DATASHEET - MSC-R-1,6-M7(230V50HZ)/BBA



Reversing starter, 380 V 400 V 415 V: 0.37, 0.55 kW, Ir= 1 - 1.6 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage



Powering Business Worldwide

MSC-R-1,6-M7(230V50HZ)/BBA Part no.

102985 Catalog No.

Alternate Catalog XTSR1P6B007BFNL-A

No.

4315446 **EL-Nummer**

(Norway)

Delivery program Basic function Reversing starters (complete devices) MSC Basic device Notes Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging. Connection to SmartWire-DT **Motor ratings** Motor rating AC-3 380 V 400 V 415 V kW 0.37 0.55 Rated operational current AC-3 380 V 400 V 415 V Α 1.1 1.5 Rated short-circuit current 380 - 415 V I_q kΑ 100 **Setting range** Setting range of overload releases Α 1 - 1.6 Type of coordination "1" Coordination Type of coordination "2" Contact sequence

Motor-protective circuit-breakers PKZM0-1,6

Contactor DILM7-01(...)

Actuating voltage

DOL starter wiring set

Mechanical connection element and electrical electric contact module PKZM0-XRM12

Notes

The reversing starter (complete units) consists of a PKZM0 motor protective circuit breaker and two DILM contactors.

These combinations are mounted on the busbar adapters.

The connection of the main circuit between the motor protective circuit breaker and the contactor is established with an electrical contact module.

Complete units with mechanical interlock, starters up to 12 A also feature electrical interlock.

Further information Technical data PKZM0 Accessories PKZ Technical data DILM

Accessories DIL

Page

→ PKZM0

230 V 50 Hz, 240 V 60 Hz

AC voltage

→ 072896

 \rightarrow DILM → 281199

Technical data

General			
Standards			UL 508 (on request) CSA C 22.2 No. 14 (on request)
Altitude		m	Max. 2000
Ambient temperature			-25 - +55
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	l _e	Α	1.6
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 $\rm U_{S}$			
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		٧	250
DC		Α	1

Design verification as per IEC/EN 61439

resign verincation as per illo/liv 01400			
Fechnical data for design verification			
Rated operational current for specified heat dissipation	In	Α	1.6
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
C/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

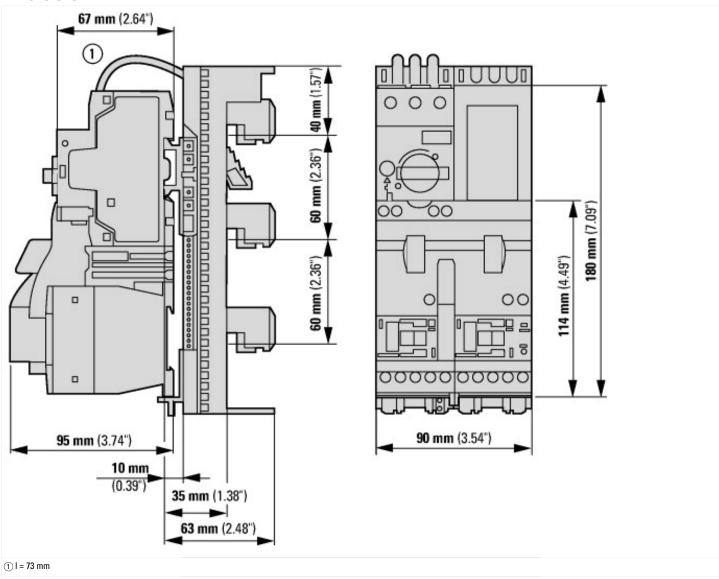
Ambient temperature, upper operating limit C 60 Temperature compensated overload protection Yes Yes Release class CLASS 10 CLASS 10 Type of electrical connection of main circuit Serw connection Serw connection Type of electrical connection for auxiliary- and control current circuit Yes Serw connection Rail mounting possible Yes Yes With transformer Yes No Number of command positions Yes No Suitable for emergency stop Yes No Coordination class according to IEC 60947-4-3 Yes No External reset possible Yes No With fuse Yes No Degree of protection (IP) No No Degree of protection (NEMA) Yes No Supporting protocol for TCP/IP No No Supporting protocol for PROFIBUS No No Supporting protocol for PROFIBUS No No Supporting protocol for CAN No No Supporting protoco	[AJZ718013])		
Rated control supply voltage Us at AC 50HZ V 20 - 200 Rated control supply voltage Us at OC V 0 - 0 Voltage type for actuating AC Rated operation power at AC-3, 280 V, Juhase KW 0.25 Rated power 34, 04-3, 480 V KW 0.25 Rated power 34, 09 V, Juhase KW 0 Rated power 34, 09 V, 3-phase KW 0 Rated power 35 V, 80 Hz, 3-phase KW 0 Rated power 36 V, 80 Hz, 3-phase KW 1.8 Rated power 36 V, 80 Hz, 3-phase KW 1.8 Rated operation current te Ration A 1.5 Rated operation current te Station A 1.6 Rated operation current te Station B 0 Rated operation duriner te station B 0 Rated operation te Station B	Kind of motor starter		Reversing starter
Rated control supply voltage Us at AC 68HZ V 0 - 0 Rated control supply voltage Us at DC V 0 - 0 Voltage type for actuating AC Rated operation power at AC-3, 28U V.3-plase kW 0.25 Rated operation power at AC-3, 48U V W 0 Rated power, 8EW, 6B H.3, -3-phase kW 0 Rated operation current at AC-3, 48U V A 1.5 Rated operation current at AC-3, 48U V A 1.5 Rated operation current at AC-3, 48U V A 1.6 Voverload release current setting A 1.1 6 Rated conditional short-circuit current, type 1, 480 V;27V V A 0 0 Rated conditional short-circuit current, type 2, 280 V A 50000 0 Rated conditional short-circuit current, type 2, 280 V A 50000 0 Rated conditional short-circuit current, type 2, 280 V A 50000 0 Rated conditional short-circuit current, type 2, 280 V A 50000 0 Rated conditional short-circuit current, type 2, 280 V C 60000 0	With short-circuit release		Yes
Rated control supply voltage Us at DC V 0 - 0 Voltage Upe for actualing AC Rated operation power at AC-3, 280 V, 3-phase kW 0.55 Rated power, 370 V, BU Hz. 3-phase kW 0 Rated operation current LP AD 1.5 Rated operation current LP AD 1.6 Rated operation current LPC-2, 400 V AD 1.6 Rated conditional short-circuit current, type 1, 680 Y/347 V AD 0 Rated conditional short-circuit current, type 1, 680 Y/347 V AD 0 Rated conditional short-circuit current, type 2, 240 V AD 0 Rated conditional short-circuit current, type 2, 440 V AD 0 Rated conditional short-circuit current, type 2, 440 V AD 0 Rated conditional short-circuit current, type 2, 440 V AD 0 Rated conditional short-circuit current, type 2, 440 V AD 0 Rated conditional short-circuit current, type 2, 440 V AD 0 Rated conditional short-circuit current, type 2, 440 V AD 0 Rated conditional short-circuit current, type 2, 440 V AD	Rated control supply voltage Us at AC 50HZ	V	230 - 230
Voltage type for actuating AC Rated operation power at AC-3, 40 V 9 Hases KW 0.55 Rated operation power at AC-3, 40 V N 60 H.3phase KW 0.5 Rated power, 60 V, 60 H.3phase KW 0.0 Rated operation current le A A 1.5 Rated operation current setting A A 1.6 Rated conditional short-circuit current, type 1, 480 V;277 V A A 0.0 Rated conditional short-circuit current, type 1, 480 V;277 V A A 5000 Rated conditional short-circuit current, type 1, 480 V;277 V A A 5000 Rated conditional short-circuit current, type 2, 480 V A 5000 Rated conditional short-circuit current, type 2, 400 V A 5000 Rated conditional short-circuit current, type 2, 400 V A 5000 Rated conditional short-circuit current, type 2, 400 V A 5000 Rated conditional short-circuit current, type 2, 400 V A 5000 Rated conditional short-circuit current, type 2, 400 V A 5000 Rubber of auxiliary contacts as normally clased contact	Rated control supply voltage Us at AC 60HZ	V	0 - 0
Rated operation power at AC-3, 250 V, 3-phase kW 0.55 Rated opwar at AC-3, 240 V kW 0.55 Rated power, 460 V, 60 Hz, 3-phase kW 0 Rated operation current le A 1.5 Rated operation current at AC-3, 400 V A 1.5 Overfoar classes current setting A 1.0 Rated conditional short-circuit current, ype 1, 400 V/277 V A 0 Rated conditional short-circuit current, ype 2, 400 V/277 V A 0 Rated conditional short-circuit current, ype 2, 200 V A 0 Rated conditional short-circuit current, ype 2, 400 V/277 V A 0 Rated conditional short-circuit current, ype 2, 400 V A 0 Rated conditional short-circuit current, ype 2, 400 V A 0 Rated conditional short-circuit current, ype 2, 400 V A 0 Rated conditional short-circuit current, ype 2, 400 V A 0 Rated conditional short-circuit current, ype 2, 400 V A 0 Rated conditional short-circuit current, ype 2, 400 V C 0 Rated conditional short-circuit current, ype 2, 400 V	Rated control supply voltage Us at DC	V	0 - 0
Rated operation power at AC-3,400 V KW 05 Rated operation current is KW 0 Rated operation current at AC-3,400 V A 15 Rated operation current at AC-3,400 V A 15 Rated operation current at AC-3,400 V A 15 Rated conditional current, type 1, 480 Y/27 V A 0 Rated conditional short-circuit current, type 1, 500 Y/34 V A 0 Rated conditional short-circuit current, type 2, 200 V A 0 Rated conditional short-circuit current, type 2, 400 V A 0 Rated conditional short-circuit current, type 2, 400 V A 0 Rated conditional short-circuit current, type 2, 400 V A 0 Rated conditional short-circuit current, type 2, 400 V A 0 Rated conditional short-circuit current, type 2, 400 V A 0 Rated conditional short-circuit current, type 2, 400 V A 50 Rated conditional short-circuit current, type 2, 400 V A 50 Rated conditional short-circuit current, type 2, 400 V C 0 Respectation of a contrection of main circuit	Voltage type for actuating		AC
Rated power, 460 V, 60 Hz, 3-phase kW 0 Rated power, 575 V, 60 Hz, 3-phase 4W 0 Rated operation current Ie A 1.5 Rated operation current at AC-3,400 V A 1-1.6 Rated operation current setting A 1-1.6 Rated conditional short-circuit current, type 1,480 V/277 V A 0 Rated conditional short-circuit current, type 2,290 V A 5000 Rated conditional short-circuit current, type 2,400 V A 5000 Number of auxiliary contacts as normally open contact B 0 Number of auxiliary contacts as normally closed contact C 0 Imperature compensated overload protection Y 0 Imperature compensated overload protection of main circuit Y 0 Type of electrical connection of main circuit Y 0 With transformer Y 0 0 With transformer Y 0 0 Number of auxiliary- and control current circuit Y 0 0 Vibra formergency stop Y 0 0	Rated operation power at AC-3, 230 V, 3-phase	kW	0.25
Rated power, 575 V, 60 Hz, 3-phase kW 0 Rated operation current te A 1.5 Rated operation current at AC3, 400 V A 1.6 Overload release current setting A 1.6 Rated conditional short-circuit current, type 1, 480 Y/277 V A 0 Rated conditional short-circuit current, type 1, 800 Y/347 V A 0 Rated conditional short-circuit current, type 2, 400 V A 5000 Number of suxiliary contacts as normally open contact 0 0 Number of suxiliary contacts as normally closed contact C 0 Ambient temperature, upper operating limit C 0 Temperature compensated overload protection C 0 Release class C 0 Type of electrical connection of main circuit C 0 With transformer Number of suxiliary- and control current circuit C 0 Number of electrical connection for auxiliary- and control current circuit C 0 0 Vibra of electrical connection for auxiliary- and control current circuit C 0 0	Rated operation power at AC-3, 400 V	kW	0.55
Rated operation current le A 15 Rated operation current a AC-3, 400 V A 1, 8 Overload release current setting A 1, 1, 15 Rated conditional short-circuit current, type 1, 800 Y/377 V A 0 Rated conditional short-circuit current, type 2, 230 V A 5000 Rated conditional short-circuit current, type 2, 400 V A 5000 Number of auxiliary contacts as normally open contact B 0 Number of auxiliary contacts as normally closed contect C 6 Temperature compensated overload protection C 6 Release class C CASS 10 Type of electrical connection of main circuit Screw connection Screw connection Type of electrical connection of main circuit No No With transformer No No Number of command positions No No Suitable for emergency stop No No Coordinator laights No No External reset possible No No With fuse No No	Rated power, 460 V, 60 Hz, 3-phase	kW	0
Rated operation current at AC-3,400 V A 1.8 Overload release current setting A 1.16 Rated conditional short-circuit current, typa 1,480 Y,277 V A 0 Rated conditional short-circuit current, typa 2,400 V A 50000 Rated conditional short-circuit current, type 2,400 V A 5000 Number of auxiliary contacts as normally closed contact B 0 Number of auxiliary contacts as normally closed contact C 66 Temperature compensated overload protection C 60 Release class C CLASS 10 Type of electrical connection of main circuit C CServe connection Yea Screw connection Screw connection Rail mounting possible Yea No With transformer Yea No Number of command positions Yea No Suitable for emergency stop Yea Class 2 Coordination class according to IEC 60947-43 Yea No Number of indicator lights Yea Po External reset possible Yea <td>Rated power, 575 V, 60 Hz, 3-phase</td> <td>kW</td> <td>0</td>	Rated power, 575 V, 60 Hz, 3-phase	kW	0
Overload release current setting A 1 - 1.6 Rated conditional short-circuit current, type 1, 800 Y;347 V A 0 Rated conditional short-circuit current, type 1, 800 Y;347 V A 0 Rated conditional short-circuit current, type 2, 200 V A 0 Rated conditional short-circuit current, type 2, 400 V A 0 Number of auxiliary contacts as normally open contact C 0 Ambient temperature, upper operating limit C 0 Tamparature compensated overload protection C 0 Release class C CLASS 10 Type of electrical connection of main circuit Yes Cerew connection Type of electrical connection for auxiliary- and control current circuit Yes Yes Rail mounting possible Yes Yes With transformer Yes Yes Number of command positions Yes Yes Suitable for emergency stop Yes Yes External reset possible Yes Yes External reset possible Yes Yes With fuse <	Rated operation current le	Α	1.5
Rated conditional short-circuit current, type 1, 800 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 O 0 Number of auxiliary contacts as normally closed contact C 6 Ambient temperature, upper operating limit C 6 Temperature compensated overload protection Yes CLASS 10 Temperature compensated overload protection Yes CLASS 10 Type of electrical connection of main circuit Yes Crew connection Yes Ves Cumber of command positions Yes With transformer Yes No Number of command positions Yes No Suitable for emergency stop Yes No Cordination class according to IEC 60947-4-3 Yes No With fuse Yes No Degree of protection (IPS No No Supporting protocol for TCP/IP No Supporting protocol for CAN<	Rated operation current at AC-3, 400 V	Α	1.6
Rated conditional short-circuit current, type 2, 300 V A 50000 Rated conditional short-circuit current, type 2, 400 V A 50000 Number of auxiliary contacts as normally open contact V 0 Number of auxiliary contacts as normally closed contact °C 0 Ambient temperature, upper operating limit °C 6 Temperature compensated overload protection VS CLASS 10 Release class VS CLASS 10 Type of electrical connection of main circuit VS Screw connection You of electrical connection for auxiliary- and control current circuit VS No Rail mounting possible VS No With transformer VS No Coordination class according to IEC 60947-4-3 VS Class 2 Number of indicator lights VS No External reset possible VS No With fuse NO No Degree of protection (IP) NO No Supporting protocol for TCPIP NO NO Supporting protocol for TCPIP NO	Overload release current setting	Α	1 - 1.6
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 C 0 Number of auxiliary contacts as normally closed contact C 60 Ambient temperature, upper operating limit C 60 Temperature compensated overload protection C CASS 10 Release class CLASS 10 CLASS 10 Type of electrical connection of main circuit Screw connection Screw connection Type of electrical connection for auxiliary- and control current circuit Screw connection Screw connection Rail mounting possible Yes Screw connection With transformer Yes No Number of command positions Yes Class 2 Suitable for emergency stop No Class 2 Cordination class according to IEC 60947-4-3 Yes No Number of indicator lights Yes No External reset possible Yes No With fuse Yes No <tr< td=""><td>Rated conditional short-circuit current, type 1, 480 Y/277 V</td><td>Α</td><td>0</td></tr<>	Rated conditional short-circuit current, type 1, 480 Y/277 V	Α	0
Rated conditional short-circuit current, type 2, 400 V A 500000 Number of auxiliary contacts as normally closed contact C S C	Rated conditional short-circuit current, type 1, 600 Y/347 V	Α	0
Number of auxiliary contacts as normally closed contact C 0 Ambient temperature, upper operating limit °C 60 Temperature compensated overload protection S Yes Release class CLASS 10 Type of electrical connection of main circuit Screw connection Type of electrical connection for auxiliary- and control current circuit Yes Rail mounting possible Yes With transformer No Number of command positions Yes Suitable for emergency stop No Coordination class according to IEC 60947-4-3 Yes Number of indicator lights Ios External reset possible No With fuse Ios External reset possible No With fuse Ios Degree of protection (IP) No Degree of protection (IP) No Supporting protocol for TCP/IP No Supporting protocol for PROFIBUS No Supporting protocol for PROFIBUS No Supporting protocol for CAN No Supporting proto	Rated conditional short-circuit current, type 2, 230 V	Α	50000
Number of auxiliary contacts as normally closed contact C 60 Ambient temperature, upper operating limit C 60 Temperature compensated overload protection F Yes Release class CLASS 10 Type of electrical connection of main circuit Screw connection Type of electrical connection for auxiliary- and control current circuit S Yes Rail mounting possible Yes No With transformer No No Number of command positions No No Suitable for emergency stop No Class 2 Coordination class according to IEC 60947-4-3 No No Number of indicator lights No No External reset possible No No With fuse No No Degree of protection (IP) No No Degree of protection (NEMA) Yes No Supporting protocol for TCP/IP No No Supporting protocol for PROFIBUS No No Supporting protocol for PROFIBUS No No<	Rated conditional short-circuit current, type 2, 400 V	Α	50000
Ambient temperature, upper operating limit °C 60 Temperature compensated overload protection Yes Yes Release class CLASS 10 CLASS 10 Type of electrical connection of main circuit Serw connection Serw connection Type of electrical connection for auxiliary- and control current circuit Serw connection Serw connection Rail mounting possible Yes Yes With transformer No No Number of command positions Yes No Suitable for emergency stop No Class 2 Coordination class according to IEC 60947-4-3 Yes No External reset possible Yes No With fuse No No Degree of protection (IP) No No Degree of protection (NEMA) Yes No Supporting protocol for TCP/IP No No Supporting protocol for PROFIBUS No No Supporting protocol for PROFIBUS No No Supporting protocol for CAN No No Sup	Number of auxiliary contacts as normally open contact		0
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 ** No Suitable for emergency stop ** No Coordination class according to IEC 60947-4-3 ** No Number of indicator lights ** No External reset possible No No With fuse No No Degree of protection (IP) No No Degree of protection (NEMA) ** P2O Other Supporting protocol for PROFIBUS No No Supporting protocol for PROFIBUS No No Supporting protocol for CAN No No Supporting protocol for INTERBUS No No Supporting protocol for INTERBUS No No	Number of auxiliary contacts as normally closed contact		0
Release class Type of electrical connection of main circuit Type of electrical connection for auxiliary- and control current circuit Rail mounting possible With transformer Number of command positions Suitable for emergency stop Coordination class according to IEC 60947-4-3 Number of indicator lights External reset possible With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for INTERBUS Supporting pr	Ambient temperature, upper operating limit	°C	60
Type of electrical connection of main circuit Type of electrical connection for auxiliary- and control current circuit Rail mounting possible With transformer Number of command positions Suitable for emergency stop Coordination class according to IEC 60947-4-3 Number of indicator lights External reset possible With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for TCP/IP Supporting protocol for TCP/IP Supporting protocol for CAN Supporting protocol for CAN Supporting protocol for INTERBUS	Temperature compensated overload protection		Yes
Type of electrical connection for auxiliary- and control current circuit Rail mounting possible With transformer With transformer Number of command positions Coordination class according to IEC 60947-4-3 Number of indicator lights External reset possible With fuse Degree of protection (IP) Degree of protection (IPRA) Supporting protocol for TCP/IP Supporting protocol for TCP/IP Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for INTERBUS	Release class		CLASS 10
Rail mounting possible With transformer With transformer Number of command positions Suitable for emergency stop Coordination class according to IEC 60947-4-3 Number of indicator lights Cuss 2 Number of indicator lights Cuss 2 Number of indicator lights No External reset possible No With fuse Degree of protection (IP) Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for PROFIBUS Supporting protocol for PROFIBUS Supporting protocol for INTERBUS No Supporting protocol for INTERBUS	Type of electrical connection of main circuit		Screw connection
With transformerNoNumber of command positions0Suitable for emergency stopNoCoordination class according to IEC 60947-4-3Class 2Number of indicator lights0External reset possibleNoWith fuseNoDegree of protection (IP)NoDegree of protection (NEMA)1P20Supporting protocol for TCP/IPNoSupporting protocol for TCP/IBUSNoSupporting protocol for CANNoSupporting protocol for CANNoSupporting protocol for INTERBUSNoSupporting protocol for INTERBUSNo	Type of electrical connection for auxiliary- and control current circuit		Screw connection
Number of command positions Suitable for emergency stop Coordination class according to IEC 60947-4-3 Number of indicator lights External reset possible With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for TCP/IP Supporting protocol for CAN Supporting protocol for CAN Supporting protocol for INTERBUS O Class 2 Class 2 No Class 2 No O O O O O O O O O O O O O	Rail mounting possible		Yes
Suitable for emergency stop Coordination class according to IEC 60947-4-3 Number of indicator lights External reset possible No With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for CAN Supporting protocol for CAN Supporting protocol for INTERBUS No	With transformer		No
Coordination class according to IEC 60947-4-3 Number of indicator lights External reset possible With fuse With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for CAN Supporting protocol for INTERBUS Mo Class 2 Class 2 Class 2 No No No No No No Class 2 No No No No Class 2 No No No No Class 2 No No Class 2 No No Class 2 No No Class 2 No No No Class 2 No Class 2 No No Class 2 No Class 2 No No Class 2 No Class	Number of command positions		0
Number of indicator lights External reset possible With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for INTERBUS No O O O O O O O O O O O O O	Suitable for emergency stop		No
External reset possible With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PR0FIBUS Supporting protocol for CAN Supporting protocol for INTERBUS No No No No No No No No No N	Coordination class according to IEC 60947-4-3		Class 2
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	Number of indicator lights		0
Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for INTERBUS No No No No No No No No No N	External reset possible		No
Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for INTERBUS Other No No No	With fuse		No
Supporting protocol for TCP/IP Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for INTERBUS No No	Degree of protection (IP)		IP20
Supporting protocol for PROFIBUS Supporting protocol for CAN Supporting protocol for INTERBUS No No	Degree of protection (NEMA)		Other
Supporting protocol for CAN Supporting protocol for INTERBUS No	Supporting protocol for TCP/IP		No
Supporting protocol for INTERBUS No	Supporting protocol for PROFIBUS		No
	Supporting protocol for CAN		No
Supporting protocol for ASI 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	200
Depth	mm	154

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.	3211-04
North America Certification	UL listed, CSA certified
Specially designed for North America	No

Dimensions



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

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 ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402006Z2018_04.pdf to 12 A		
IL03402015Z (AWA1210-2324) Busbar adapter		
IL03402015Z (AWA1210-2324) Busbar adapter	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402015Z2018_05.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	