DATASHEET - MSC-R-10-M7(230V50HZ)



Reversing starter, 380 V 400 V 415 V: 3 kW, Ir= 6.3 - 10 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage



Part no. Catalog No. Alternate Catalog No. EL-Nummer (Norway)

MSC-R-10-M7(230V50HZ) 283182 pg XTSR010B007BFNL

4315478

Delivery program

Basic function			Reversing starters (complete devices)
Basic device			MSC
			IE3 🗸
Notes			Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging.
Connection technique			Screw terminals
Connection to SmartWire-DT			по
Motor ratings			
Motor rating			
AC-3			
380 V 400 V 415 V	Р	kW	3
Rated operational current			
AC-3			
380 V 400 V 415 V	le	А	6.6
Rated short-circuit current 380 - 415 V	Ι _q	kA	150
Setting range			
Setting range of overload releases	l _r	A	6.3 - 10
Coordination			Type of coordination "1"
Contact sequence			
Actuating voltage			230 V 50 Hz, 240 V 60 Hz
			AC voltage
Motor-protective circuit-breakers PKZM0-10			
Contactor DILM7-01()	Contactor DILM7-01()		
DOL starter wiring set Mechanical connection element and electrical electric contact module PKZM0-XF	RM12		
Notes			

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.

Page			
→ PKZM0			
→ 072896			
→ DILM			
→ 276537			
→ 281199			

Technical data General

Mounting position For a position Mounting position For a position Altitude mu Antitude Mu Openvalues exitestand voltage Mu Openvalues (S- 00 fulcitudes) mu Antid operational current mu Openvalues (S- 00 fulcitudes) mu Antitude current mu Antitude current mu Openvalues (S- 00 fulcitudes) mu Antitude current mu Antitude current mu Antitude current mu Antitude current mu	General			
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Rated impulse withstand voltage Vamp VAC 6000 Overvoltage category/pollution degree IN3 IN3 Rated operational voltage Vamp Vamp 20 - 415 Rated operational current Image Vamp 20 - 415 380 V 400 V Image Image Vamp 7 Additional technical data Image Vamp 7 7 Additional technical data Image Vamp 7 7 Additional technical data Image Vamp 7	Ambient temperature			-25 - +55
Overvoltage category/pollution degree No	Main conducting paths			
Reted operational voltage Pug Pug <td>Rated impulse withstand voltage</td> <td>U_{imp}</td> <td>V AC</td> <td>6000</td>	Rated impulse withstand voltage	U _{imp}	V AC	6000
Relacioperational current Image: Relacional current Im	Overvoltage category/pollution degree			11/3
Open 3-pole: 50 – 60 Hz Image: Constraint of the second of t	Rated operational voltage	U _e	V	230 - 415
380 V400 V Ie A 7 Additional technical data	Rated operational current			
Additional technical data Mode of the circuit breaker PKZM0, PKE PKZM0 product group DILET timing relay, ETR, see contactor product group DILET timing relay, ETR, see contactors, electronic timing relays product group DILET timing relay, ETR, see contactors, electronic timing relays product group DILET timing relay, ETR, see contactors, electronic timing relays product group DLM contactors Even Mode of the coll in a cold state and 1.0 x Us Vent Power consumption of the coll in a cold state and 1.0 x Us Even Vent Seeling Vent Auxiliary contacts Sealing Vent 1.2 Seeling Vent Pilot Duty Ac operated Seeling Vent Aconocation	Open, 3-pole: 50 – 60 Hz			
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Power consumption of the coil in a cold state and 1.0 x Ug Yes Yes Dual-voltage coil 50 Hz Sealing W 1.2 Rating data for approved types Yes Yes Akuliary contacts Yes Yes Pilot Duty Yes Yes DC operated Yes Yes General Use Yes Yes AkC operated Yes Yes Ac Concent Construction Construction Yes Yes Ac Construction Yes Yes	Additional technical data			
Power consumption of the coil in a cold state and 1.0 × Ug Sealing Wa 1.2 Dual-voltage coil 50 Hz Sealing Wa 1.2 Rating data for approved types Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Auxiliary contacts Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Auxiliary contacts Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Auxiliary contacts Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Ac operated Image: Cold State and 1.0 × Ug Acold State and 1.0 × Ug Ac Cold State and Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Ac Cold State and Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Ac Cold State and Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Ac Cold State and Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Ac Cold State and Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Ac Cold State and Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Ac Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug Image: Cold State and 1.0 × Ug <td>Motor protective circuit breaker PKZM0, PKE</td> <td></td> <td></td> <td>PKZM0 product group DILM contactors, see contactor product group</td>	Motor protective circuit breaker PKZM0, PKE			PKZM0 product group DILM contactors, see contactor product group
Dual-voltage coil 50 Hz Sealing W 1.2 Rating data for approved types Auxiliary contacts Image: Control of the second	DILM contactors			
Atiliary contacts Image: Contact Sector	Power consumption of the coil in a cold state and 1.0 x U_S			
Auxiliary contacts Image: Content of the second	Dual-voltage coil 50 Hz	Sealing	W	1.2
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AC operated A600 DC operated P300 General Use V AC AC AC SA AC SA	Auxiliary contacts			
DC operated P300 General Use P300 AC V AC V AC AC DC V DC V	Pilot Duty			
General Use Image: Constraint of the second secon	AC operated			A600
ACV600ACA15DCV250	DC operated			P300
AC A 15 DC V 250	General Use			
DC V 250	AC		V	600
	AC		А	15
DC A 1	DC		V	250
	DC		А	1

Design verification as per IEC/EN 61439

In	А	10
P _{vid}	W	2.7
P _{vid}	W	8.1
P _{vs}	W	1.4
P _{diss}	W	0
	°C	-25
	°C	55
		Meets the product standard's requirements.
	P _{vid} P _{vid} P _{vs}	P _{vid} W P _{vid} W P _{vs} W P _{diss} W °C

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 7.0

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@ss10.0.1-27-37-09-05 [AJZ718013])

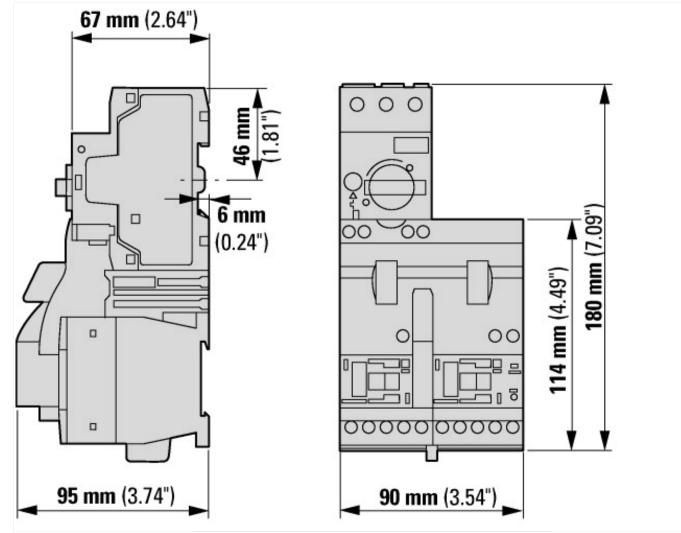
[A02/10010]/		
Kind of motor starter		Reversing starter
With short-circuit release		Yes
Rated control supply voltage Us at AC 50HZ	V	230 - 230
Rated control supply voltage Us at AC 60HZ	V	0 - 0
Rated control supply voltage Us at DC	V	0 - 0
Voltage type for actuating		AC
Rated operation power at AC-3, 230 V, 3-phase	kW	1.5
Rated operation power at AC-3, 400 V	kW	3
Rated power, 460 V, 60 Hz, 3-phase	kW	0
Rated power, 575 V, 60 Hz, 3-phase	kW	0
Rated operation current le	А	6.6
Rated operation current at AC-3, 400 V	А	7
Overload release current setting	А	6.3 - 10
Rated conditional short-circuit current, type 1, 480 Y/277 V	А	0
Rated conditional short-circuit current, type 1, 600 Y/347 V	А	0
Rated conditional short-circuit current, type 2, 230 V	А	0
Rated conditional short-circuit current, type 2, 400 V	А	0
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
With transformer		No
Number of command positions		0

Contrinuior inclas according to IEC 60947-4-3 Image:	Suitable for emergency stop		No
Number of indicator lights I I I External reset possible I I I With fuse I I I I Degree of protection (IPI) I			
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Widthmm90Heightmm180	Supporting protocol for SafetyBUS p		No
Height Market	Supporting protocol for other bus systems		No
	Width	mm	90
Depth mm 95	Height	mm	180
	Depth	mm	95

Approvals

Product Standards	UL60947-4-1A; CSA-C22.2 No. 14-10; IEC60947-4-1; CE marking
UL File No.	E123500
UL Category Control No.	NKJH
CSA File No.	12528
CSA Class No.	3211-24
North America Certification	UL listed, CSA certified
Specially designed for North America	No

Dimensions



MSC-R-...-M7[...12]...

Additional product information (links)

IL03402006Z (AWA1210-2248) Reversing starter to 12 A

IL03402006Z (AWA1210-2248) Reversing starter https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402006Z2018_04.pdf to 12 A

Motor starters and "Special Purpose Ratings" http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf for the North American market

Busbar Component Adapters for modern Industrial control panels

http://www.moeller.net/binary/ver_techpapers/ver960en.pdf