

### **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**



Series	MC	10N - S	S - 10	- 24AC	2	11 4 12 6
Standard Contactor	MC					
AC3 Ra	iting					
4kW / 1	0A	10N			Coil Vo	ltage*
5.5kW /	/ 14A	14N		Aux. Contact Configuration	24AC	24DC
7.5kW /	/ 18A	18N	10	Normally Open (NO)	110AC	48DC
11kW /	22A	22N	01	Normally Closed (NC)	230AC	110DC
	Switching Typ	ре			400AC	
	Standard	S	3	* 011	il	

<sup>\*</sup> Other coil voltages available. Please contact IMO for more information.

Part Numbei	r		MC10N-S-10	MC14N-S-10	MC18N-S-10	MC22N-S-10	
	AC1 690V I <sub>e</sub> (=I <sub>th</sub> )	open at 40°C	25A	25A	32A	32A	
	AC2, AC3, 380-440	OV	4kW / 10A	5.5kW / 14A	7.5kW / 18A	11kW / 22A	
ings	AC2, AC3, 500-690V DC1 / 3 / 5, 24VDC (1 pole/3 poles in series)		5.5kW	10kW			
Rat			20A 25A 32A				
Main Contact Ratings	Fuse "Typ1" gl. (gG	à)	63A max.	63A max.	63A max.	63A max.	
1001	Rated Insulation Vo	Itage U <sub>i</sub> *4	690V~	690V~	690V~	690V~	
Mair	Making Capacity I <sub>eff</sub>	, at U <sub>e</sub> =690V~	200A	200A	200A	200A	
	Breaking Capacity I	eff 400V~	180A	180A	200A	200A	
	cosθ= 0.65 500V-	~	150A	150A	180A	180A	
	Operation Open			-40 to +60	°C (+90°C)*1		
Max. Ambient Temp	Operation Enclosed			-40 to	+40°C		
Amb Temp	with Thermal Overlo	oad Relay Open		-25 to	+60°C		
Лах.	with Thermal Overlo	oad Relay Enclosed		-25 to	+40°C		
_	Storage		-50 to +90°C				
J(	Switching Without I	Load	10,000				
ions //hr	AC3, I <sub>e</sub>		600				
Freqency of Operations z Ops/hr	AC4, I		120				
<u> </u>	DC3, I <sub>e</sub>			6	600		
		Make Time		8 -	16ms		
ne at e Us	AC Operated	Release Time		5 -	13ms		
y Tin oltag 5*2.7		Arc Duration		10 -	15ms		
Switching Time at Control Voltage Us ±10%*2. *3		Make Time		8 -	12ms		
Switch Sonth	DC Operated	Release Time		8 -	13ms		
0,0		Arc Duration		10 -	15ms		
Mech. Life	AC Operated			10	x 10 <sup>6</sup>		
Me	DC Operated with D	Oual-Wound Coils		10	x 10 <sup>6</sup>		
Curr. Heat Loss	Power Loss Per Po	le (I <sub>e</sub> /AC3 400V)	0.21W	0.35W	0.5W	0.75W	
こまら	Contact Resistance	Per Pole	2.1mΩ 1.8mΩ 1.5mΩ 1.5mΩ				
Shock Resis	tance acc. to IEC6006	68-2-27 - 20ms Sine Wave NO		1	0g		
Shock Resis	tance acc. to IEC6006	68-2-27 - 20ms Sine Wave NC			6g		

<sup>\*1</sup> With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current le / AC1 according to le / AC3

<sup>\*\*</sup> 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<sub>sing</sub> =8kV. Data for other conditions upon request



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
000 st	AC1 690V $I_e$ (= $I_{th}$ ) open at 40°C	10A	10A	10A	10A
ontact ings 0 (NO) 1 (NC)	AC15, 220-240V	3A	3A	3A	3A
A Tat	AC15, 380-440V	2A	2A	2A	2A
AU, MC,	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
		110-120V	hp	1.5	2	2	3
		200V	hp	3	3	5	5
		220-240V	hp	3	3	7.5	7.5
Motor DOL 3-Phase at 60Hz	Rated Operational Power	277V	hp	3	5	7.5	7.5
00112		380-415V	hp	5	5	10	10
		440-480V	hp	5	7.5	10	15
		550-600V	hp	7.5	10	15	20
		110-120V	hp	0.5	0.75	1	1.5
		200V	hp	1	1.5	2	3
	Rated Operational Power AC Motors at 60Hz (1ph)	220-240V	hp	1.5	2	3	3
Motor DOL 1-Phase at 60Hz		277V	hp	2	3	3	5
00112		380-415V	hp	3	3	5	5
		440-480V	hp	3	5	5	7.5
		550-600V	hp	3	5	7.5	10
	Rated Operational Current	600V	А	-	-	-	-
		110-120V	hp	-	-	-	-
	Rated Operational Power	200V	hp	-	-	-	-
	3-phase Motors for Elevators	220-240V	hp	-	-	-	-
lotor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	-	-	-	-
ASME A17.5		550-600V	hp	-	-	-	-
	Rated Current 2 Series Contacts	600V	А	-	-	-	-
	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
uxiliary Contacts (cULus)				A600	A600	A600	A600

### **Cable Cross Sections**

	Contacts	Coils
Solid Strand (mm <sup>2</sup> )	0.75 - 6.0	0.75 - 2.5
Flexible Strand (mm²)	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

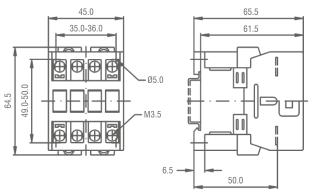
### Resistance to Climatic Conditions acc. to IEC60068

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 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.

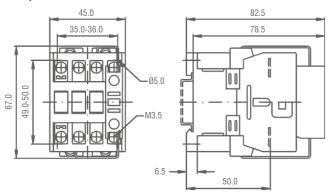


Technical Datasheet

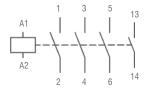
### Dimensions (mm) AC Operated



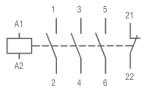
### DC Operated



### Wiring Diagrams AC Operated

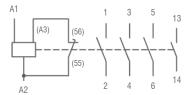


13-14 Normally Open (NO) Auxiliary

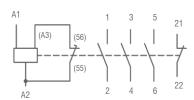


21-22 Normally Closed (NC) Auxiliary

### **DC** Operated

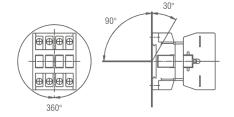


13-14 Normally Open (NO) Auxiliary



21-22 Normally Closed (NC) Auxiliary

### **Mounting Position**

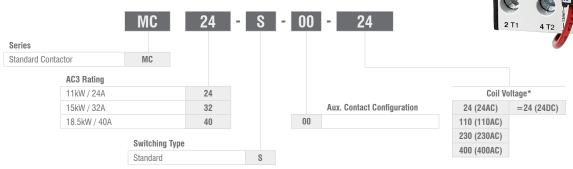


### **Key Features**

- Up to 40A AC3
- Up to 80A AC1
- · DIN Rail Mounting
- International Approvals
- Data according to IEC 947 / EN 60947



### **Options & Ordering Codes**



<sup>\*</sup> Other coil voltages available. Please contact IMO for more information.

Technical Datasheet

Part Number			MC24-S-00	MC32-S-00	MC40-S-10		
	AC1 690V I <sub>e</sub> (=I <sub>th</sub> )	open at 40°C	50A	65A	80A		
	AC2, AC3, 380-440V		11kW / 24A	15kW / 32A	18.5kW / 40A		
ings	AC2, AC3, 500-690V		15kW	18.5kW	18.5kW		
Rat	DC1 / 3 / 5, 24VD0	C (1 pole/3 poles in series)	50A	65A	80A		
ntact	Fuse "Typ1" gl. (gl	G)	100A max.	100A max.	100A max.		
Main Contact Ratings	Rated Insulation Vo	oltage U <sub>i</sub> *4	690V~	690V~	690V~		
Mair	Making Capacity I	$_{\rm eff}$ at U $_{\rm e}$ =690V $\sim$	400A	500A	500A		
	Breaking Capacity	I <sub>eff</sub> 400V~	380A	400A	400A		
	cosθ= 0.35 500V	~	300A	370A	370A		
	Operation Open			-40 to +60°C (+90°C)*1			
Max. Ambient Temp	Operation Enclose	d		-40 to +40°C			
k. Ambi Temp	with Thermal Over	load Relay Open		-25 to +60°C			
Max.	with Thermal Over	load Relay Enclosed		-25 to +40°C			
_	Storage		-50 to +90°C				
of Z	Switching Without Load			7,000			
Freqency of Operations z Ops/hr	AC3, I <sub>e</sub>		600				
reqel pera Ops	AC4, I <sub>e</sub>			120			
<u> </u>	DC3, I <sub>e</sub>			600			
+ · · ·		Make Time		10 - 25ms			
ne a Je U	AC Operated	Release Time		8 - 15ms			
g Tin oltag %*2, 3		Arc Duration		10 - 15ms			
Switching Time at Control Voltage Us ±10%*2.*3		Make Time		10 - 20ms			
Swit Cont	DC Operated	Release Time		10 - 15ms			
		Arc Duration		10 - 15ms			
Mech. Life	AC Operated			10 x 10 <sup>6</sup>			
Me	DC Operated with	Dual-Wound COils	10 x 10 <sup>6</sup>				
Curr. Heat Loss	Power Loss Per Po	ole (I <sub>e</sub> /AC3 400V)	0.7W	1.3W	2.0W		
σ±3	Contact Resistanc	e Per Pole	1.2mΩ 1.2mΩ 1.2mΩ				
Shock Resis	tance acc. to IEC600	68-2-27 - 20ms Sine Wave NO	8g				
Shock Resis	tance acc. to IEC600	68-2-27 - 20ms Sine Wave NC		-			

<sup>\*1</sup> With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current le / AC1 according to le / AC3

<sup>\*2</sup> 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<sub>mp</sub> = 8kV. Data for other conditions upon request



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
t 66	AC1 690V $I_e$ (= $I_{th}$ ) open at 40°C	10A	10A	10A
S S S	AC15, 220-240V	3A	3A	3A
Rat SA1	AC15, 380-440V	2A	2A	2A
MC AL	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

art Number				MC24	MC32	MC40
Main Contact Ratings	Rated Operational Current "General Use"			50A	65A	80A
		110-120V	hp	5	5	7.5
		200V	hp	7.5	10	10
		220-240V	hp	10	10	15
Motor DOL 3-Phase at 60Hz	Rated Operational Power	277V	hp	7.5	10	15
OUTE		380-415V	hp	10	15	20
		440-480V	hp	15	20	25
		550-600V	hp	20	25	30
		110-120V	hp	1.5	2	3
		200V	hp	3	5	7.5
	Rated Operational Power AC Motors at 60Hz (1ph)	220-240V	hp	5	5	7.5
Motor DOL 1-Phase at 60Hz		277V	hp	5	7.5	10
00112		380-415V	hp	5	7.5	10
		440-480V	hp	7.5	10	15
		550-600V	hp	10	15	20
	Rated Operational Current	600V	А	15	22	-
		110-120V	hp	2	3	-
	Rated Operational Power	200V	hp	3	5	-
	3-phase Motors for Elevators	220-240V	hp	5	7.5	-
otor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	10	15	-
ASME A17.5		550-600V	hp	10	20	-
	Rated Current 2 Series Contacts	600V	Α	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
xiliary Contacts (cULus)				_	_	-

### **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 - 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

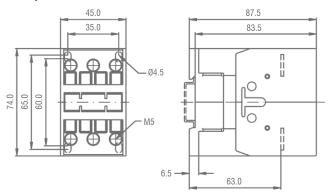
### Resistance to Climatic Conditions acc. to IEC60068

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 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.

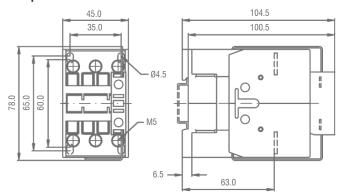


Technical Datasheet

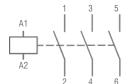
### Dimensions (mm) AC Operated



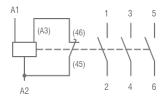
### **DC** Operated



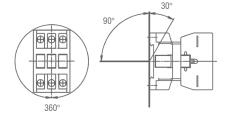
### Wiring Diagrams AC Operated



### **DC** Operated



### **Mounting Position**

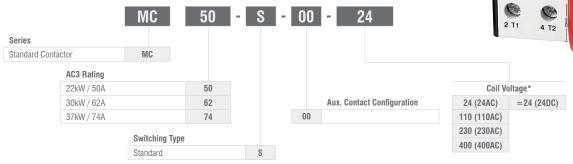


### **Key Features**

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



### **Options & Ordering Codes**



<sup>\*</sup> Other coil voltages available. Please contact IMO for more information.

5 L3

Technical Datasheet

Part Numbei			MC50-S-00	MC62-S-00	MC74-S-10
	AC1 690V I <sub>e</sub> (=I <sub>th</sub> )	open at 40°C	110A	120A	130A
	AC2, AC3, 380-44	0V	22kW / 50A	30kW / 62A	37kW / 74A
ings	AC2, AC3, 500-690V		30kW	37kW	45kW
t Rat	DC1 / 3 / 5, 24VDC (1 pole/3 poles in series)		110A	120A	130A
Main Contact Ratings	Fuse "Typ1" gl. (g	G)	160A max.	160A max.	160A max.
1001	Rated Insulation V	oltage U <sub>i</sub> *4	830V~	830V~	830V~
Mair	Making Capacity I	at U <sub>e</sub> =690V~	700A	900A	900A
	Breaking Capacity	I <sub>eff</sub> 400V~	600A	800A	A008
	cosθ= 0.35 500V	~	500A	700A	700A
	Operation Open			-40 to +60°C (+90°C)*1	
Max. Ambient Temp	Operation Enclose	d		-40 to +40°C	
	with Thermal Overload Relay Open		-25 to +60°C		
Max.	with Thermal Overload Relay Enclosed		-25 to +40°C		
_	Storage		-50 to +90°C		
of s z	Switching Without Load		7,000		
Freqency of Operations z Ops/hr	AC3, I <sub>e</sub>		400		
reqel pera Ops	AC4, I <sub>e</sub>		120		
ш О	DC3, I <sub>e</sub>		400		
<b>→</b> S		Make Time		12 - 28ms	
Switching Time at Control Voltage Us ±10%*2,*3)	AC Operated	Release Time		8 - 15ms	
g Tin oltag		Arc Duration		10 - 15ms	
chin rol V		Make Time		12 - 23ms	
Swith Contr	DC Operated	Release Time		10 - 18ms	
0	Arc Duration		10 - 15ms		
Mech. Life	AC Operated			10 x 10 <sup>6</sup>	
Me	DC Operated with	Dual-Wound Coils		10 x 10 <sup>6</sup>	
Curr. Heat Loss	Power Loss Per Po	ole (I <sub>e</sub> /AC3 400V)	2.2W	3.9W	5.5W
2 7 3	Contact Resistance Per Pole		1.0mΩ	1.0mΩ	$1.0 m\Omega$
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NO			8g		
Shock Resis	tance acc. to IEC600	68-2-27 - 20ms Sine Wave NC		-	

<sup>\*1</sup> With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current le / AC1 according to le / AC3

<sup>\*2</sup> 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<sub>mp</sub> = 8kV. Data for other conditions upon request



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
t 66	AC1 690V $I_e$ (= $I_{th}$ ) open at 40°C	10A	10A	10A
S S S	AC15, 220-240V	3A	3A	3A
Rat SA1	AC15, 380-440V	2A	2A	2A
M M	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

art Number				MC50	MC62	MC74
Main Contact Ratings	Rated Operational Current "General Use"			110A	120A	130A
		110-120V	hp	10	10	10
		200V	hp	15	20	25
		220-240V	hp	20	25	30
Motor DOL 3-Phase at 60Hz	Rated Operational Power	277V	hp	20	25	30
OUTE		380-415V	hp	25	30	40
		440-480V	hp	30	40	50
		550-600V	hp	40	50	50
		110-120V	hp	3	5	7.5
	Rated Operational Power AC Motors at 60Hz (1ph)	200V	hp	7.5	10	15
		220-240V	hp	10	15	15
Motor DOL 1-Phase at 60Hz		277V	hp	10	15	15
00112		380-415V	hp	15	20	20
		440-480V	hp	20	25	25
		550-600V	hp	25	30	30
	Rated Operational Current	600V	А	27	37	-
		110-120V	hp	3	5	-
	Rated Operational Power	200V	hp	7.5	10	-
	3-phase Motors for Elevators	220-240V	hp	7.5	10	-
lotor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	20	25	-
ASME A17.5		550-600V	hp	25	30	-
	Rated Current 2 Series Contacts	600V	А	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
ixiliary Contacts (cULus)				-	-	-

### **Cable Cross Sections**

	Contacts	Coils
Solid Strand (mm²)	4.0 - 50.0	0.75 - 2.5
Flexible Strand (mm²)	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

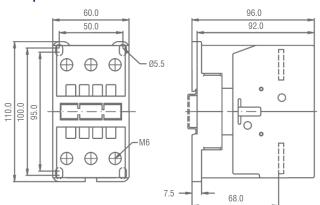
### Resistance to Climatic Conditions acc. to IEC60068

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 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.

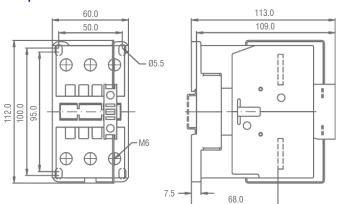


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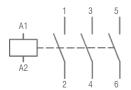
### Dimensions (mm) AC Operated



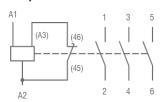
### **DC** Operated



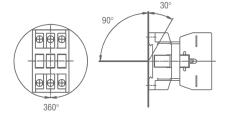
### Wiring Diagrams AC Operated



### **DC** Operated



### **Mounting Position**





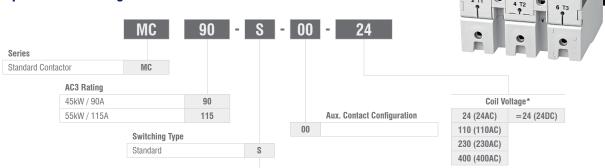
Technical Datasheet

### **Key Features**

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



### **Options & Ordering Codes**



<sup>\*</sup> Other coil voltages available. Please contact IMO for more information.

Part Number	r		MC90-S-00	MC115-S-00	
	AC1 690V I <sub>e</sub> (=I <sub>th</sub> )	open at 40°C	160A	200A	
S	AC2, AC3, 380-44	0V	45kW / 90A	55kW / 115A	
atinç	AC2, AC3, 500-69	0V	55kW	55kW	
ict B	Fuse "Typ1" gl. (g0	G)	250A max.	250A max.	
onta	Rated Insulation Vo	oltage U <sub>i</sub> *4	1000V~	1000V~	
Main Contact Ratings	Making Capacity I	<sub>ff</sub> at U <sub>e</sub> =690V~	1100A	1200A	
Š	Breaking Capacity	I <sub>eff</sub> 400V~	950A	1100A	
	cosθ= 0.35 500V	~	850A	1000A	
	Operation Open		-40 to +60°C (	+90°C)*1	
oient -	Operation Enclosed	d	-40 to +4	0°C	
Max. Ambient Temp	with Thermal Over	load Relay Open	-25 to +60°C		
√ax.	with Thermal Over	load Relay Enclosed	-25 to +40°C		
_	Storage		-50 to +90°C		
JC Z	Switching Without Load		3,000		
Fregency of Operations z Ops/hr	AC3, I <sub>e</sub>		300		
eqency perations Ops/hr	AC4, I		120		
7 9	DC3, I		300		
		Make Time	20 - 35ms		
ne at e Us	AC Operated	Release Time	35 - 50ms		
y Tin oltag 5*2.7		Arc Duration	10 - 15ms		
Switching Time at Control Voltage Us ±10%*2. *3		Make Time	20 - 35n	ns	
Swite Sont	DC Operated	Release Time	35 - 50n	ns	
9, 0		Arc Duration	10 - 15ms		
ch.	AC Operated		5 x 10	6	
Mech. Life	DC Operated		5 x 10	6	
Curr. Heat Loss	Power Loss Per Po	ole (I <sub>e</sub> /AC3 400V)	4.8W	7.9W	
2 # 9	Contact Resistance	e Per Pole	0.6mΩ	0.5mΩ	
Shock Resistance acc. to IEC60068-2-27 - 20ms Sine Wave NO			7g		
Shock Resis	tance acc. to IEC600	68-2-27 - 20ms Sine Wave NC	5g		

 $<sup>^{\</sup>star1}$  With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current le / AC1 according to le / AC3

<sup>\*\*</sup> Total predates to the 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



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

Part Number		MC90-S-00+MCA	MC115-S-00+MCA
ntact gs (NO) (NC)	AC1 690V $I_e$ (= $I_{th}$ ) open at 40°C	10A	10A
ontact ngs 0 (NO) 1 (NC)	AC15, 220-240V	3A	3A
Rati CA10	AC15, 380-440V	2A	2A
Au; MC MC	Fuse "Typ1" gl. (gG)	20A max.	20A max.

### Technical Data acc. to UL508

art Number				MC90	MC115
Main Contact Ratings	Rated Operational Current "General Use"			160A	200A
		110-120V	hp	15	20
		200V	hp	25	35
		220-240V	hp	35	40
Motor DOL 3-Phase at 60Hz	Rated Operational Power	277V	hp	-	-
00112		380-415V	hp	50	60
		440-480V	hp	65	75
		550-600V	hp	85	100
		110-120V	hp	8	10
	Rated Operational Power AC Motors at 60Hz (1ph)	200V	hp	15	20
		220-240V	hp	20	25
Motor DOL 1-Phase at 60Hz		277V	hp	20	25
		380-415V	hp	30	40
		440-480V	hp	40	50
		550-600V	hp	50	60
	Rated Operational Current	600V	А	-	-
		110-120V	hp	-	-
	Rated Operational Power	200V	hp	-	-
	3-phase Motors for Elevators	220-240V	hp	-	-
Motor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	-	-
ASME A17.5		550-600V	hp	-	-
	Rated Current 2 Series Contacts	600V	А	-	-
	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)				-	-

<sup>\*</sup> Class T and Class RK1

### **Cable Cross Sections**

	Contacts	Coils
Solid Strand (mm²)	0.5 - 95.0 + 10.0 - 120.0	0.75 - 2.5
Flexible Strand (mm²)	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**

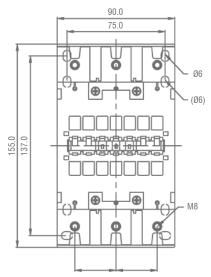
Single Unit (inc. packaging)	2.20kg
Dimensions	157 x 92 x 155mm

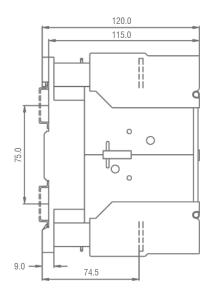
### Resistance to Climatic Conditions acc. to IEC60068

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.

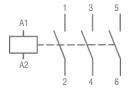


### **Dimensions (mm)**

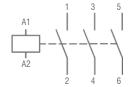




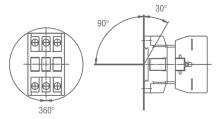
### Wiring Diagrams AC Operated



### **DC** Operated



### **Mounting Position**





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	2	
Series								
Standard Conta	actor	MC						
	AC3 Rating							Coil Voltage
	75kW / 150A		151				24	24VAC/DC
	90kW / 175A		176			Aux. Contact Configuration	48	48VAC/DC
	30KW / 173A		170		00	Aux. Contact Configuration	110	110VAC/DC
		Switching Type	)		00		230	230VAC/DC
		Standard		S			110AC	110VAC
							230AC	230VAC
							400AC	400VAC

Part Number		MC151-S-00	MC176-S-00		
	AC1 690V I <sub>e</sub> (=I <sub>th</sub> )	open at 40°C	250A	300A	
	AC2, AC3, 380-44	0V	75kW / 150A	90kW / 175A	
	AC2, AC3, 500-690V		90kW	110kW	
ngs	Fuse "Typ1" gl. (g0	G)	250A max.	315A max.	
Rati	Rated Insulation Vo	oltage U <sub>i</sub> *1	1000VAC	1000VAC	
Main Contact Ratings	Making Capacity I <sub>e</sub>	at U <sub>e</sub> =690V~	1500A	2000A	
Cor	Making Capacity I <sub>e</sub>	at U <sub>e</sub> =1000V~	720A	840A	
Main	Breaking Capacity	I <sub>eff</sub> 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	
	Operation Open		-25 to +55°C (+70°C)*2		
Max. Ambient Temp	Operation Enclosed		-25 to +40°C		
. Ambi Temp	with Thermal Overload Relay Open		-25 to -	-55°C	
lax. ⊤	with Thermal Overload Relay Enclosed		-25 to -	-40°C	
2	Storage		-55 to +80°C		
ncy of ions z /hr	Switching Without Load		120	0	
Frequency of Operations z Ops/hr	AC3, I <sub>e</sub>		300	)	
at Us	AC Operated	Make Time	30 - 6	0ms	
Switching Time at Control Voltage Us ±10%*3.*4	AC Operated	Release Time	30 - 8	30 - 80ms	
vitching ntrol V ±10%	DC Operated	Make Time	30 - 6	0ms	
SOO	Do operated	Release Time	30 - 8	0ms	
ch.	AC Operated		10 x	10 <sup>6</sup>	
Mech. Life	DC Operated		10 x	10 <sup>6</sup>	
Curr. Heat Loss	Power Loss Per Po	le (I <sub>e</sub> /AC3 400V)	9W	11W	
2 % 2	Contact Resistance	e Per Pole	0.4mΩ	0.35mΩ	

<sup>\*</sup>¹ Suitable at 690V for earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard industry): U<sub>imp</sub>=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 le / AC1 according to le / 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



Technical Datasheet

### Technical Data acc. to UL508

Main Contact Ratings  Motor DOL 3-Phase at 60Hz	Rated Operational Current "General Use"  Rated Operational Power	110-120V 200V 220-240V 277V 380-415V	hp hp hp	180A - 40 50	220A - 50 60
	Rated Operational Power	200V 220-240V 277V 380-415V	hp hp	50	50
	Rated Operational Power	220-240V 277V 380-415V	hp hp	50	
	Rated Operational Power	277V 380-415V	hp		60
	Rated Operational Power	380-415V			
00112				-	-
			hp	-	-
		440-480V	hp	100	125
		550-600V	hp	125	150
		110-120V	hp	15	25
	Rated Operational Power AC Motors at 60Hz (1ph)	200V	hp	-	-
		220-240V	hp	25	30
Motor DOL 1-Phase at 60Hz		277V	hp	-	-
OULE		380-415V	hp	-	-
		440-480V	hp	-	-
		550-600V	hp	-	-
	Rated Operational Current	600V	А	-	-
		110-120V	hp	-	-
	Rated Operational Power	200V	hp	-	-
	3-phase Motors for Elevators	220-240V	hp	-	-
lotor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	-	-
ASME A17.5		550-600V	hp	-	-
	Rated Current 2 Series Contacts	600V	А	-	-
	Fuse Class RK5 / Short-circuit current		A/kA	300/10	350-10
	Fuse Class T / Short-circuit current		A/kA	-	-
			V	600	600
uxiliary Contacts (cULus)	Rated voltage		V	DUU	600

### **Cable Cross Sections**

	Contacts	Coils
Solid Strand (mm²)		1.0 - 2.5
Flexible Strand (mm²)	Busbar	1.0 - 2.5
Solid Strand (AWG)	18 x 4	16 - 12
Flexible Strand (AWG)	screw M8	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

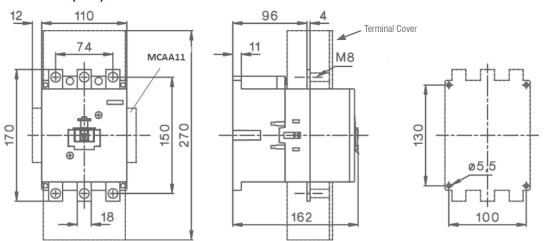
### **Weights & Dimensions**

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 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)**





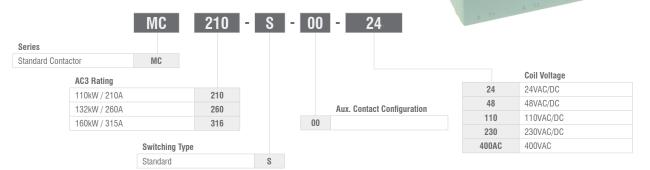
Technical Datasheet

### **Key Features**

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



### **Options & Ordering Codes**



art Number			MC210-S-00	MC260-S-00	MC316-S-00	
	AC1 690V I <sub>e</sub> (=I <sub>th</sub> )	open at 40°C	350A	450A	600A	
	AC2, AC3, 380-44	0V	110kW / 210A	132kW / 260A	160kW / 315A	
	AC2, AC3, 500-69	0V	132kW	160kW	210kW	
Main Contact Ratings	Fuse "Typ1" gl. (g	G)	400A max.	450A max.	500A max.	
t Rat	Rated Insulation V	oltage U <sub>i</sub> *1	1000VAC			
ntaci	Making Capacity I	<sub>eff</sub> at U <sub>e</sub> =690V~	2100A	2600A	3200A	
00 [	Making Capacity I	$_{\rm eff}$ at $U_{\rm e} = 1000 V \sim$	1020A	1200A	1500A	
Mair	Breaking Capacity	I <sub>eff</sub> 400V~	1600A	2100A	2600A	
	Breaking Capacity	cosθ= 0.65 500V~	1600A	2100A	2600A	
	Breaking Capacity	cosθ= 0.35 690V~	1200A	1900A	2300A	
	Breaking Capacity $\cos\theta = 0.35\ 1000V \sim$		700A	850A	1000A	
_	Operation Open		-25 to +55°C (+70°C)*2			
bien.	Operation Enclosed		-25 to +40°C			
Max. Ambient Temp	with Thermal Overload Relay Open		-25 to +55°C			
Max.	with Thermal Overload Relay Enclosed		-25 to +40°C			
	Storage		-55 to +80°C			
Frequency of Operations z Ops/hr	Switching Without Load		1200			
Freque Operat Ops	AC3, I <sub>e</sub>		150			
at Us	AC Operated	Make Time	40 - 60ms			
Switching Time at Control Voltage Us ±10%*2. *3	AC Operated	Release Time	15 - 45ms			
witchin ntrol V ±109	DC Operated	Make Time	40 - 60ms			
S) CO	Do oporatou	Release Time	15 - 45ms			
Mech. Life	AC Operated			5 x 10 <sup>6</sup>		
Me Li	DC Operated			5 x 10 <sup>6</sup>		
Curr. Heat Loss	Power Loss Per Po	ole (I <sub>e</sub> /AC3 400V)	8W	11W	14.9W	
Z Ž S	Contact Resistanc	e Per Pole	0.18mΩ	0.16mΩ	$0.15 m\Omega$	

<sup>\*</sup>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 le / AC1 according to le / AC3



Technical Datasheet

### Technical Data acc. to UL508

art Number				MC210	MC260	MC316
Main Contact Ratings	Rated Operational Current "General Use"			250A	300A	350A
		110-120V	hp	-	-	-
		200V	hp	60	75	100
		220-240V	hp	75	100	125
Motor DOL 3-Phase at 60Hz	Rated Operational Power	277V	hp	-	-	-
OUTE		380-415V	hp	-	-	-
		440-480V	hp	150	200	250
		550-600V	hp	200	250	300
		110-120V	hp	-	-	-
	Rated Operational Power AC Motors at 60Hz (1ph)	200V	hp	-	-	-
		220-240V	hp	40	50	50
Motor DOL 1-Phase at 60Hz		277V	hp	-	-	-
OOTIE		380-415V	hp	-	-	-
		440-480V	hp	-	-	-
		550-600V	hp	-	-	-
	Rated Operational Current	600V	А	-	-	-
		110-120V	hp	-	-	-
	Rated Operational Power	200V	hp	-	-	-
	3-phase Motors for Elevators	220-240V	hp	-	-	-
Motor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	-	-	-
ASME A17.5		550-600V	hp	-	-	-
	Rated Current 2 Series Contacts	600V	А	-	-	-
	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 <sup>2</sup> )	(mm²)	1.0 - 2.5
Flexible Strand (mm²)	Busbar	1.0 - 2.5
Solid Strand (AWG)	25 x 6	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

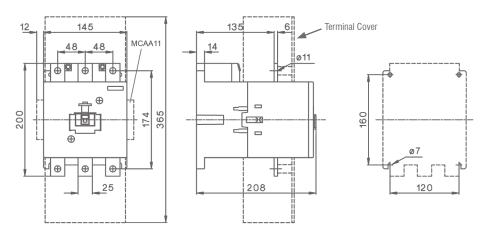
### **Weights & Dimensions**

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 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)**





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**



ries						
andard Contactor	MC					
AC3 Rating						Coil Voltage
250kW / 450A		450			24	24VAC/DC
300kW / 550A		550		Aux. Contact Configuration	48	48VAC/DC
			00	Aux. Comact Comiguration	110	110VAC/DC
400kW / 700A		700	UU		230	230VAC/DC
500kW / 860A		860			400AC	400VAC

Part Number			MC450-S-00	MC550-S-00	MC700-S-00	MC860-S-00		
	AC1 690V I <sub>e</sub> (=I <sub>th</sub> )	open at 40°C	700A	800A	1000A	1100A		
	AC2, AC3, 380-440	0V	250kW / 450A	300kW / 550A	400kW / 700A	500kW / 860A		
	AC2, AC3, 500-(60	00-690V)	300/375kW	325/500kW	500/630kW	600/700kW		
ngs	Fuse "Typ1" gl. (gG) Rated Insulation Voltage U <sub>i</sub> *1		630A max.	630A max.	800A max.	1000A max.		
. Rati			1000	DVAC	690	VAC		
Main Contact Ratings	Making Capacity I <sub>ef</sub>	at U <sub>e</sub> =690V~	4500A	5500A	7000A	8600A		
l Col	Making Capacity I <sub>ef</sub>	at U <sub>e</sub> =1000V~	2400A	3000A	-	-		
Mair	Breaking Capacity $I_{eff}$ 400V~ Breaking Capacity $\cos\theta = 0.65500$ V~ Breaking Capacity $\cos\theta = 0.35690$ V~		4500A	5500A	7000A	A0008		
			4500A	5500A	7000A	A0008		
			3200A	4400A	5600A	6900A		
	Breaking Capacity	cosθ= 0.35 1000V~	-	-	-	-		
	Operation Open		-25 to +55°C (+70°C)*2					
Max. Ambient Temp	Operation Enclosed	i	-25 to +40°C					
. Ambi Temp	with Thermal Overl	oad Relay Open	-25 to +55°C					
Max.	with Thermal Overl	oad Relay Enclosed	-25 to +40°C					
_	Storage		-55 to +80°C					
/ of	Switching Without	Load		1200				
Frequency of Operations z Ops/hr	AC3, I <sub>e</sub>			50				
Freq Ope	AC4, I <sub>e</sub>			25				
Switching Time at Control Voltage Us ±10%*2.*3	AC Operated	Make Time		50 - 100ms				
Switc Tim Con Voltaç	AC Operated	Release Time		150 - 200ms / 500 - 1000ms *3				
e. D	AC Operated			5 x	10 <sup>6</sup>			
Mech. Life	DC Operated			5 x	10 <sup>6</sup>			
Curr. Heat Loss	Power Loss Per Pole (I <sub>g</sub> /AC3 400V)		26.3W	33.3W	49.0W	59.2W		

<sup>\*</sup>¹ Suitable at 690V for earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard industry): U<sub>mp</sub>=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 le / AC1 according to le / AC3 \*3 Normal or delayed drop is adjustable



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
		110-120V	hp	-	-	-	-
		200V	hp	125	150	200	250
		220-240V	hp	125	150	250	300
Motor DOL 3-Phase at 60Hz	Rated Operational Power	277V	hp	-	-	-	-
00112		380-415V	hp	-	-	-	-
		440-480V	hp	250	350	500	600
		550-600V	hp	250	350	500	600
		110-120V	hp	-	-	-	-
		200V	hp	-	-	-	-
	Rated Operational Power AC Motors at 60Hz (1ph)	220-240V	hp	-	-	-	-
Motor DOL 1-Phase at 60Hz		277V	hp	-	-	-	-
00112		380-415V	hp	-	-	-	-
		440-480V	hp	-	-	-	-
		550-600V	hp	-	-	-	-
	Rated Operational Current	600V	А	-	-	-	-
		110-120V	hp	-	-	-	-
	Rated Operational Power	200V	hp	-	-	-	-
	3-phase Motors for Elevators	220-240V	hp	-	-	-	-
lotor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	-	-	-	-
ASME A17.5		550-600V	hp	-	-	-	-
	Rated Current 2 Series Contacts	600V	А	-	-	-	-
	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
uxiliary Contacts (cULus)				A600	A600	A600	A600

### **Cable Cross Sections**

		Coils				
	MC450	MC550	MC700	MC860		
Solid Strand (mm²)		Busbar 40 x 6 screw M12			1.0 - 2.5	
Flexible Strand (mm²)	Busbar		Busbar	Rushar Rushar	Busbar	1.0 - 2.5
Solid Strand (AWG)	30 x 5		50 x 8	50 x 8	16 - 12	
Flexible Strand (AWG)	screw M12		screw M12	screw M14	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 135		1350 -	1350 - 1600VA		700 - 850W		1300 - 1550W	
Sealed	9 -	11W 21 - 25W		8 - 10W		18 -	18 - 22W		

### **Weights & Dimensions**

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

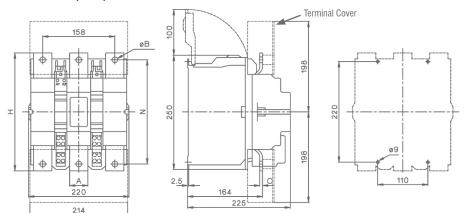
### Resistance to Climatic Conditions acc. to IEC60068

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 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.

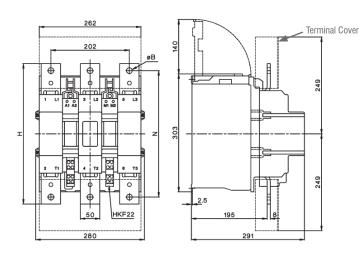


Technical Datasheet

### **Dimensions (mm)**



Туре	Α	В	С	Н	N
MC450	40	10.5	4	233	206
MC550	40	12.5	6	258	228



Туре	В	Н	N
MC700	13	310	277
MC860	15	361	325

Technical Datasheet

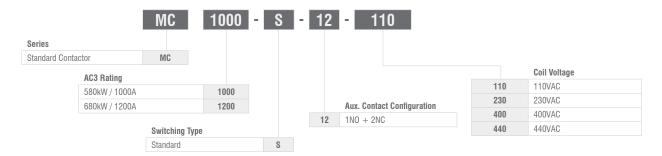
### **Key Features**

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





### **Options & Ordering Codes**



Part Number		MC1000-S-12	MC1200-S-12		
	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) Fuse "Typ1" gl. (gG)		720/850kW	850/1000kW	
sbu			1000A max.	1250A max.	
Main Contact Ratings	Rated Insulation Voltag	e U <sub>i</sub> *1	690V	AC	
ntact	Making Capacity I <sub>eff</sub> at I	U <sub>e</sub> =690V~	10000A	12000A	
- C0I	Making Capacity I <sub>eff</sub> at I	U <sub>e</sub> =1000V~	-	-	
Mair	Breaking Capacity I <sub>eff</sub> 4	00V~	8000A	10000A	
	Breaking Capacity cost	)= 0.65 500V~	8000A	10000A	
	Breaking Capacity cost	)= 0.35 690V~	7000A	A0008	
	Breaking Capacity cost	e = 0.35 1000V~	-	-	
	Operation Open		-25 to +55°C (+70°C)*2		
Max. Ambient Temp	Operation Enclosed		-25 to +40°C		
Amb Temp	with Thermal Overload	Relay Open	-25 to +55°C		
Max.	with Thermal Overload	Relay Enclosed	-25 to +40°C		
_	Storage		-55 to +80°C		
Frequency of Operations z Ops/hr	Switching Without Load	d	300		
Freque Operal Ops	AC3, I <sub>e</sub>		20		
Switching Time at Control Voltage Us ±10%*2.*3	AC Operated	Make Time	50 - 10	0ms	
Switching Time at Control Voltage Us ±10%*2.*	AC Operated	Release Time	25 - 50ms		
e ch.	AC Operated		5 x 10	)6 *4	
Mech. Lífe	DC Operated		5 x 10	)6 *4	
Curr. Heat Loss	Power Loss Per Pole (I	/AC3 400V)	60W	72W	

<sup>\*</sup>¹ Suitable at 690V for earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard industry): U<sub>emp</sub>=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 le / AC1 according to le / AC3
\*³ Normal or delayed drop is adjustable

<sup>\*4</sup> After each 1x106 operations magentic core and built-in auxiliary contact block must be changed



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  Rated Operational Power  277V  380-415  440-480  550-600  110-120  200V		110-120V	hp	-	-
		200V	hp	-	450
		220-240V	hp	-	450
	Rated Operational Power	277V	hp	-	-
	380-415V	hp	-	-	
	ain Contact Ratings  Rated Operational Current "General Use"  Potor DOL 3-Phase at 60Hz  Rated Operational Power  Rated Operational Power  AC Motors at 60Hz (1ph)  Rated Operational Current  Rated Operational Current  Rated Operational Power 3-phase Motors for Elevators (500,000 Operations)  Rated Current 2 Series Contacts  Fuse Class RK5 / Short-circuit current  Fuse Class T / Short-circuit current  Rated Voltage	440-480V	hp	-	900
		550-600V	hp	-	900
Motor DOL 1-Phase at 60Hz		110-120V	hp	-	-
		200V	hp	-	-
		220-240V	hp	-	-
		277V	hp	-	-
		380-415V	hp	-	-
		440-480V	hp	-	-
		550-600V	hp	-	-
	Rated Operational Current	600V	А	-	-
		110-120V	hp	-	-
	Rated Operational Power	200V	hp	-	-
	3-phase Motors for Elevators	220-240V	hp	-	-
Motor DOL 3-phase acc. to	(500,000 Operations)	440-480V	hp	-	-
ASME A17.5		550-600V	hp	-	-
	Rated Current 2 Series Contacts	600V	А	-	-
	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	1.0 - 2.5
Flexible Strand (mm²)		1.0 - 2.5
Solid Strand (AWG)	50 x 10	16 - 12
Flexible Strand (AWG)	screw 2 x M12	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

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)**

