DATASHEET - MSC-R-6,3-M7(230V50HZ)



Reversing starter, 380 V 400 V 415 V: 2.2 kW, Ir= 4 - 6.3 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage



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

MSC-R-6,3-M7(230V50HZ) 283181 og XTSR6P3B007BFNL

4365057

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 to SmartWire-DT			no	
Motor ratings				
Motor rating				
AC-3				
380 V 400 V 415 V	Ρ	kW	2.2	
Rated operational current				
AC-3				
380 V 400 V 415 V	le	А	5	
Rated short-circuit current 380 - 415 V	Iq	kA	150	
Setting range				
Setting range of overload releases	l _r	A	4 - 6.3	
Coordination			Type of coordination "1" Type of coordination "2"	
Contact sequence				
Actuating voltage			230 V 50 Hz, 240 V 60 Hz	
			AC voltage	
Motor-protective circuit-breakers PKZM0-6,3				
Contactor DILM7-01()				
DOL starter wiring set Mechanical connection element and electrical electric contact module PKZM0-XRM12				
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.

For further information

→ PKZM0
→ 072896
→ DILM
→ 276537
→ 281199

Technical data

General			
Standards			UL 508 (on request) CSA C 22.2 No. 14 (on request)
Mounting position			
Altitude		m	Max. 2000
Ambient temperature			-25 - +55
Main conducting paths			
Rated impulse withstand voltage	U _{imp}	V AC	6000
Overvoltage category/pollution degree			11/3
Rated operational voltage	Ue	V	230 - 415
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
380 V 400 V	۱ _e	А	6.3
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 contactor 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 x U_S			
Dual-voltage coil 50 Hz	Sealing	W	1.2
Rating data for approved types			
Auxiliary contacts			
Pilot Duty			
AC operated			A600
DC operated			P300
General Use			
AC		V	600
AC		Α	15
DC		V	250
DC		А	1

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	А	6.3
Heat dissipation per pole, current-dependent	P _{vid}	W	2.2
Equipment heat dissipation, current-dependent	P _{vid}	W	6.6
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])

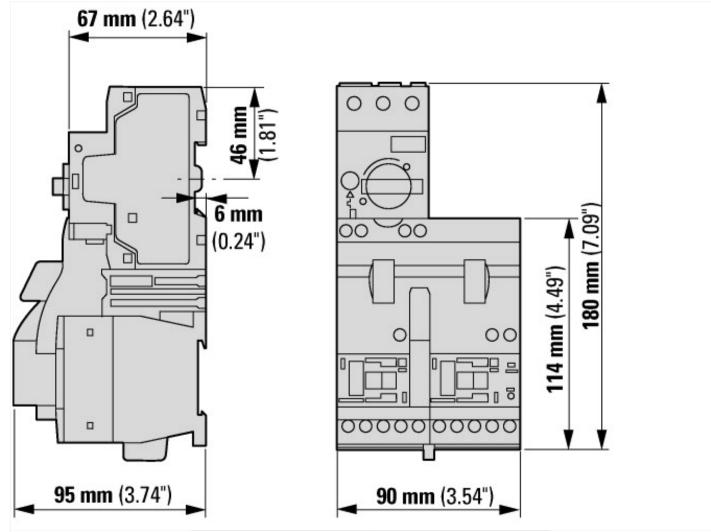
nshort-circuit release Yes ad control supply voltage Us at AC 50HZ Q 20 - 230 ad control supply voltage Us at AC 60HZ Q 0 ad control supply voltage Us at AC 60HZ Q 0 age type for actuating AC AC ad operation power at AC-3,230 V,3-phase AC AC ad operation power at AC-3,400 V G Q Q ad operation power at AC-3,400 V KW Q Q ad operation power at AC-3,400 V KW Q Q ad operation current la G AC Q ad operation current at AC-3,400 V G AC Q ad operation current type 1,480 Y/277 V AC AC Q ad conditional short-circuit current, type 2,230 V AC Q Q ad conditional short-circuit current, type 2,230 V AC Q Q ad conditional short-circuit current, type 2,230 V AC Q Q ad conditional short-circuit current, type 2,400 V AC Q Q ad ref acuiliary contacts as normall	AJZ/10013]/		
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age type for actuating AC and a set of	ated control supply voltage Us at AC 60HZ	V 0-0	
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ad operation power at AC-3, 400 V ad power, 460 V, 60 Hz, 3-phase ad operation current le ad operation current le ad operation current at AC-3, 400 V ad operation current at AC-3, 400 V be ad operation current at AC-3, 400 V current, type 1, 480 Y/277 V ad conditional short-circuit current, type 1, 480 Y/277 V ad conditional short-circuit current, type 2, 230 V ad conditional short-circuit current, type 2, 2400 V be of auxiliary contacts as normally open contact be of auxiliary contacts as normally closed contact be of auxiliary contacts as normally closed contact be of electrical connection for auxiliary- and control current circuit be of electrical connection for auxiliary- and control current circuit be of electrical connection for auxiliary- and control current circuit be of command positions b	oltage type for actuating	AC	
ad power, 460 V, 60 Hz, 3-phase RW 0 ad power, 575 V, 60 Hz, 3-phase RW 0 ad operation current le RW 5 ad operation current at AC-3, 400 V A 6 ad operation current at AC-3, 400 V A 7 ad conditional short-circuit current, type 1, 480 Y/277 V A A 6 ad conditional short-circuit current, type 1, 480 Y/277 V A A 6 ad conditional short-circuit current, type 1, 600 Y/347 V A A 6 ad conditional short-circuit current, type 2, 230 V A A 6 ad conditional short-circuit current, type 2, 230 V A A 7 ad conditional short-circuit current, type 2, 400 V A A 7 ber of auxiliary contacts as normally open contact A A 7 ber of auxiliary contacts as normally closed contact A A 7 ber of auxiliary contacts as normally closed contact A 7 ber of auxiliary contacts as normally closed contact A 7 ber of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection of main circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control current circuit A A 7 e of electrical connection for auxiliary - and control	ated operation power at AC-3, 230 V, 3-phase	kW 1.5	
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ad conditional short-circuit current, type 2, 230 V A 50000 ad conditional short-circuit current, type 2, 400 V A 50000 aber of auxiliary contacts as normally open contact A 0 aber of auxiliary contacts as normally closed contact 0 0 bient temperature, upper operating limit C 60 perature compensated overload protection Yes Yes aber of electrical connection of main circuit Screw connection Screw connection and electrical connection for auxiliary- and control current circuit Yes Screw connection in transformer Yes Yes Yes in transformer Yes Yes Yes	ated conditional short-circuit current, type 1, 480 Y/277 V	A 0	
ad conditional short-circuit current, type 2, 400 V A 50000 ber of auxiliary contacts as normally open contact 0 0 ber of auxiliary contacts as normally closed contact C 0 bient temperature, upper operating limit °C 60 perature compensated overload protection Yes CLASS 10 base class CLASS 10 Screw connection a of electrical connection for auxiliary- and control current circuit Yes Screw connection mounting possible Yes Yes Yes h transformer Yes Yes Yes	ated conditional short-circuit current, type 1, 600 Y/347 V	A 0	
her of auxiliary contacts as normally open contact be of auxiliary contacts as normally closed contact be of electrical connection of main circuit be of electrical connection for auxiliary- and control current circuit be of command positions be of co	ated conditional short-circuit current, type 2, 230 V	A 50000	
her of auxiliary contacts as normally closed contact bient temperature, upper operating limit perature compensated overload protection asse class a of electrical connection of main circuit a of electrical connection for auxiliary- and control current circuit mounting possible transformer ther of command positions be	ated conditional short-circuit current, type 2, 400 V	A 50000	
hier temperature, upper operating limit 60 60 Free for the series of electrical connection for auxiliary- and control current circuit for auxiliary- and control current circuit for auxiliary for the series of electrical connection for auxiliary for the series of the s	umber of auxiliary contacts as normally open contact	0	
perature compensated overload protection Yes pase class CLASS 10 perature connection of main circuit Screw connection perature connection for auxiliary- and control current circuit Screw connection mounting possible Yes h transformer No her of command positions Screw connection	umber of auxiliary contacts as normally closed contact	0	
pase class CLASS 10 properties Screw connection properties Screw connection properties Screw connection properties Yes properties No properties O	mbient temperature, upper operating limit	°C 60	
e of electrical connection of main circuit e of electrical connection for auxiliary- and control current circuit mounting possible transformer ber of command positions	emperature compensated overload protection	Yes	
e of electrical connection for auxiliary- and control current circuit mounting possible transformer ber of command positions	elease class	CLASS	10
mounting possible Yes n transformer Mo nber of command positions Mo	/pe of electrical connection of main circuit	Screw	connection
h transformer No O	ype of electrical connection for auxiliary- and control current circuit	Screwo	connection
nber of command positions 0	ail mounting possible	Yes	
· · · · · · · · · · · · · · · · · · ·	/ith transformer	No	
able for emergency stop No	umber of command positions	0	
	uitable 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	90
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]...

Assets (links)

Declaration of CE Conformity 00002885

Instruction Leaflets IL03402006Z2018_04

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/IL03402006Z2018_04.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