


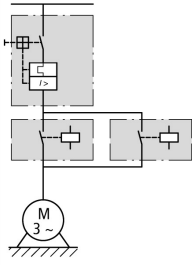




## Reversing starter, 3p, 4.0kW/400V/AC3, 100kA

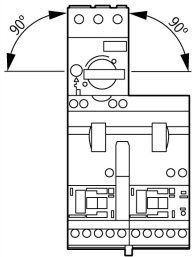
**Part no.** MSC-R-10-M17(230V50HZ)  
**Article no.** 101049  
**Catalog No.** XTSR010B018CFNL

### Delivery program

Basic function				Reversing starters (complete devices)
Basic device				MSC
				
Notes				Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging.
<b>Motor ratings</b>				
Motor rating				
AC-3				
380 V 400 V 415 V	P	kW	3	
Rated operational current	$I_e$	A	6.6	
Rated short-circuit current 380 - 415 V	$I_q$	kA	50	
<b>Setting range</b>				
Setting range of overload releases	$I_r$	A	6.3 - 10	
				
Non-delayed	$I_{rm}$	A	155	
				
Coordination				Type of coordination "1" Type of coordination "2"
Contact sequence				
Actuating voltage				230 V 50 Hz AC voltage
<b>Motor-protective circuit-breakers</b> PKZM0-10				
Contactor DILM17-01(...)				
<b>Reversing starter wrong set</b>				
Mechanical connection element and electrical contact module and reversing connector PKZM0-XRM32				
<b>Notes</b>				
The reversing starter (complete unit) consists of a PKZM0 motor-protective circuit-breaker and two DILM contactors.				
With the adapter-less top-hat rail mounting of starters up to 12 A, only the motor-protective circuit-breaker on the top-hat rail requires an adapter. The contactors are provided with mechanical support via a mechanical connection element.				
Control wire guide with max. 6 conductors up to 2.5mm external diameter or 4 conductors up to 3.5mm external diameter.				
From 16 A, the motor-protective circuit-breakers and contactors are mounted on the top-hat rail adapter plate.				
The connection of the main circuit between PKZ and contactor is established with electrical contact modules.				
Complete units with mechanical interlock, starters up to 12 A also feature electrical interlock.				
When using the auxiliary contacts DILA-XHIT... (→ 101042) the plug-in electrical connector can be removed without the removal of the front mounting auxiliary contact.				
<b>For further information</b>			<b>Page</b>	
Technical data PKZM0			→ PKZM0	

## Technical data

### General

Standards			UL 508 (on request) CSA C 22.2 No. 14 (on request)
Mounting position			

### Main conducting paths

Rated impulse withstand voltage	$U_{imp}$	V AC	6000
Overvoltage category/pollution degree			III/3
Rated operational voltage	$U_e$	V	230 - 415
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
380 V 400 V	$I_e$	A	10

### Additional technical data

Motor protective circuit breaker PKZM0, PKE			PKZM0 motor-protective circuit-breakers, see motor-protective circuit-breakers/ PKZM0 product group DILM contactors, see contactors product group DILET timing relay, ETR, see contactors, electronic timing relays product group
DILM contactors			
Power consumption of the coil in a cold state and $1.0 \times U_c$			
Dual-voltage coil 50 Hz	Sealing	W	2.1

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	10
Heat dissipation per pole, current-dependent	$P_{vid}$	W	2.6
Equipment heat dissipation, current-dependent	$P_{vid}$	W	7.8
Static heat dissipation, non-current-dependent	$P_{vs}$	W	2.1
Heat dissipation capacity	$P_{diss}$	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			
			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			
			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			
			Meets the product standard's requirements.
10.2.5 Lifting			
			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			
			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			
			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			
			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			
			Meets the product standard's requirements.
10.5 Protection against electric shock			
			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			
			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			
			Is the panel builder's responsibility.
10.8 Connections for external conductors			
			Is the panel builder's responsibility.

10.9 Insulation properties		
10.9.2 Power-frequency electric strength		Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage		Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material		Is the panel builder's responsibility.
10.10 Temperature rise		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## Technical data ETIM 6.0

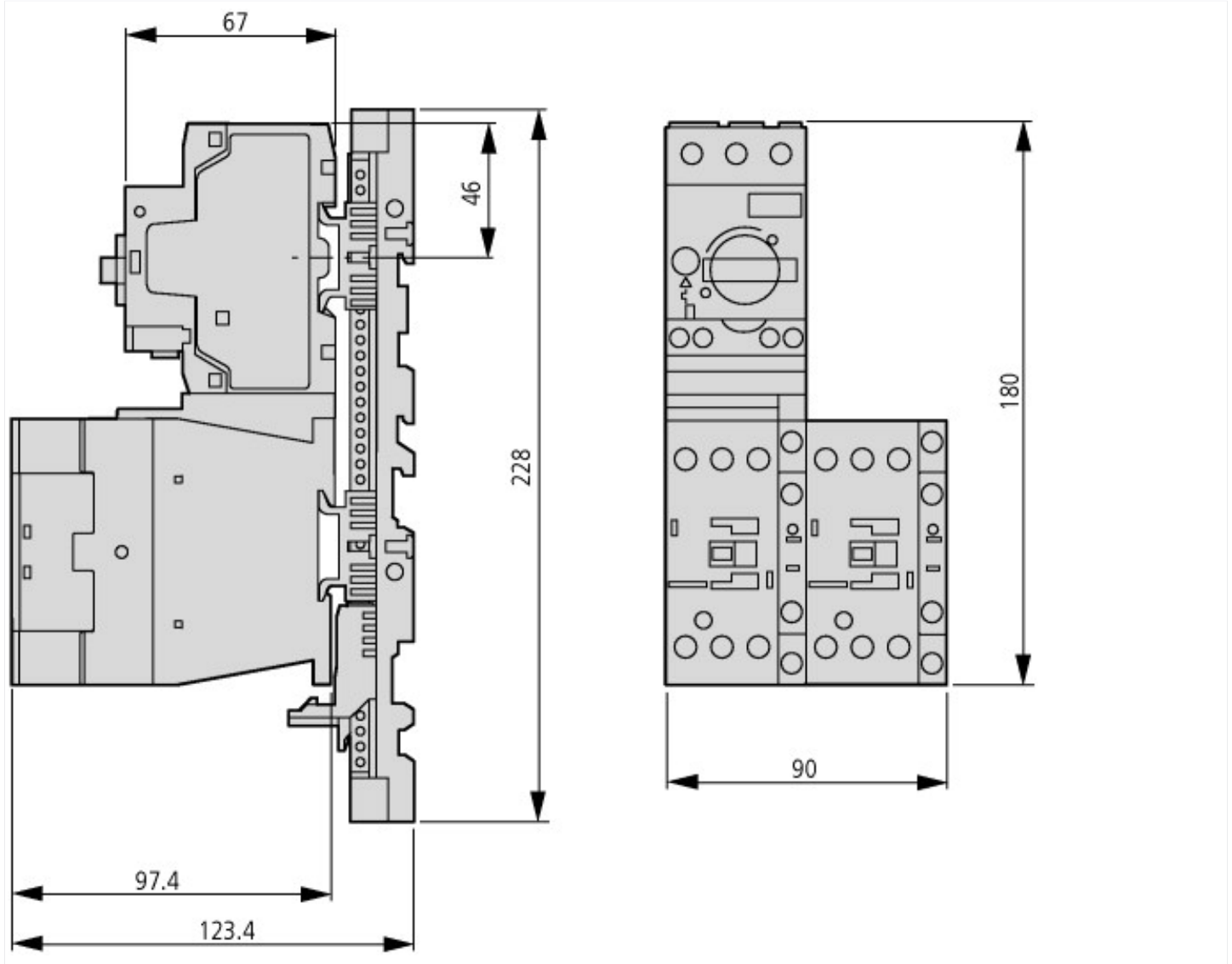
Low-voltage industrial components (EG000017) / Motor starter/Motor starter combination (EC001037)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Motor starter combination (ecl@ss8.1-27-37-09-05 [AJZ718010])

Kind of motor starter		Reversing starter
With short-circuit release		Yes
Rated control supply voltage $U_s$ at AC 50HZ	V	230 - 230
Rated control supply voltage $U_s$ at AC 60HZ	V	0 - 0
Rated control supply voltage $U_s$ at DC	V	0 - 0
Voltage type for actuating		AC
Rated operation power at AC-3, 230 V, 3-phase	kW	2.2
Rated operation power at AC-3, 400 V	kW	4
Rated power, 460 V, 60 Hz, 3-phase	kW	0
Rated power, 575 V, 60 Hz, 3-phase	kW	0
Rated operation current $I_e$	A	8.5
Rated operation current at AC-3, 400 V	A	10
Overload release current setting	A	6.3 - 10
Rated conditional short-circuit current, type 1, 480 Y/277 V	A	0
Rated conditional short-circuit current, type 1, 600 Y/347 V	A	0
Rated conditional short-circuit current, type 2, 230 V	A	50000
Rated conditional short-circuit current, type 2, 400 V	A	50000
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as normally closed contact		0
Ambient temperature, , upper operating limit	°C	60
Temperature compensated overload protection		Yes
Release class		CLASS 10
Type of electrical connection of main circuit		Screw connection
Type of electrical connection for auxiliary- and control current circuit		Screw connection
Rail mounting possible		Yes
Degree of protection (IP)		IP00
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for MODBUS		No
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No
Supporting protocol for SERCOS		No
Supporting protocol for Foundation Fieldbus		No

Supporting protocol for EtherNet/IP		No
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		No

## Dimensions



MSC-R-...-M17[...32]...

## Additional product information (links)

### IL03402006Z (AWA1210-2248) Reversing starter to 12 A

IL03402006Z (AWA1210-2248) Reversing starter to 12 A [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03402006Z2016\\_08.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402006Z2016_08.pdf)

### IL03402011Z (AWA1210-2266) Reversing starter to 32 A

IL03402011Z (AWA1210-2266) Reversing starter to 32 A [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03402011Z2016\\_10.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402011Z2016_10.pdf)

Motor starters and "Special Purpose Ratings" for the North American market [http://www.moeller.net/binary/ver\\_techpapers/ver953en.pdf](http://www.moeller.net/binary/ver_techpapers/ver953en.pdf)

Busbar Component Adapters for modern Industrial control panels [http://www.moeller.net/binary/ver\\_techpapers/ver960en.pdf](http://www.moeller.net/binary/ver_techpapers/ver960en.pdf)