MC Contactors

IMO

Technical Datasheet

Key Features

- Up to 1200A AC3
- Up to 1350A AC1
- DIN Rail Mounting up to AC3 74A
- International Approvals
- Data according to IEC 947 / EN 60947

Options & Ordering Codes

MC - **24** - **S** - **00** - **24**

Series

Standard Contactor	MC

AC3 Rating

11kW / 24A	24
15kW / 32A	32
18.5kW / 40A	40

Switching Type

Standard	S

Aux. Contact Configuration

00	

Coil Voltage*

24 (24AC)	=24 (24DC)
110 (110AC)	
230 (230AC)	
400 (400AC)	

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

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

Part Number			MC24-S-00	MC32-S-00	MC40-S-10
Main Contact Ratings	AC1 I_e (=I_{th}) open at 40°C		50A	65A	80A
	AC2, AC3, 380-440V		11kW / 24A	15kW / 32A	18.5kW / 40A
	AC2, AC3, 500-690V		15kW	18.5kW	18.5kW
	DC1 / 3 / 5, 24VDC		50A	65A	80A
	Fuse "Typ1" gl. (gG)		80A max.	80A max.	80A max.
	Rated Insulation Voltage U_i*4		690V~	690V~	690V~
	Making Capacity I_{eff} at U_e=690V~		400A	500A	500A
	Breaking Capacity I_{eff} 400V~		380A	400A	400A
	cosθ= 0.35 500V~		300A	370A	370A
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		
Freqency of Operations z Ops/hr	Switching Without Load		7,000		
	AC3, I_e		600		
	AC4, I_e		120		
	DC3, I_e		600		
Switching Time at Control Voltage Us ±10%*2, *3	AC Operated	Make Time	10 - 25ms		
		Release Time	8 - 15ms		
		Arc Duration	10 - 15ms		
	DC Operated	Make Time	10 - 20ms		
		Release Time	10 - 15ms		
		Arc Duration	10 - 15ms		
Mech. Life	AC Operated		10 x 10^6		
	DC Operated with Economy Resistor		10 x 10^6		
Curr. Heat Loss	Power Loss Per Pole (I_e/AC3 400V)		0.7W	1.3W	2.0W
	Contact Resistance Per Pole		1.2mΩ	1.2mΩ	1.2mΩ
Shock Resistance acc. to IEC68-2-27 - 20ms Sine Wave NO			8g		
Shock Resistance acc. to IEC68-2-27 - 20ms Sine Wave NC			0g		

*1 With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current Ie / AC1 according to Ie / 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

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

Part Number		MC24-S-00..+MCA..	MC32-S-00..+MCA..	MC40-S-00..+MCA..
Aux Contact Ratings MCA10 (NO) MCA01 (NC)	AC1 I_e (=I_{th}) open at 40°C	10A	10A	10A
	AC15, 220-240V	3A	3A	3A
	AC15, 380-440V	2A	2A	2A
	Fuse "Typ1" gl. (gG)	20A max.	20A max.	20A max.

NOTE: Maximum number of auxiliaries that can be added to AC operated contactors is 4. Maximum that can be added to DC operated contactors is 3.

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm²)	1.5 - 25.0	0.75 - 2.5
Flexible Strand (mm²)	2.5 - 16.0	0.5 - 1.5
Solid Strand (AWG)	16 - 10	14 - 12
Flexible Strand (AWG)	14 - 4	18 - 12
Cables per Clamp	1	2
Terminal Screws	M5	M3.5
Screwdriver	Pozidrive Pz2	Pozidrive Pz2
Tightening Torque (Nm)	2.5 - 3.0	0.8 - 1.4
Tightening Torque (lb.inch)	22 - 26	7 - 12

Coil

	AC Operated	DC Operated
Operation Range	0.85 - 1.1	0.8 - 1.1
Inrush	90 - 115VA	140W
Sealed	9 - 13VA	2W

Weights & Dimensions

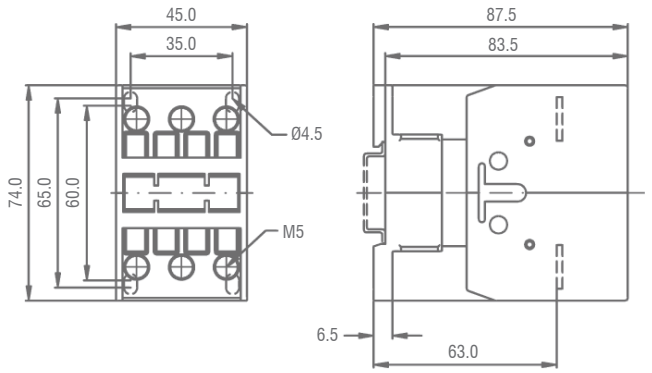
	AC Operated	DC Operated
Single Unit (inc. packaging)	0.48kg	0.55kg
Dimensions	75 x 46 x 88mm	83 x 46 x 105mm

Resistance to Climatic Conditions acc. to IEC60068

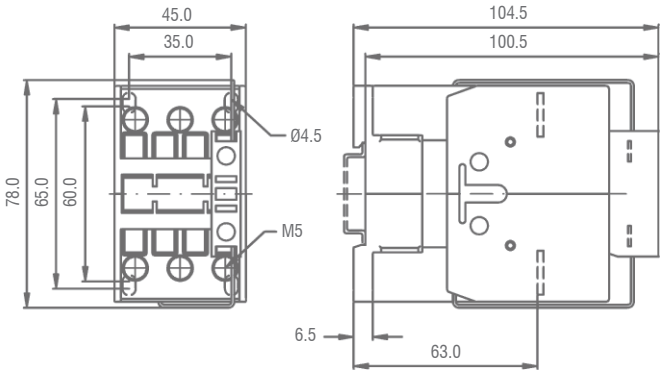
Open- type devices are climate-resistant in the constant climate according to IEC60068-2-78 (this is a climate with an ambient temperature of 40°C and an atmospheric humidity of 90 to 95%). Enclosed devices are climate-resistant in an alternating climate accordingto IEC 68-2-30 (this is a moist alternating 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)

AC Operated

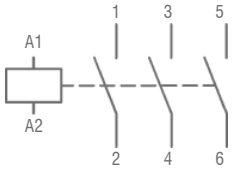


DC Operated

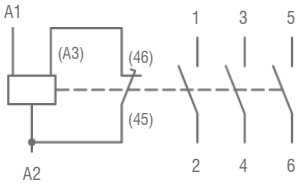


Wiring Diagrams

AC Operated



DC Operated



Mounting Position