DATASHEET - MSC-D-1-M7(230V50HZ)



DOL starter, 380 V 400 V 415 V: 0.25 kW, Ir= 0.63 - 1 A, 230 V 50 Hz, 240 V 60 Hz, AC



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

MSC-D-1-M7(230V50HZ) 281929 og XTSC001B007BFNL

4365025

Delivery program

Delivery program			
Basic function			DOL 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			no
Motor ratings			
Motor rating			
AC-3			
380 V 400 V 415 V	Р	kW	0.25
Rated operational current			
AC-3			
380 V 400 V 415 V	le	А	0.8
Rated short-circuit current 380 - 415 V	lq	kA	150
Setting range			
Setting range of overload releases	l _r	А	0.63 - 1
中			
Coordination			Type of coordination "1" Type of coordination "2"
Contact sequence			
Actuating voltage			230 V 50 Hz, 240 V 60 Hz
			AC
Motor-protective circuit-breakers PKZM0-1			

Contactor DILM7-10(...)

DOL starter wiring set

Mechanical connection element and electrical electric contact module PKZM0-XDM12

Notes

BK25/3-PKZ0-E extension terminal and if necessary B3.../...-PKZ0 three-phase commoning link can be added to motor-starter combinations to make Type F starters in accordance with UL508.

Notes

The DOL starters (complete units) consist of a PKZM0 motor protective circuit breaker and a DILM contactor.

With the adapter-less top-hat rail mounting of starters up to 15 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 2.5 mm external diameter or 4 conductors up to 3.5 mm external diameter.

The connection of the main circuit between PKZ and contactor is established with electrical contact modules.

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.

Technical data

Mounting position العالي المحالي المحال	General			
Attivude سابع می از این	Standards			IEC/EN 60947-4-1, VDE 0660
Ambient temperature 24-55 Main conducting paths Vaco 600 Name of paths Vaco 600 000 </td <td>Mounting position</td> <td></td> <td></td> <td></td>	Mounting position			
Alian conducting paths Many Vac Model and second and sec	Altitude		m	Max. 2000
Bated impulse withstand voltage VAC 6000 Devications category/pollution degree III/3 III/3 Bated operational voltage Ve Sol - 15 Bated operational current Ve Ve III/3 Open, 3-pole: 50 - 60 Hz - - - glob, 3-pole: 50 - 60 Hz - - - glob, 3-pole: 50 - 60 Hz - - - glob, 3-pole: 50 - 60 Hz - <td>Ambient temperature</td> <td></td> <td></td> <td>-25 - +55</td>	Ambient temperature			-25 - +55
Averavitage category/pollution degree I//3 Rated operational voltage P I//3 Rated operational current P I//3 Open, 3-pole: 50 – 60 Hz P I//3 380 V 400 V Io A Ionatory 380 V 400 V Io A Ionatory Additional technical data Very FX2M0 protective circuit-breakers, see motor-protective circuit-breakers, see mo	Main conducting paths			
Rated operational outrent Up open, 3-pole: 50 - 60 Hz	Rated impulse withstand voltage	U _{imp}	V AC	6000
And operational current open, 3-pole: 50 – 60 Hz 380 V 400 V Additional technical data Motor protective circuit breaker PKZM0, PKE Motor protective circuit breakers, see motor-protective circuit-breakers, see motor-protective circuit-brea	Overvoltage category/pollution degree			111/3
Open 3-pole 50 – 60 Hz Image: Control of the control of	Rated operational voltage	Ue	V	230 - 415
380 V400 V I Additional technical data Additional technical data More protective circuit breaker PKZM0, PKE FXZM0 product group DULM contactors PKZM0 product group Current heat loss V Current heat loss at I to AC-3/400 V V Power consumption of the coil in a cold state and 10.x US V Dul-voltage coil 50 Hz Sealing Additional technical V Prover consumption of the coil in a cold state and 10.x US V Dul-voltage coil 50 Hz Sealing Add operated V Plot Dury FAC Operated AC operated V AC operated S AC operate	Rated operational current			
Additional technical data Moder protective circuit breaker PKZM0, PKE Moder protective circuit breaker PKZM0, PKE Moder protective circuit breakers, see motor-protective circuit-breakers, see contactor product group DILL timing relay, ETR, see contactors, electronic timing relays product group DILL timing relay, ETR, see contactors, electronic timing relays product group Moder protective circuit breakers, see motor-protective circuit-breakers, see contactors, electronic timing relays product group DILL timing relay, ETR, see contactors, electronic timing relays product group DilL triming relay, ETR, see contactors, electronic timing relays product group DilL triming relay, ETR, see contactors, electronic timing relays product group DILL timing relay, ETR, see contactors, electronic timing relays product group DilL triming relay, ETR, see contactors, electronic timing relays product group DilL triming relay, ETR, see contactors, electronic timing relays product group Moder protective circuit-breakers, see motor-protective circuit-breakers, electronic timing relays ETR, see contactors, electronic timing relays	Open, 3-pole: 50 – 60 Hz			
Moder protective circuit breaker PKZM0, PKE PKZM0 motor-protective circuit-breakers, see motor-protecitre circuit-breakers, see motor-protective circuit-breakers, see	380 V 400 V	Ι _e	А	1
PKZM0 product group pull contactors, see contactor product group pull triming relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, see contactors, electronic timing relays product group pull triming relay, FTR, see contactors, s	Additional technical data			
Current heat loss Image: Participation of the coil in a cold state and 1.0 x Ug Power consumption of the coil in a cold state and 1.0 x Ug Mode: Participation of the coil in a cold state and 1.0 x Ug Dual-voltage coil 50 Hz Sealing V 1.4 Rating data for approved types Mode: Participation of the coil in a cold state and 1.0 x Ug Mode: Participation of the coil in a cold state and 1.0 x Ug Plote Dual-voltage coil 50 Hz Sealing V 1.4 Rating data for approved types Mode: Participation of the coil in a cold state and 1.0 x Ug Mode: Participation of the coil in a cold state and 1.0 x Ug Plote Dual-voltage coil 50 Hz Sealing V A600 AC operated V Mode: Participation of the coil in a cold state and 1.0 x Ug AC V Mode: Participation of the coil in a cold state and 1.0 x Ug AC V Mode: Participation of the coil in a cold state and 1.0 x Ug AC V Mode: Participation of the coil in a cold state and 1.0 x Ug AC V Mode: Participation of the coil in a cold state and 1.0 x Ug AC A Mode: Participation of the coil in a cold state and 1.0 x Ug AC V Mode: Participation of the coil in a cold state and 1.0 x Ug AC V Mode: Participation of the coil in a cold state and 1.0 x Ug	Motor protective circuit breaker PKZM0, PKE			DILM contactors, see contactor product group
Current heat loss at l _e to AC-3/400 V V 5.7 Power consumption of the coil in a cold state and 1.0 x Ug V V Dual-voltage coil 50 Hz Sealing V 14 Rating data for approved types V 14 Rating Loss V 14 Pilot Duty V 14 Pilot Duty V 14 Coperated V 14 Ocoperated V 14 Coperated Use V 14 AC V 14 AC V 100 AC V 100 AC V 100 AC AC V 100 AC AC V 100 AC AC V 100	DILM contactors			
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Dual-voltage coil 50 Hz Sealing W 1.4 Auting data for approved types ************************************	Current heat loss at $\rm I_{e}$ to AC-3/400 V		W	5.7
Auxiliary contacts Auxiliary	Power consumption of the coil in a cold state and 1.0 x $\rm U_S$			
Auxiliary contactsImage: Biole of the sector of	Dual-voltage coil 50 Hz	Sealing	W	1.4
Pilot DutyImage: Second se	Rating data for approved types			
AC operatedImage: Constraint of the sector of t	Auxiliary contacts			
DC operated P300 General Use V 600 AC AC AC 600 AC AC AC V 600 DC V V 500	Pilot Duty			
General UseMMACV60ACAADCV250	AC operated			A600
ACV600ACA15DCV250	DC operated			P300
AC A 15 DC V 250	General Use			
DC V 250	AC		V	600
			А	
DC A 1			V	
	DC		А	1

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	1
Heat dissipation per pole, current-dependent	P _{vid}	W	1.9
Equipment heat dissipation, current-dependent	P _{vid}	W	5.7

Static heat dissipation, non-current-dependent	P _{vs}	W	1.4
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 7.0

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

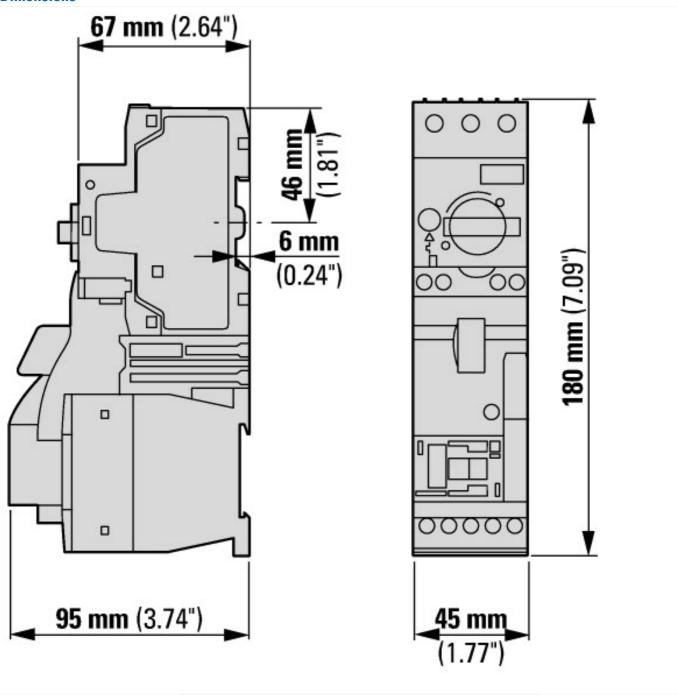
Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Motor starter combination (ecl@ss10.0.1-27-37-09-05 [AJZ718013])

Kind of motor starter		Direct 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	0.12
Rated operation power at AC-3, 400 V	kW	0.25
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	0.8
Rated operation current at AC-3, 400 V	А	1
Overload release current setting	А	1-1
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	50
Rated conditional short-circuit current, type 2, 400 V	А	50
Number of auxiliary contacts as normally open contact		1
Number of auxiliary contacts as normally closed contact		0

Ambient temperature, upper operating limit	°C	60
Temperature compensated overload protection	0	Yes
Release class		CLASS 10 A
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
Suitable for emergency stop		No
Coordination class according to IEC 60947-4-3		Class 2
Number of indicator lights		0
External reset possible		No
With fuse		No
Degree of protection (IP)		IP20
Degree of protection (NEMA)		Other
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
Width	mm	45
Height	mm	180
Depth	mm	95

Approvals

Approvato	
Product Standards	IEC/EN 60947-4-1; UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CE marking
UL File No.	E36332
UL Category Control No.	NLRV
CSA File No.	12528
CSA Class No.	3211-24
North America Certification	UL listed, CSA certified
Specially designed for North America	No



MSC-D-...-M7[...15]...

Additional product information (links)

IL034038ZU (AWA1210-2246) Direct-on-line starter up to 15 A				
IL034038ZU (AWA1210-2246) Direct-on-line starter up to 15 A	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL034038ZU2018_06.pdf			
Motor starters and "Special Purpose Ratings" for the North American market	http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf			
Busbar Component Adapters for modern Industrial control panels	http://www.moeller.net/binary/ver_techpapers/ver960en.pdf			
Moeller_Online Selections Aids	http://www.moeller.net/en/support/slider/index.jsp			