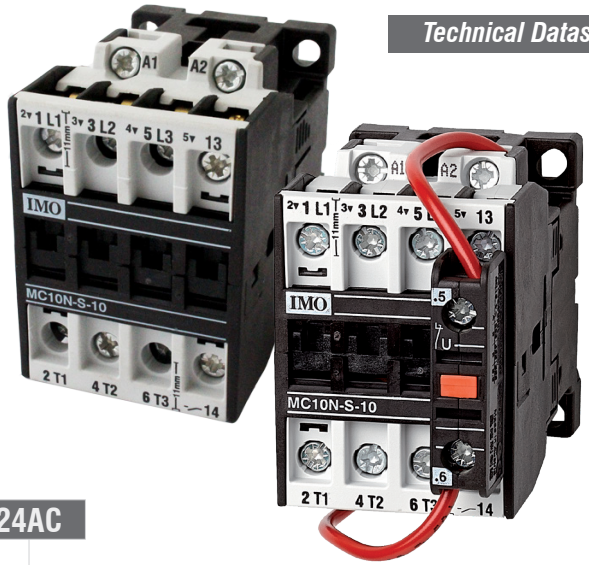
MC 3- Pole Contactors

IMO

Technical Datasheet

Key Features

- Up to 22A AC3
- Up to 32A AC1
- DIN Rail Mounting
- International Approvals
- Data according to IEC 947 / EN 60947



Options & Ordering Codes

MC | **10N** - **S** - **10** - **24AC**

Series

Standard Contactor	**MC**

AC3 Rating

4kW / 10A	**10N**
5.5kW / 14A	**14N**
7.5kW / 18A	**18N**
11kW / 22A	**22N**

Switching Type

Standard	**S**

Aux. Contact Configuration

10	Normally Open (NO)
01	Normally Closed (NC)

Coil Voltage*

24AC	**24DC**
110AC	**48DC**
230AC	**110DC**
400AC	

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

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

Part Number			MC10N-S-10	MC14N-S-10	MC18N-S-10	MC22N-S-10
Main Contact Ratings	AC1 690V I_e (=I_{th}) open at 40°C		25A	25A	32A	32A
	AC2, AC3, 380-440V		4kW / 10A	5.5kW / 14A	7.5kW / 18A	11kW / 22A
	AC2, AC3, 500-690V		5.5kW	7.5kW	10kW	10kW
	DC1 / 3 / 5, 24VDC (1 pole/3 poles in series)		20A	25A	32A	32A
	Fuse "Typ1" gl. (gG)		63A max.	63A max.	63A max.	63A max.
	Rated Insulation Voltage U_i*4		690V~	690V~	690V~	690V~
	Making Capacity I_{eff} at U_e=690V~		200A	200A	200A	200A
	Breaking Capacity I_{eff} 400V~		180A	180A	200A	200A
	cosϑ= 0.65 500V~		150A	150A	180A	180A
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		10,000			
	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	8 - 16ms			
		Release Time	5 - 13ms			
		Arc Duration	10 - 15ms			
	DC Operated	Make Time	8 - 12ms			
		Release Time	8 - 13ms			
		Arc Duration	10 - 15ms			
Mech. Life	AC Operated		10 x 10^6			
	DC Operated with Dual-Wound Coils		10 x 10^6			
Curr. Heat Loss	Power Loss Per Pole (I_e/AC3 400V)		0.21W	0.35W	0.5W	0.75W
	Contact Resistance Per Pole		2.1mΩ	1.8mΩ	1.5mΩ	1.5mΩ
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NO			10g			
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NC			6g			

*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

MC 3- Pole Contactors

IMO

Technical Datasheet

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

Part Number		MC10N-S-10..+MCA..	MC14N-S-10..+MCA..	MC18N-S-10..+MCA..	MC22N-S-10..+MCA..
Aux Contact Ratings MCA10 (NO) MCA01 (NC)	AC1 690V I_e ($=I_{th}$) open at 40°C	10A	10A	10A	10A
	AC15, 220-240V	3A	3A	3A	3A
	AC15, 380-440V	2A	2A	2A	2A
	Fuse "Typ1" gl. (gG)	20A max.	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.

Technical Data acc. to UL508

Part Number				MC10N	MC14N	MC18N	MC22N
Main Contact Ratings	Rated Operational Current "General Use"			25A	25A	25A	25A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	1.5	2	2	3
		200V	hp	3	3	5	5
		220-240V	hp	3	3	7.5	7.5
		277V	hp	3	5	7.5	7.5
		380-415V	hp	5	5	10	10
		440-480V	hp	5	7.5	10	15
		550-600V	hp	7.5	10	15	20
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	0.5	0.75	1	1.5
		200V	hp	1	1.5	2	3
		220-240V	hp	1.5	2	3	3
		277V	hp	2	3	3	5
		380-415V	hp	3	3	5	5
		440-480V	hp	3	5	5	7.5
		550-600V	hp	3	5	7.5	10
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	-	-	-	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	-	-	-	-
		200V	hp	-	-	-	-
		220-240V	hp	-	-	-	-
		440-480V	hp	-	-	-	-
		550-600V	hp	-	-	-	-
	Rated Current 2 Series Contacts	600V	A	-	-	-	-
	Fuse Class RK5 / Short-circuit current		A/kA	50/5	50/5	70/5	90/5
	Fuse Class T / Short-circuit current		A/kA	45/100	50/100	70/100	90/100
	Rated voltage		V	600	600	600	600
Auxiliary Contacts (cULus)				A600	A600	A600	A600

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm^2)	0.75 - 6.0	0.75 - 2.5
Flexible Strand (mm^2)	1.0 - 4.0	0.5 - 2.5
Solid Strand (AWG)	18 - 10	14 - 12
Flexible Strand (AWG)	18 - 10	18 - 12
Cables per Clamp	1	2
Terminal Screws	M3.5	M3.5
Screwdriver	Pozidrive Pz2	Pozidrive Pz2
Tightening Torque (Nm)	0.8 - 1.4	0.8 - 1.4
Tightening Torque (lb.inch)	7 - 12	7 - 12

Coil

	AC Operated	DC Operated
Operation Range	0.85 - 1.1	0.8 - 1.1
Inrush	33 - 45VA	75W
Sealed	7 - 10VA	2W

Weights & Dimensions

	AC Operated	DC Operated
Single Unit (inc. packaging)	0.23kg	0.25kg
Dimensions	67 x 46 x 67mm	70 x 47 x 85mm

Resistance to Climatic Conditions acc. to IEC60068

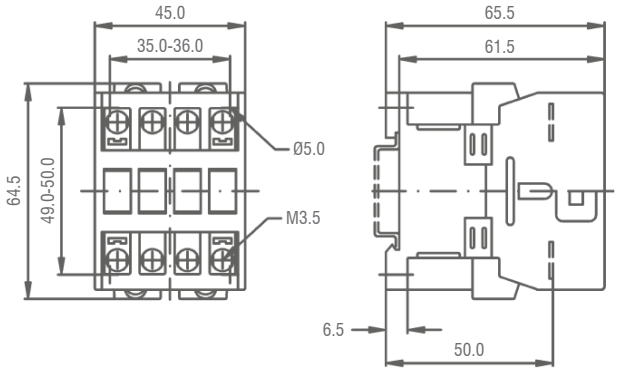
Open- type devices are climate-resistant in the constant climate according to IEC60068-2-78 (this is a climate with an ambient temperature of 40°C and an atmospheric humidity of 90 to 95%). Enclosed devices are climate-resistant in an alternating climate accordingto IEC 68-2-30 (this is a moist alternating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

MC 3- Pole Contactors

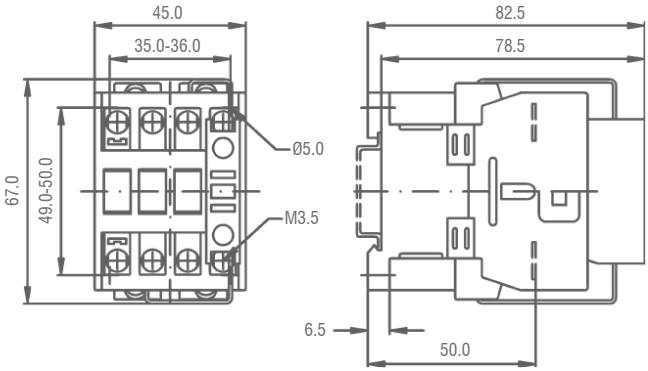
Technical Datasheet

Dimensions (mm)

AC Operated

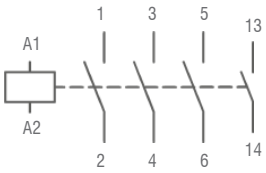


DC Operated

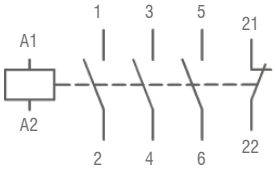


Wiring Diagrams

AC Operated

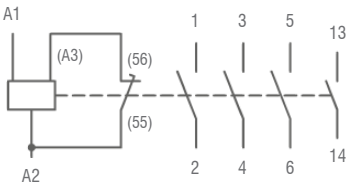


13-14 Normally Open (NO) Auxiliary

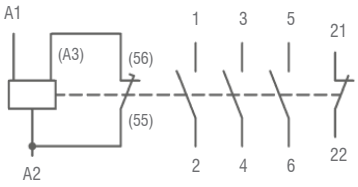


21-22 Normally Closed (NC) Auxiliary

DC Operated

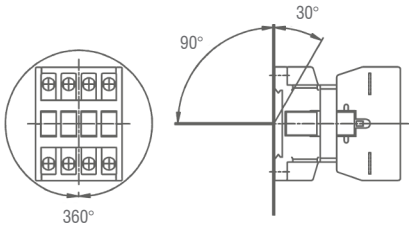


13-14 Normally Open (NO) Auxiliary



21-22 Normally Closed (NC) Auxiliary

Mounting Position



MC 3- Pole Contactors

IMO

Technical Datasheet

Key Features

- Up to 40A AC3
- Up to 80A AC1
- DIN Rail Mounting
- 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 690V 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 (1 pole/3 poles in series)		50A	65A	80A
	Fuse "Typ1" gl. (gG)		100A max.	100A max.	100A 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 Dual-Wound COils		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 IEC60068-2-27 - 20ms Sine Wave NO			8g		
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NC			-		

*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

MC 3- Pole Contactors

IMO

Technical Datasheet

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 690V 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.

Technical Data acc. to UL508

Part Number				MC24	MC32	MC40
Main Contact Ratings	Rated Operational Current "General Use"			50A	65A	80A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	5	5	7.5
		200V	hp	7.5	10	10
		220-240V	hp	10	10	15
		277V	hp	7.5	10	15
		380-415V	hp	10	15	20
		440-480V	hp	15	20	25
		550-600V	hp	20	25	30
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	1.5	2	3
		200V	hp	3	5	7.5
		220-240V	hp	5	5	7.5
		277V	hp	5	7.5	10
		380-415V	hp	5	7.5	10
		440-480V	hp	7.5	10	15
		550-600V	hp	10	15	20
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	15	22	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	2	3	-
		200V	hp	3	5	-
		220-240V	hp	5	7.5	-
		440-480V	hp	10	15	-
		550-600V	hp	10	20	-
	Rated Current 2 Series Contacts	600V	A	22	27	-
	Fuse Class RK5 / Short-circuit current		A/kA	90/5	125/5	175/5
	Fuse Class T / Short-circuit current		A/kA	110/100	150/100	150/100
	Rated voltage		V	600	600	600
Auxiliary Contacts (cULus)				-	-	-

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm^2)	1.5 - 25.0	0.75 - 2.5
Flexible Strand (mm^2)	2.5 - 16.0	0.5 - 2.5
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

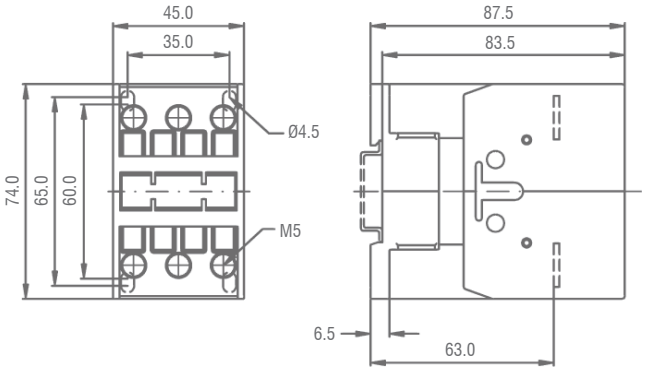
Open- type devices are climate-resistant in the constant climate according to IEC60068-2-78 (this is a climate with an ambient temperature of 40°C and an atmospheric humidity of 90 to 95%). Enclosed devices are climate-resistant in an alternating climate accordingto IEC 68-2-30 (this is a moist alternating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

MC 3- Pole Contactors

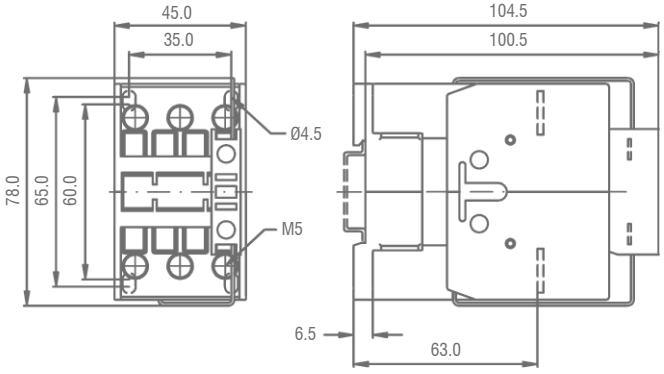
Technical Datasheet

Dimensions (mm)

AC Operated

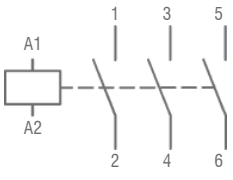


DC Operated

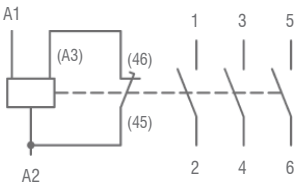


Wiring Diagrams

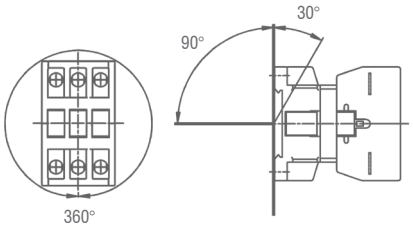
AC Operated



DC Operated



Mounting Position



MC 3- 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 - **50** - **S** - **00** - **24**

Series

Standard Contactor	MC

AC3 Rating

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

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			MC50-S-00	MC62-S-00	MC74-S-10
Main Contact Ratings	AC1 690V 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
	DC1 / 3 / 5, 24VDC (1 pole/3 poles in series)		110A	120A	130A
	Fuse "Typ1" gl. (gG)		160A max.	160A max.	160A max.
	Rated Insulation Voltage U_i*4		830V~	830V~	830V~
	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		
Freqency of Operations z Ops/hr	Switching Without Load		7,000		
	AC3, I_e		400		
	AC4, I_e		120		
	DC3, I_e		400		
Switching Time at Control Voltage Us ±10%*2, *3)	AC Operated	Make Time	12 - 28ms		
		Release Time	8 - 15ms		
		Arc Duration	10 - 15ms		
	DC Operated	Make Time	12 - 23ms		
		Release Time	10 - 18ms		
		Arc Duration	10 - 15ms		
Mech. Life	AC Operated		10 x 10^6		
	DC Operated with Dual-Wound Coils		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		1.0mΩ	1.0mΩ	1.0mΩ
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NO			8g		
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NC			-		

*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

MC 3- Pole Contactors

IMO

Technical Datasheet

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

Part Number		MC50-S-00..+MCA..	MC62-S-00..+MCA..	MC74-S-00..+MCA..
Aux Contact Ratings MCA10 (NO) MCA01 (NC)	AC1 690V 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.

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)	4.0 - 50.0	0.75 - 2.5
Flexible Strand (mm^2)	10.0 - 35.0	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

Weights & Dimensions

	AC Operated	DC Operated
Single Unit (inc. packaging)	0.85kg	0.90kg
Dimensions	112 x 63 x 99mm	112 x 62 x 115mm

Resistance to Climatic Conditions acc. to IEC60068

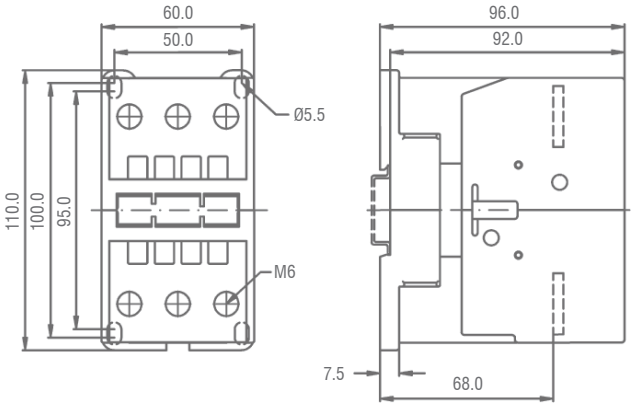
Open- type devices are climate-resistant in the constant climate according to IEC60068-2-78 (this is a climate with an ambient temperature of 40°C and an atmospheric humidity of 90 to 95%). Enclosed devices are climate-resistant in an alternating climate accordingto IEC 68-2-30 (this is a moist alternating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

MC 3- Pole Contactors

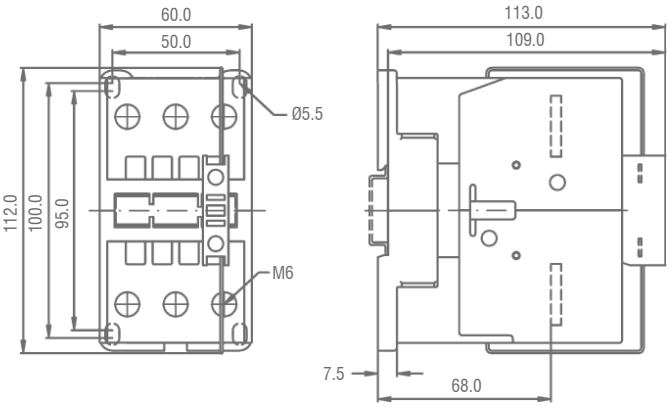
Technical Datasheet

Dimensions (mm)

AC Operated

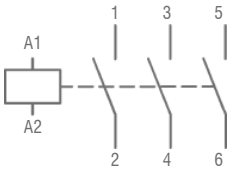


DC Operated

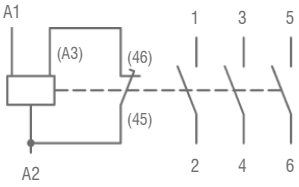


Wiring Diagrams

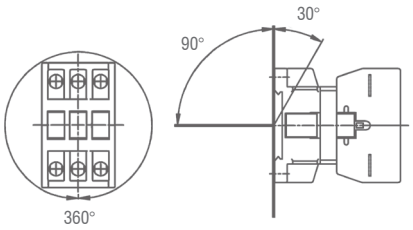
AC Operated



DC Operated



Mounting Position



MC 3- Pole Contactors

IMO

Technical Datasheet

Key Features

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

Options & Ordering Codes

MC | **90** - **S** - **00** - **24**

Series

Standard Contactor	**MC**

AC3 Rating

45kW / 90A	**90**
55kW / 115A	**115**

Switching Type

Standard	**S**

Aux. Contact Configuration

00	

Coil Voltage

24	24VAC/DC
48	48VAC/DC
110	110VAC/DC
230	230VAC/DC
110AC	110VAC
230AC	230VAC
400AC	400VAC

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~		1100A	1200A
	Breaking Capacity I_{eff} 400V~		950A	1100A
	cosθ= 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	
Freqency 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 Us ± 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 10^6	
	DC Operated		5 x 10^6	
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 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

MC 3- Pole Contactors

IMO

Technical Datasheet

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) MCA01 (NC)	AC1 690V I_e ($=I_{th}$) open at 40°C	10A	10A
	AC15, 220-240V	3A	3A
	AC15, 380-440V	2A	2A
	Fuse "Typ1" gl. (gG)	20A max.	20A max.

Technical Data acc. to UL508

Part Number				MC90	MC115
Main Contact Ratings	Rated Operational Current "General Use"			160A	200A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	15	20
		200V	hp	25	35
		220-240V	hp	35	40
		277V	hp	-	-
		380-415V	hp	50	60
		440-480V	hp	65	75
		550-600V	hp	85	100
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	8	10
		200V	hp	15	20
		220-240V	hp	20	25
		277V	hp	20	25
		380-415V	hp	30	40
		440-480V	hp	40	50
		550-600V	hp	50	60
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	-	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	-	-
		200V	hp	-	-
		220-240V	hp	-	-
		440-480V	hp	-	-
		550-600V	hp	-	-
	Rated Current 2 Series Contacts	600V	A	-	-
	Fuse Class RK5 / Short-circuit current		A/kA	300/10	300/10
	Fuse Class T / Short-circuit current		A/kA	300/10*	300/10*
	Rated voltage		V	600	600
Auxiliary Contacts (cULus)				-	-

* Class T and Class RK1

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm^2)	0.5 - 95.0 + 10.0 - 120.0	0.75 - 2.5
Flexible Strand (mm^2)	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

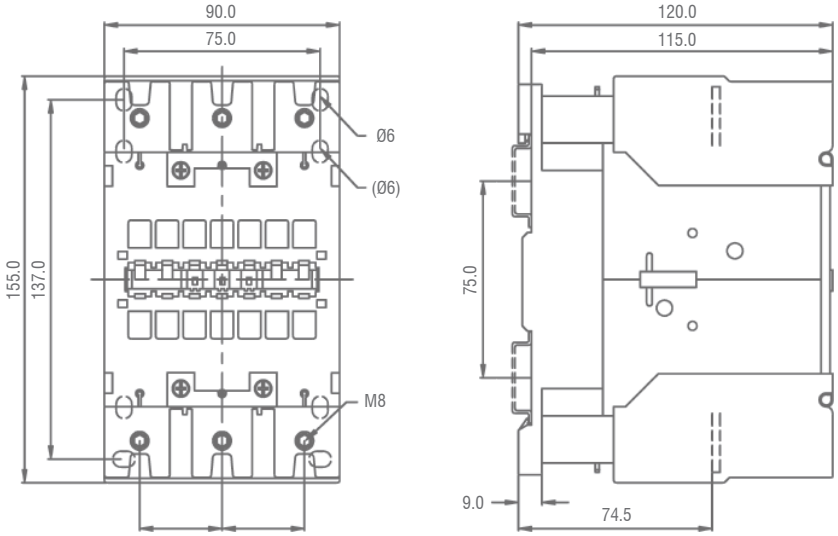
Resistance to Climatic Conditions acc. to IEC60068

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 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.

MC 3- Pole Contactors

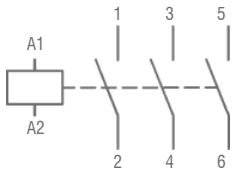
Technical Datasheet

Dimensions (mm)

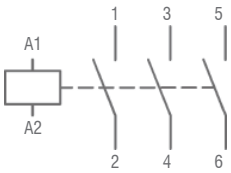


Wiring Diagrams

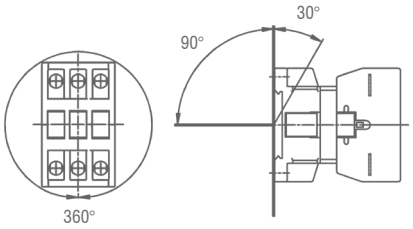
AC Operated



DC Operated



Mounting Position



MC 3- Pole Contactors

IMO

Technical Datasheet

Key Features

- Up to 175A AC3
- Up to 300A AC1
- 3 Pole
- International Approvals
- Data according to IEC 947 / EN 60947

Options & Ordering Codes

MC | **151** - **S** - **00** - **24**

Series

Standard Contactor	**MC**

AC3 Rating

75kW / 150A	**151**
90kW / 175A	**176**

Switching Type

Standard	**S**

Aux. Contact Configuration

00	

Coil Voltage

24	24VAC/DC
48	48VAC/DC
110	110VAC/DC
230	230VAC/DC
110AC	110VAC
230AC	230VAC
400AC	400VAC

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

Part Number			MC151-S-00	MC176-S-00
Main Contact Ratings	AC1 690V I_e (=I_{th}) open at 40°C		250A	300A
	AC2, AC3, 380-440V		75kW / 150A	90kW / 175A
	AC2, AC3, 500-690V		90kW	110kW
	Fuse "Typ1" gl. (gG)		250A max.	315A max.
	Rated Insulation Voltage U_i*1		1000VAC	1000VAC
	Making Capacity I_{eff} at U_e=690V~		1500A	2000A
	Making Capacity I_{eff} at U_e=1000V~		720A	840A
	Breaking Capacity I_{eff} 400V~		1200A	1500A
	Breaking Capacity cosθ= 0.65 500V~		1200A	1500A
	Breaking Capacity cosθ= 0.35 690V~		1000A	800A
	Breaking Capacity cosθ= 0.35 1000V~		500A	600A
Max. Ambient Temp	Operation Open		-25 to +55°C (+70°C)*2	
	Operation Enclosed		-25 to +40°C	
	with Thermal Overload Relay Open		-25 to +55°C	
	with Thermal Overload Relay Enclosed		-25 to +40°C	
	Storage		-55 to +80°C	
Frequency of Operations z Ops/hr	Switching Without Load		1200	
	AC3, I_e		300	
Switching Time at Control Voltage Us ±10%*3, *4	AC Operated	Make Time	30 - 60ms	
		Release Time	30 - 80ms	
	DC Operated	Make Time	30 - 60ms	
		Release Time	30 - 80ms	
Mech. Life	AC Operated		10 x 10^6	
	DC Operated		10 x 10^6	
Curr. Heat Loss	Power Loss Per Pole (I_e/AC3 400V)		9W	11W
	Contact Resistance Per Pole		0.4mΩ	0.35mΩ

*1 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
*2 With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current Ie / AC1 according to Ie / AC3
*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 (varistor, RC unit, diode unit)
*4 Total breaking time = release time + arc duration

MC 3- Pole Contactors

IMO

Technical Datasheet

Technical Data acc. to UL508

Part Number				MC151	MC176
Main Contact Ratings	Rated Operational Current "General Use"			180A	220A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	-	-
		200V	hp	40	50
		220-240V	hp	50	60
		277V	hp	-	-
		380-415V	hp	-	-
		440-480V	hp	100	125
		550-600V	hp	125	150
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	15	25
		200V	hp	-	-
		220-240V	hp	25	30
		277V	hp	-	-
		380-415V	hp	-	-
		440-480V	hp	-	-
		550-600V	hp	-	-
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	-	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	-	-
		200V	hp	-	-
		220-240V	hp	-	-
		440-480V	hp	-	-
		550-600V	hp	-	-
	Rated Current 2 Series Contacts	600V	A	-	-
	Fuse Class RK5 / Short-circuit current		A/kA	300/10	350-10
	Fuse Class T / Short-circuit current		A/kA	-	-
	Rated voltage		V	600	600
Auxiliary Contacts (cULus)				-	-

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm^2)	Busbar 18 x 4 screw M8	1.0 - 2.5
Flexible Strand (mm^2)		1.0 - 2.5
Solid Strand (AWG)		16 - 12
Flexible Strand (AWG)		16 - 12
Cables per Clamp		2

Coil

	AC Operated	DC Operated
Operation Range	0.85 - 1.1	0.85 - 1.1
Inrush	350VA	350W
Sealed	5W	5W

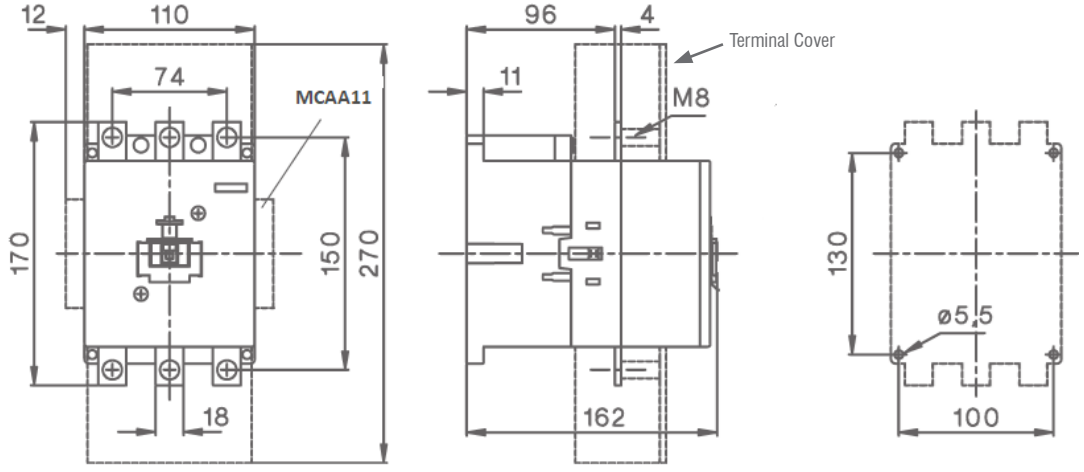
Weights & Dimensions

Single Unit (inc. packaging)	4.0kg
Dimensions	170 x 110 x 162mm

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)



MC 3- Pole Contactors

IMO

Technical Datasheet

Key Features

- Up to 315A AC3
- Up to 600A AC1
- 3 Pole
- International Approvals
- Data according to IEC 947 / EN 60947

Options & Ordering Codes

MC - **210** - **S** - **00** - **24**

Series

Standard Contactor	**MC**

AC3 Rating

110kW / 210A	**210**
132kW / 260A	**260**
160kW / 315A	**316**

Switching Type

Standard	**S**

Aux. Contact Configuration

00	

Coil Voltage

24	24VAC/DC
48	48VAC/DC
110	110VAC/DC
230	230VAC/DC
400AC	400VAC

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

Part Number			MC210-S-00	MC260-S-00	MC316-S-00
Main Contact Ratings	AC1 690V I_e (=I_{th}) open at 40°C		350A	450A	600A
	AC2, AC3, 380-440V		110kW / 210A	132kW / 260A	160kW / 315A
	AC2, AC3, 500-690V		132kW	160kW	210kW
	Fuse "Typ1" gl. (gG)		400A max.	450A max.	500A max.
	Rated Insulation Voltage U_i*1		1000VAC		
	Making Capacity I_{eff} at U_e=690V~		2100A	2600A	3200A
	Making Capacity I_{eff} at U_e=1000V~		1020A	1200A	1500A
	Breaking Capacity I_{eff} 400V~		1600A	2100A	2600A
	Breaking Capacity cosθ= 0.65 500V~		1600A	2100A	2600A
	Breaking Capacity cosθ= 0.35 690V~		1200A	1900A	2300A
	Breaking Capacity cosθ= 0.35 1000V~		700A	850A	1000A
Max. Ambient Temp	Operation Open		-25 to +55°C (+70°C)*2		
	Operation Enclosed		-25 to +40°C		
	with Thermal Overload Relay Open		-25 to +55°C		
	with Thermal Overload Relay Enclosed		-25 to +40°C		
	Storage		-55 to +80°C		
Frequency of Operations z Ops/hr	Switching Without Load		1200		
	AC3, I_e		150		
Switching Time at Control Voltage Us ±10%*2, *3	AC Operated	Make Time	40 - 60ms		
		Release Time	15 - 45ms		
	DC Operated	Make Time	40 - 60ms		
		Release Time	15 - 45ms		
Mech. Life	AC Operated		5×10^6		
	DC Operated		5×10^6		
Curr. Heat Loss	Power Loss Per Pole (I_e/AC3 400V)		8W	11W	14.9W
	Contact Resistance Per Pole		0.18mΩ	0.16mΩ	0.15mΩ

*1 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
*2 With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current Ie / AC1 according to Ie / AC3

MC 3- Pole Contactors

IMO

Technical Datasheet

Technical Data acc. to UL508

Part Number				MC210	MC260	MC316
Main Contact Ratings	Rated Operational Current "General Use"			250A	300A	350A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	-	-	-
		200V	hp	60	75	100
		220-240V	hp	75	100	125
		277V	hp	-	-	-
		380-415V	hp	-	-	-
		440-480V	hp	150	200	250
		550-600V	hp	200	250	300
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	-	-	-
		200V	hp	-	-	-
		220-240V	hp	40	50	50
		277V	hp	-	-	-
		380-415V	hp	-	-	-
		440-480V	hp	-	-	-
		550-600V	hp	-	-	-
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	-	-	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	-	-	-
		200V	hp	-	-	-
		220-240V	hp	-	-	-
		440-480V	hp	-	-	-
		550-600V	hp	-	-	-
	Rated Current 2 Series Contacts	600V	A	-	-	-
	Fuse Class RK5 / Short-circuit current		A/kA	400/18	500/18	500/18
	Fuse Class T / Short-circuit current		A/kA	-	-	-
	Rated voltage		V	600	600	600
Auxiliary Contacts (cULus)				-	-	-

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm^2)	Busbar 25 x 6 screw M10	1.0 - 2.5
Flexible Strand (mm^2)		1.0 - 2.5
Solid Strand (AWG)		16 - 12
Flexible Strand (AWG)		16 - 12
Cables per Clamp		2

Coil

	AC Operated	DC Operated
Operation Range	0.85 - 1.1	0.85 - 1.1
Inrush	360VA	360W
Sealed	5W	5W

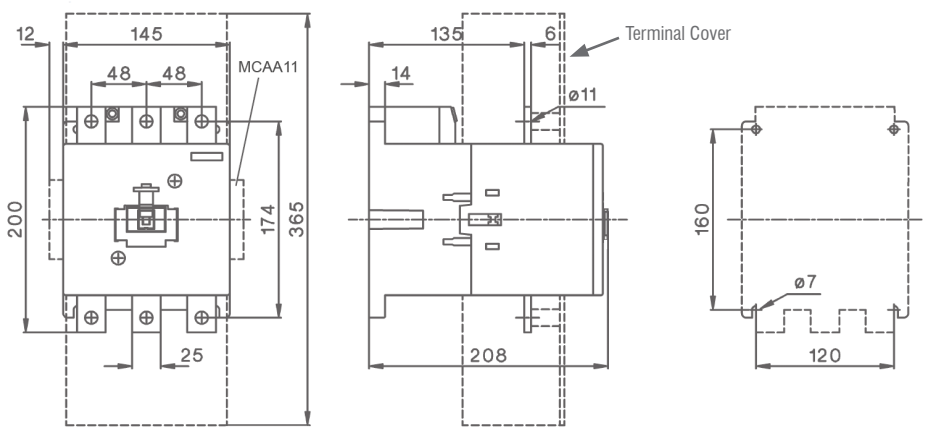
Weights & Dimensions

Single Unit (inc. packaging)	7.2kg
Dimensions	200 x 145 x 208mm

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)



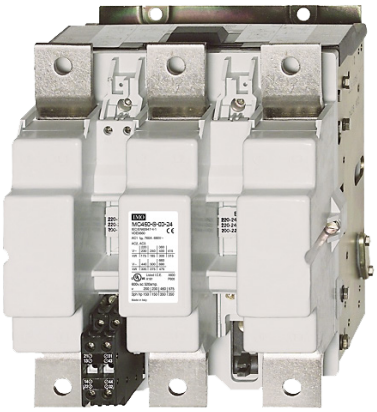
MC 3- Pole Contactors

IMO

Technical Datasheet

Key Features

- Up to 860A AC3
- Up to 1100A AC1
- 3 Pole
- International Approvals
- Data according to IEC 947 / EN 60947



Options & Ordering Codes

MC **450** - **S** - **22** - **24**

Series

Standard Contactor	**MC**

AC3 Rating

250kW / 450A	**450**
300kW / 550A	**550**
400kW / 700A	**700**
500kW / 860A	**860**

Switching Type

Standard	**S**

Aux. Contact Configuration

22	2NO + 2NC

Coil Voltage

24	24VAC/DC
48	48VAC/DC
110	110VAC/DC
230	230VAC/DC
400AC	400VAC

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

Part Number			MC450-S-00	MC550-S-00	MC700-S-00	MC860-S-00
Main Contact Ratings	AC1 690V I_e (=I_{th}) open at 40°C		700A	800A	1000A	1100A
	AC2, AC3, 380-440V		250kW / 450A	300kW / 550A	400kW / 700A	500kW / 860A
	AC2, AC3, 500-(600-690V)		300/375kW	325/500kW	500/630kW	600/700kW
	Fuse "Typ1" gl. (gG)		630A max.	630A max.	800A max.	1000A max.
	Rated Insulation Voltage U_i*1		1000VAC		690VAC	
	Making Capacity I_{eff} at U_e=690V~		4500A	5500A	7000A	8600A
	Making Capacity I_{eff} at U_e=1000V~		2400A	3000A	-	-
	Breaking Capacity I_{eff} 400V~		4500A	5500A	7000A	8000A
	Breaking Capacity cosθ= 0.65 500V~		4500A	5500A	7000A	8000A
	Breaking Capacity cosθ= 0.35 690V~		3200A	4400A	5600A	6900A
	Breaking Capacity cosθ= 0.35 1000V~		-	-	-	-
Max. Ambient Temp	Operation Open		-25 to +55°C (+70°C)*2			
	Operation Enclosed		-25 to +40°C			
	with Thermal Overload Relay Open		-25 to +55°C			
	with Thermal Overload Relay Enclosed		-25 to +40°C			
	Storage		-55 to +80°C			
Frequency of Operations z Ops/hr	Switching Without Load		1200			
	AC3, I_e		50			
	AC4, I_e		25			
Switching Time at Control Voltage Us ±10%*2, *3	AC Operated	Make Time	50 - 100ms			
		Release Time	150 - 200ms / 500 - 1000ms *3			
Mech. Life	AC Operated		5 x 10^6			
	DC Operated		5 x 10^6			
Curr. Heat Loss	Power Loss Per Pole (I_e/AC3 400V)		26.3W	33.3W	49.0W	59.2W

*1 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
*2 With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current Ie / AC1 according to Ie / AC3
*3 Normal or delayed drop is adjustable

MC 3- Pole Contactors

IMO

Technical Datasheet

Technical Data acc. to UL508

Part Number				MC450	MC550	MC700	MC860
Main Contact Ratings	Rated Operational Current "General Use"			420A	520A	700A	810A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	-	-	-	-
		200V	hp	125	150	200	250
		220-240V	hp	125	150	250	300
		277V	hp	-	-	-	-
		380-415V	hp	-	-	-	-
		440-480V	hp	250	350	500	600
		550-600V	hp	250	350	500	600
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	-	-	-	-
		200V	hp	-	-	-	-
		220-240V	hp	-	-	-	-
		277V	hp	-	-	-	-
		380-415V	hp	-	-	-	-
		440-480V	hp	-	-	-	-
		550-600V	hp	-	-	-	-
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	-	-	-	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	-	-	-	-
		200V	hp	-	-	-	-
		220-240V	hp	-	-	-	-
		440-480V	hp	-	-	-	-
		550-600V	hp	-	-	-	-
	Rated Current 2 Series Contacts	600V	A	-	-	-	-
	Fuse Class RK5 / Short-circuit current		A/kA	1200/18	1200/18	2000/30	2000/30
	Fuse Class T / Short-circuit current		A/kA	-	-	-	-
	Rated voltage		V	600	600	600	600
Auxiliary Contacts (cULus)				A600	A600	A600	A600

Cable Cross Sections

	Contacts				Coils
	MC450	MC550	MC700	MC860	
Solid Strand (mm^2)	Busbar 30 x 5 screw M12	Busbar 40 x 6 screw M12	Busbar 50 x 8 screw M12	Busbar 50 x 8 screw M14	1.0 - 2.5
Flexible Strand (mm^2)					1.0 - 2.5
Solid Strand (AWG)					16 - 12
Flexible Strand (AWG)					16 - 12
Cables per Clamp					2

Coil

	AC Operated				DC Operated			
	MC450	MC550	MC700	MC860	MC450	MC550	MC700	MC860
Operation Range	0.85 - 1.1							
Inrush	800 - 950VA		1350 - 1600VA		700 - 850W		1300 - 1550W	
Sealed	9 - 11W		21 - 25W		8 - 10W		18 - 22W	

Weights & Dimensions

	MC450	MC550	MC700	MC860
Single Unit (inc. packaging)	13.0kg	13.5kg	26.5kg	27.6kg

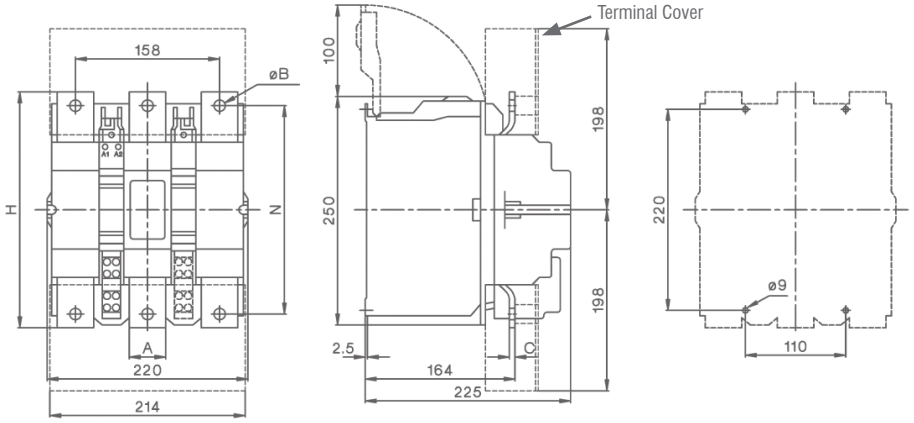
Resistance to Climatic Conditions acc. to IEC60068

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.

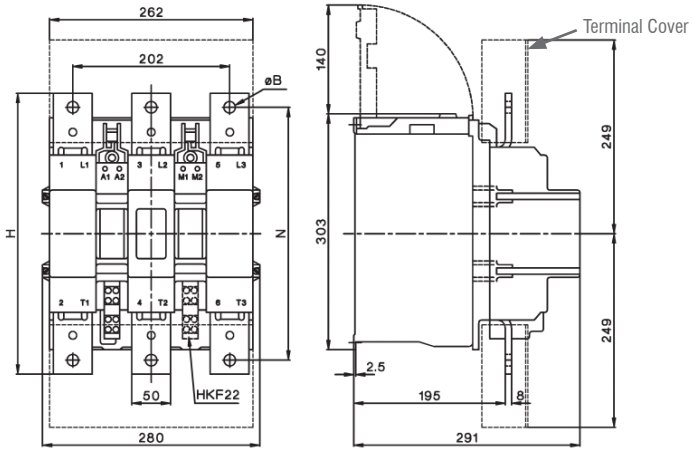
MC 3- Pole Contactors

Technical Datasheet

Dimensions (mm)



Type	A	B	C	H	N
MC450	40	10.5	4	233	206
MC550	40	12.5	6	258	228



Type	B	H	N
MC700	13	310	277
MC860	15	361	325

MC 3- Pole Contactors

IMO

Technical Datasheet

Key Features

- Up to 1200A AC3
- Up to 1350A AC1
- 3 Pole
- International Approvals
- Data according to IEC 947 / EN 60947

Options & Ordering Codes

MC - **1000** - **S** - **12** - **110**

Series

Standard Contactor	**MC**

AC3 Rating

580kW / 1000A	**1000**
680kW / 1200A	**1200**

Switching Type

Standard	**S**

Aux. Contact Configuration

12	1NO + 2NC

Coil Voltage

110	110VAC
230	230VAC
400	400VAC
440	440VAC

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

Part Number			MC1000-S-12	MC1200-S-12
Main Contact Ratings	AC1 690V I_e (=I_{th}) open at 40°C		1200A	1350A
	AC2, AC3, 380-440V		580kW / 1000A	680kW / 1200A
	AC2, AC3, 500-(600-690V)		720/850kW	850/1000kW
	Fuse "Typ1" gl. (gG)		1000A max.	1250A max.
	Rated Insulation Voltage U_i*1		690VAC	
	Making Capacity I_{eff} at U_e=690V~		10000A	12000A
	Making Capacity I_{eff} at U_e=1000V~		-	-
	Breaking Capacity I_{eff} 400V~		8000A	10000A
	Breaking Capacity cosϑ= 0.65 500V~		8000A	10000A
	Breaking Capacity cosϑ= 0.35 690V~		7000A	8000A
	Breaking Capacity cosϑ= 0.35 1000V~		-	-
Max. Ambient Temp	Operation Open		-25 to +55°C (+70°C)*2	
	Operation Enclosed		-25 to +40°C	
	with Thermal Overload Relay Open		-25 to +55°C	
	with Thermal Overload Relay Enclosed		-25 to +40°C	
	Storage		-55 to +80°C	
Frequency of Operations z Ops/hr	Switching Without Load		300	
	AC3, I_e		20	
Switching Time at Control Voltage Us ±10%*2, *3	AC Operated	Make Time	50 - 100ms	
		Release Time	25 - 50ms	
Mech. Life	AC Operated		5 x 10^6 *4	
	DC Operated		5 x 10^6 *4	
Curr. Heat Loss	Power Loss Per Pole (I_e/AC3 400V)		60W	72W

*1 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
*2 With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current Ie / AC1 according to Ie / AC3
*3 Normal or delayed drop is adjustable
*4 After each 1x106 operations magentic core and built-in auxiliary contact block must be changed

MC 3- Pole Contactors

IMO

Technical Datasheet

Technical Data acc. to UL508

Part Number				MC1000	MC1200
Main Contact Ratings	Rated Operational Current "General Use"			-	1215A
Motor DOL 3-Phase at 60Hz	Rated Operational Power	110-120V	hp	-	-
		200V	hp	-	450
		220-240V	hp	-	450
		277V	hp	-	-
		380-415V	hp	-	-
		440-480V	hp	-	900
		550-600V	hp	-	900
Motor DOL 1-Phase at 60Hz	Rated Operational Power AC Motors at 60Hz (1ph)	110-120V	hp	-	-
		200V	hp	-	-
		220-240V	hp	-	-
		277V	hp	-	-
		380-415V	hp	-	-
		440-480V	hp	-	-
		550-600V	hp	-	-
Motor DOL 3-phase acc. to ASME A17.5	Rated Operational Current	600V	A	-	-
	Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)	110-120V	hp	-	-
		200V	hp	-	-
		220-240V	hp	-	-
		440-480V	hp	-	-
		550-600V	hp	-	-
	Rated Current 2 Series Contacts	600V	A	-	-
	Fuse Class RK5 / Short-circuit current		A/kA	-	2000/42
	Fuse Class T / Short-circuit current		A/kA	-	-
	Rated voltage		V	-	600
Auxiliary Contacts (cULus)				-	A600

Cable Cross Sections

	Contacts	Coils
Solid Strand (mm²)	Busbar 50 x 10 screw 2 x M12	1.0 - 2.5
Flexible Strand (mm²)		1.0 - 2.5
Solid Strand (AWG)		16 - 12
Flexible Strand (AWG)		16 - 12
Cables per Clamp		2

Coil

	AC Operated	DC Operated
Operation Range	0.85 - 1.1	0.85 - 1.1
Inrush	2400VA	2100W
Sealed	70W	60W

Weights & Dimensions

	MC1000	MC1200
Single Unit (inc. packaging)	49.0kg	53.0kg

Resistance to Climatic Conditions acc. to IEC60068

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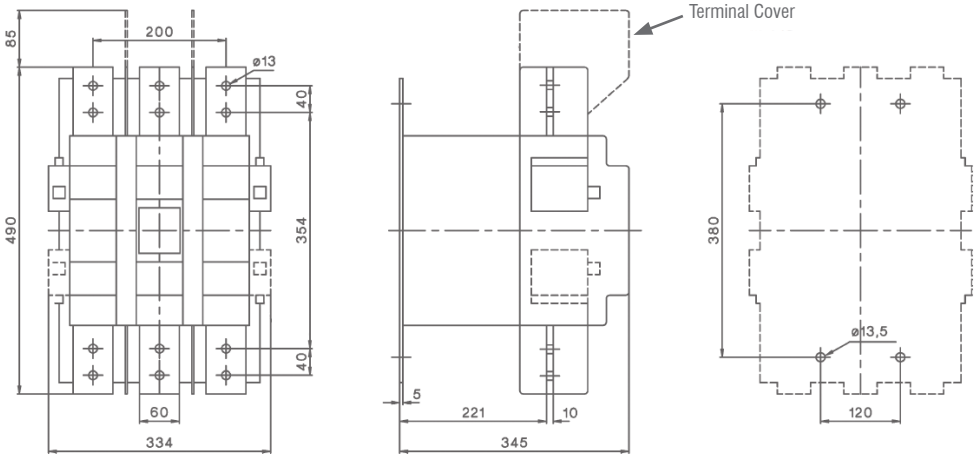
Dimensions (mm)



MC 3- Pole Contactors

Technical Datasheet

Locked Rotor Amperage Data

Definite Purpose Ratings, 3-ph, Breaking All Lines, 100,000 Cycles				
Hermetic Refrigeration Compressor, AC-8a				
Contactor	UL-FLA	UL-LRA		
		220-240V	440-480V	550-600V
	(Amps)	(Amps)	(Amps)	(Amps)
MC10	10	54	45	36
MC14	14	58	60	48
MC18	18	108	84	72
MC22	22	132	125	100
MC24	27	168	160	128
MC32	34	240	200	160
MC40	34	240	200	160
MC50	44	300	240	200
MC62	52	390	310	260
MC74	66	450	375	300
MC90	85	550	500	460
MC115	99	620	575	590