MC 4-Pole Contactors

IMO

Technical Datasheet

Key Features

- Up to 74A AC3
- Up to 130A AC1
- DIN Rail Mounting
- International Approvals
- Data according to IEC 947 / EN 60947

Options & Ordering Codes

MC - **50N** - **S** - **00** - **40** - **24AC**

Series

Standard Contactor	MC

AC3 Rating

22kW / 50A	50N
30kW / 62A	62N
37kW / 74A	74N

Switching Type

Standard	S

Aux. Contact Configuration

0	No Aux Contacts

Main Contacts

40	4 Normally Open (NO)

Coil Voltage*

24AC	24DC
110AC	
230AC	
400AC	

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

Part Number			MC50N-S-00-XX	MC62N-S-00-XX	MC74N-S-00-XX
Main Contact Ratings	AC1 I_e ($=I_{th}$) open at 40°C		110A	120A	130A
	AC2, AC3, 380-440V		22kW/50A	30kW / 62A	37kW / 74A
	AC2, AC3, 500-690V		30kW	37kW	45kW
	Fuse "Typ1" gl. (gG)		160A max	160A max.	160A max.
	Rated Insulation Voltage U_i*4		690V~	690V~	690V~
	Making Capacity I_{eff} at U_e=690V~		700A	900A	900A
	Breaking Capacity I_{eff} 400V~		600A	800A	800A
	cosθ= 0.35 500V~		500A	700A	700A
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		7,000		
	AC3, I_e		400		
	AC4, I_e		120		
Switching Time at Control Voltage Us ±10%*2, *3	AC Operated	Make Time	12-28 ms		
		Release Time	8-15 ms		
		Arc Duration	10-15 ms		
	DC Operated	Make Time	12-23 ms		
		Release Time	10-18 ms		
		Arc Duration	10-15 ms		
Mech. Life	AC Operated		10 x 10^6		
	DC Operated with Double Winding Coil		10 x 10^6		
Curr. Heat Loss	Power Loss Per Pole (I_e/AC3 400V)		2.2W	3.9W	5.5W
	Contact Resistance Per Pole		1mΩ		
Shock Resistance acc. to IEC68-2-27 - 20ms Sine Wave NO			8g		
Shock Resistance acc. to IEC68-2-27 - 20ms Sine Wave NC			n/a		

*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		MC50N-S-00-XX..+MCA..	MC62N-S-00-XX..+MCA..	MC74N-S-00-XX..+MCA..
Aux Contact Ratings MCA10 (NO) MCA01 (NC)	AC1 I_e (=I_{th}) open at 40°C	10A		
	AC15, 220-240V	3A		
	AC15, 380-440V	2A		
	Fuse "Typ1" gl. (gG)	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.

Technical Data acc. to UL508

Part Number				MC50	MC62	MC74
Main Contact Ratings	Rated Operational Current "General Use"			110A	120A	130A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	10	10	10
		200V	hp	15	20	25
		220-240V	hp	20	25	30
		277V	hp	20	25	30
		380-415V	hp	25	30	40
		440-480V	hp	30	40	50
		550-600V	hp	40	50	50
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	3	5	7.5
		200V	hp	7.5	10	15
		220-240V	hp	10	15	15
		277V	hp	10	15	15
		380-415V	hp	15	20	20
		440-480V	hp	20	25	25
		550-600V	hp	25	30	30
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	27	37	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	3	5	-
		200V	hp	7.5	10	-
		220-240V	hp	7.5	10	-
		440-480V	hp	20	25	-
		550-600V	hp	25	30	-
	Rated Current 2 Series Contacts	600V	A	44	52	66
	Fuse Class RK5 / Short-circuit current		A/kA	200/5	250/5	300/5
	Fuse Class T / Short-circuit current		A/kA	175/100	175/100	175/100
	Rated voltage		V	600	600	600
Auxiliary Contacts (cULus)				-	-	-

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm^2)	4-50	0.75-2.5
Flexible Strand (mm^2)	10-35	0.5-2.5
Solid Strand (AWG)	12-10	14-12
Flexible Strand (AWG)	10-0	18-12
Cables per Clamp	1	2
Terminal Screws	M6	M3.5
Screwdriver	Pozidrive Pz3	Pozidrive Pz2
Tightening Torque (Nm)	3.5-4.5	0.8-1.4
Tightening Torque (lb.inch)	31-40	7-12

Coil

	AC Operated	DC Operated
Operation Range	0.85 - 1.1	0.8 - 1.1
Inrush	140 - 165VA	200W
Sealed	13 - 18VA	6W

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.

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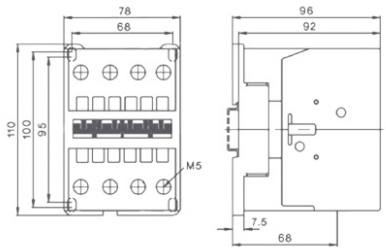
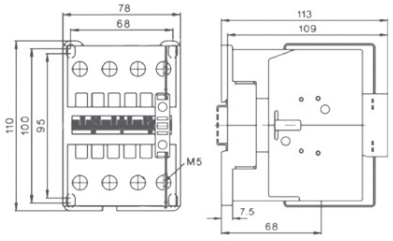
Dimensions (mm)

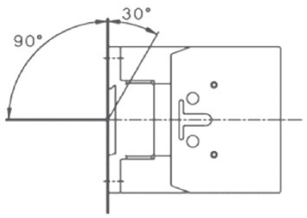
AC Operated



DC Operated

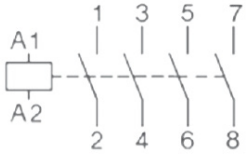


Mounting Position



Wiring Diagrams

AC Operated



DC Operated