S-00.. + MCA..	MC115-S-00.. + MCA..
Aux Contact Ratings		
MCA10 (NO)	10A	10A
MCA01 (NC)	3A	3A
	2A	2A
Fuse "Typ1" gl. (gG)	20A max.	20A max.

## Cable Cross Sections

	Contacts	Coils
Solid Strand (mm <sup>2</sup> )	0.5 - 95.0 + 10.0 - 120.0	0.75 - 2.5
Flexible Strand (mm <sup>2</sup> )	0.5 - 70.0 + 25.0 - 95.0	0.5 - 2.5
Solid Strand (AWG)	18 - 10	14 - 12
Flexible Strand (AWG)	-	18 - 12
Cables per Clamp	1	2
Terminal Screws	M8	M3.5
Screwdriver	4mm Allen Key	Pozidrive Pz2
Tightening Torque (Nm)	4.0 - 6.5	0.8 - 1.4
Tightening Torque (lb.inch)	35 - 57	7 - 12

## Coil

	AC Operated	DC Operated
Operation Range	0.85 - 1.1	0.8 - 1.1
Inrush	165 - 220VA	250W
Sealed	2.5 - 5VA	5W

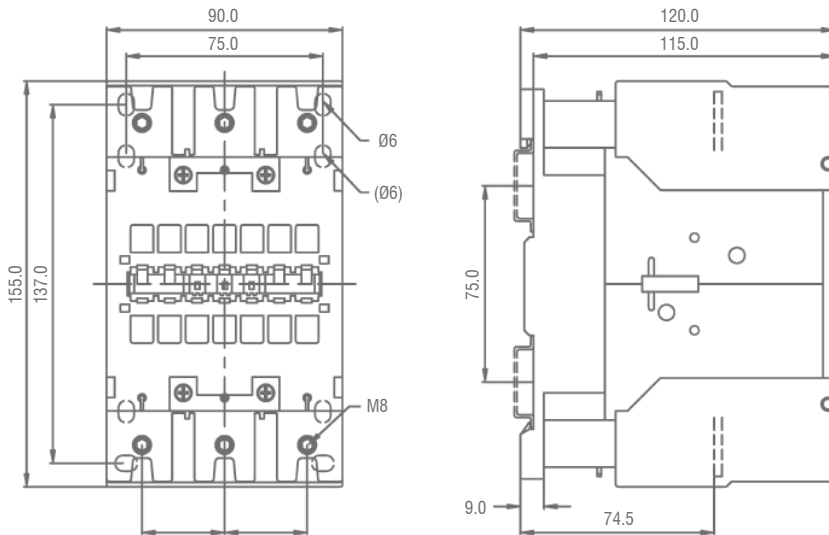
## Weights & Dimensions

Single Unit (inc. packaging)	2.20kg
Dimensions	157 x 92 x 155mm

## Resistance to Climatic Conditions acc. to IEC60068

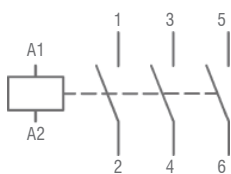
Open-type devices are climate-resistant in the constant climate according to IEC60068-2-78 (this is a climate with an ambient temperature of 40°C and an atmospheric humidity of 90 to 95%). Enclosed devices are climate-resistant in an alternating climate according to IEC 68-2-30 (this is a moist alternating climate with a 24-hour cycle between climates with an ambient temperature of 25°C, and an atmospheric humidity of 95 to 100% and an ambient temperature of 40°C, and an atmospheric humidity of 90 to 96% in the presence of condensation during rises in temperature). Note: Maximum operating altitude of 2000m above sea level.

## Dimensions (mm)

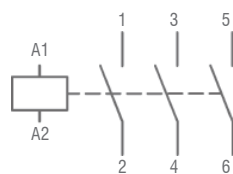


## Wiring Diagrams

### AC Operated



### DC Operated



## Mounting Position

