### DATASHEET - MSC-R-12-M17(24VDC)/BBA



Reversing starter, 380 V 400 V 415 V: 5.5 kW, Ir= 8 - 12 A, 24 V DC, DC voltage



MSC-R-12-M17(24VDC)/BBA Part no. Catalog No. 103009

**Alternate Catalog** XTSR012B018CTDNL-A

No.

**EL-Nummer** 4315470

(Norway)

### **Delivery program**

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	P	kW	5.5
Rated operational current			
AC-3			
380 V 400 V 415 V	I <sub>e</sub>	Α	11.3
Rated short-circuit current 380 - 415 V	$I_{\mathbf{q}}$	kA	100
Setting range			
Setting range of overload releases	l <sub>r</sub>	А	8 - 12
Coordination			Type of coordination "1" Type of coordination "2"
Contact sequence			M 3-
Actuating voltage			24 V DC
			DC voltage

#### Motor-protective circuit-breakers PKZM0-12

Contactor DILM17-01(...)

#### DOL starter wiring set

Mechanical connection element and electrical electric contact module PKZM0-XM32DE + DILM32-XRL

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

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→ 281199

## Technical data General

delleral			
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 <sub>e</sub>	V	230 - 415
Rated operational current			
Open, 3-pole: 50 – 60 Hz			
380 V 400 V	I <sub>e</sub>	Α	12
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
Power consumption			
DC operated	Sealing	W	0.5
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		Α	1

## **Design verification as per IEC/EN 61439**

echnical data for design verification			
Rated operational current for specified heat dissipation	In	Α	12
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	2.9
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	8.7
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0.9
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
EC/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])

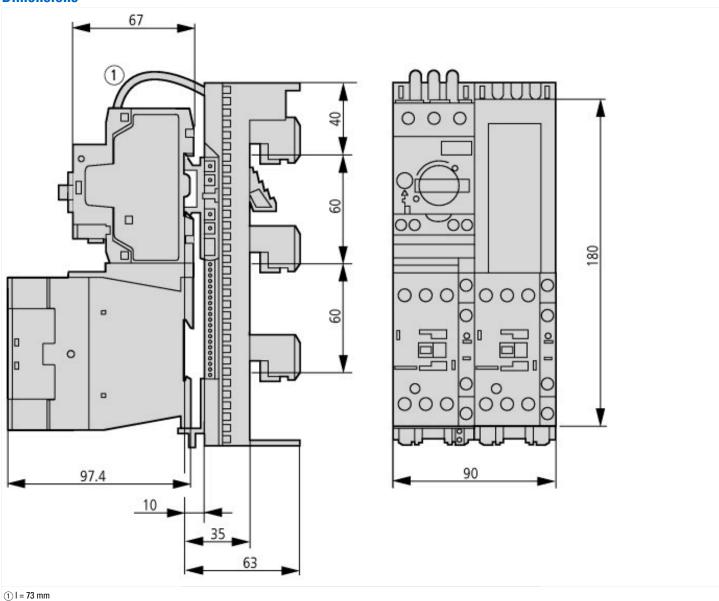
With short-circuit releases         Ves           Rated control supply voltage Us at AC SIM2         V         0 - 0           Valuege upply voltage Us at AC SIM2         V         2 - 24           Valuege upply voltage Us at AC SIM2         V         2 - 24           Valuege upply voltage Us at AC SIM2 V         V         2 - 24           Valuege upply voltage Us at AC SIM2 V         V         3 - 3           Rated operation power at AC SIM2 V, 3 phase         kW         5 - 5           Rated operation power at AC SIM2 V, 3 phase         kW         0           Rated operation current le         A         11 3           Rated operation current at AC SIM2 V, 3 phase         A         12 - 2           Rated operation current at AC SIM2 V, 3 phase         A         12 - 2           Rated operation current at AC SIM2 V, 3 phase         A         12 - 2           Rated operation current at AC SIM2 V, 3 phase         A         12 - 2           Rated operation current at AC SIM2 V, 3 phase         A         12 - 2           Rated operation current at AC SIM2 V, 3 phase         A         12 - 2           Rated operation current at AC SIM2 V, 3 phase         A         12 - 2           Rated conditional shart-circuit current plan SIM2 V, 3 phase         A         500000	[AJZ718013])		
Relate control supply voltage Us at AC 501/Z         V         0 - 0           Relate control supply voltage Us at AC 601/Z         V         2 - 24           Voltage type for a clustring         D           Relate departs supply voltage Us at AC 601/Z         W         3           Relate days type for a clustring         DC           Relate days stype for a clustring         W         3           Relate days stype for a clustring         W         5           Relate days stype for a clustring         W         0           Relate days stype for a clustring         AW         0           Relate days stype for a clustring         AW         0           Relate days stype for a clustring         AW         12           Overload release current setting         AW         12           Relate does disclinated stant-circuit current, type 1, 480 Y/277 V         AW         0           Relate conditional stant-circuit current, type 2, 400 Y/677 V         AW         50000           Relate conditional stant-circuit current, type 2, 400 Y         AW         50000           Relate conditional stant-circuit current, type 2, 400 Y         AW         50000           Relate conditional stant-circuit current, type 2, 400 Y         AW         50000           Relate conditional stant-circuit cu	Kind of motor starter		Reversing starter
Risted control supply voltage Us at AC 69H2         V         2 - 24           Risted control supply voltage Us at AC 69H2         V         2 - 24           Voltage type for actuating         IV         3           Risted operation power at AC-3, 400 V         IV         5.5           Risted power, 68 V, 50 H2, 3-phase         IV         0           Risted power, 68 V, 50 H2, 3-phase         IV         0           Risted power, 68 V, 50 H2, 3-phase         IV         0           Risted power, 68 V, 50 H2, 3-phase         IV         0           Risted power, 68 V, 50 H2, 3-phase         IV         0           Risted power, 68 V, 50 H2, 3-phase         IV         0           Risted conditional short-circuit at CCC. 400 V         A         13           Risted conditional short-circuit current, type 1, 400 V/277 V         A         0           Risted conditional short-circuit current, type 2, 200 V         A         5000           Risted conditional short-circuit current, type 2, 200 V         A         5000           Risted conditional short-circuit current, type 2, 200 V         A         5000           Risted conditional short-circuit current, type 2, 200 V         A         5000           Risted conditional short-circuit current, type 2, 200 V         A         5000 <td>With short-circuit release</td> <td></td> <td>Yes</td>	With short-circuit release		Yes
Rated control supply violage Us at DC         V         24-24           Vollage type for ectualing         CC         CC           Rated operation power at AC-3.20 V, 3-phase         kW         5           Rated operation power at AC-3.40 V         kW         5           Rated powers, 575 V, 60 Hz, 3-phase         kW         0           Rated operation current tell         A         113           Rated operation current at AC-2, 400 V         A         12           Overload release current setting         A         8-12           Rated conditional short-circuit current, type 1, 480 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         50000           Rated conditional short-circuit current, type 3, 600 Y/347 V         A         50000           Rated conditional short-circuit current, type 2, 280 V         A         50000           Rated conditional short-circuit current, type 2, 400 V         A         50000           Rated conditional short-circuit current type 2, 200 V         A         50000           Number of suciliary contacts an normally closed contact         C         6           Rated conditional short-circuit current setting         *         5           Reportance compensated overload protection         * <td< td=""><td>Rated control supply voltage Us at AC 50HZ</td><td>V</td><td>0 - 0</td></td<>	Rated control supply voltage Us at AC 50HZ	V	0 - 0
Voltage type for a cluating         DC           Rated operation power at AG-3, 280 V.3 phase         kW         3           Rated operation power at AG-3, 400 V         kW         0           Rated power, 40 Dr. 3, phase         kW         0           Rated power, 575 V, 80 Hz, 3-phase         kW         0           Rated operation current at AG-3, 400 V         A         12           Overload release current setting         A         8 - 12           Rated conditional short-circuit current, type 1, 469 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 200 V         A         50000           Rated conditional short-circuit current, type 2, 200 V         A         50000           Rated conditional short-circuit current, type 2, 200 V         A         50000           Rated conditional short-circuit current, type 2, 200 V         A         50000           Number of auxiliary contacts as normally closed contact         B         6           Number of auxiliary contacts as normally closed contact         B         6           Temperature compessable overload protection         *C         80           With transformer         Vex         CLAS TO           Number of indicator inglise         B         C         CLAS TO	Rated control supply voltage Us at AC 60HZ	V	0 - 0
Ristort operation power at AC-3, 200 V, 3-phase         kW         5.5           Rated power, AC-3, 4,00 V         kW         5.5           Rated power, AC-3, 24,00 V         kW         0           Rated power, AC-3, 24,00 V         kW         0           Rated operation current at AC-3, 400 V         A         1.3           Rated conditional short-circuit current, type 1, 460 Y/277 V         A         0           Rated conditional short-circuit current, type 1, 600 Y/247 V         A         0           Rated conditional short-circuit current, type 2, 200 V         A         50000           Rated conditional short-circuit current, type 2, 200 V         A         50000           Rated conditional short-circuit current, type 2, 200 V         A         50000           Number of auxiliary contacts as normally closed contact         C         0           Number of auxiliary contacts as normally closed contact         C         0           Release class         C         CASS 10           Temperature, compensated overload protection         C         Yes           Release class         C         CLASS 10           Vilys of electrical connection for auxiliary- and central circuit         Yes         Class 2           With transformer         No         No	Rated control supply voltage Us at DC	V	24 - 24
Nated operation power at AC-3, 400 V   Ac-3 phase   NW   0	Voltage type for actuating		DC
Rated power, 460 V, 60 Hz, 3-phase         kW         0           Rated operation current le         A         11.3           Rated operation current le         A         11.3           Rated operation current al AC-3, 400 V         A         12           Overload release current setting         A         3 - 12           Rated conditional short-circuit current, type 1, 480 V/277 V         A         0           Rated conditional short-circuit current, type 2, 230 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         A         50000           Rated conditional short-circuit current, type 2, 230 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         A         50000           Rated conditional short-circuit current, type 2, 480 V         4         50000           Rated conditio	Rated operation power at AC-3, 230 V, 3-phase	kW	3
Rated power, 75 V, 60 Hr, 3-phase         kW         0           Rated operation current te         A         13           Rated operation current st AC-3, 400 V         A         12           Overload releases current setting         A         3 - 12           Rated conditional short-circuit current, type 1, 480 V/277 V         A         0           Rated conditional short-circuit current, type 2, 500 V/347 V         A         50000           Rated conditional short-circuit current, type 2, 400 V         A         50000           Number of auxiliary contacts as normally closed contact         B         0           Number of auxiliary contacts as normally closed contact         C         0           Ambient temperature compensated overload protection         E         CLASS 10           Tippe of electrical connection of main circuit         C         Screw connection           Type of electrical connection for auxiliary—and control current circuit         C         CLASS 10           With transformer         C         Oscariantion of main circuit         C         CLASS 10           With transformer         C         Oscariantion of command positions         C         CLASS 10           With transformer         C         Oscariantion of command positions         C         Class 2 <t< td=""><td>Rated operation power at AC-3, 400 V</td><td>kW</td><td>5.5</td></t<>	Rated operation power at AC-3, 400 V	kW	5.5
Rated operation current la         A         13.           Rated operation current at AC-3,400 V         A         12.           Overload release current setting         A         8.12           Rated conditional short-circuit current, type 1,480 Y/277 V         A         0           Rated conditional short-circuit current, type 1,500 Y/347 V         A         50000           Rated conditional short-circuit current, type 2,230 V         A         50000           Number of auxiliary contacts as normally open contact         B         0           Number of auxiliary contacts as normally closed contact         "C         60           Ambient temperature, upper operating limit         "C         60           Temperature compensated overload protection         "C         60           Release class         "C         CLASS 10           Type of electrical connection of main circuit         "C         60           Type of electrical connection for auxiliary- and control current circuit         "C         60           Rall mounting possible         "G         Village Command positions           With transformer         "G         10           Number of command positions         "G         10           Statable for emergency stop         "G         10           Coo	Rated power, 460 V, 60 Hz, 3-phase	kW	0
Rated operation current at AC-3, 400 V         A         12           Overload release current setting         A         8 - 12           Rated conditional short-circuit current, type 1, 800 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 230 V         A         50000           Rated conditional short-circuit current, type 2, 230 V         A         50000           Number of auxiliary contacts as normally open contact         D         0           Number of auxiliary contacts as normally closed centact         V         60           Number of auxiliary contacts as normally closed centact         V         60           Release class         VS         60           Release class         CLASS 10         CLASS 10           Temperature compensated overload protection         VS         Screw connection           Release class         CLASS 10         CLASS 10           Number of inaction of main circuit         VS         Screw connection           Rall mounting possible         VS         No           With transformer         No         No           Number of indicator lights         VS         No           Extransi reset possible         No         No           With fuse         No         No	Rated power, 575 V, 60 Hz, 3-phase	kW	0
Overfoad reloase current setting         A         8 - 12           Rated conditional short-circuit current, type 1, 480 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 200 V         A         50000           Rated conditional short-circuit current, type 2, 200 V         A         50000           Rated conditional short-circuit current, type 2, 400 V         A         50000           Number of auxiliary contacts as normally open contact         0         0           Number of auxiliary contacts as normally closed contact         °C         80           Ambient temperature compensated overload protection         °C         80           Release class         CLASS 10         CLASS 10           Type of electrical connection of main circuit         °C         Screw connection           Type of electrical connection of main circuit         °C         Screw connection           With transformer         No         No           Number of command positions         °C         Class 2           Suitable for emergency stop         °C         Class 2           Coordination class according to IEC 60947-4-3         °C         No           Number of indicator lights         °C         P00           External reset possible         °C         No	Rated operation current le	А	11.3
Rated conditional short-circuit current, type 1, 480 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         500000           Rated conditional short-circuit current, type 2, 280 V         A         500000           Number of auxiliary contacts as normally open contact         0         0           Number of auxiliary contacts as normally closed contact         0         0           Ambient temperature, upper operating limit         °C         80           Temperature compensated overload protection         Yes         CLASS 10           Release class         CLASS 10         Screw connection           Type of electrical connection of main circuit         Screw connection         Screw connection           With transformer         Yes         No           Number of command positions         Yes         No           Suitable for emergency stop         Yes         No           Coordination class a coording to IEC 69947-4-3         Yes         Release 2           Number of indicator lights         Yes         No           Coordination class a coording to IEC 69947-4-3         Yes         No           Degree of protection (IP)         Yes         No           Degree of protection (IP)         Yes         No	Rated operation current at AC-3, 400 V	Α	12
Rated conditional short-circuit current, type 2, 230 V         A         500000           Rated conditional short-circuit current, type 2, 230 V         A         500000           Number of auxiliary contacts as normally open contact         C         60           Number of auxiliary contacts as normally closed contact         C         60           Temperature compensated overload protection         C         60           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           Auxiliary of command positions         No           Suitable for emergency stop         No           Coordination class according to IEC 60947-4-3         C           Number of indicator lights         No           External reset possible         No           With fuse         No           Degree of protection (IP)         No           Degree of protection (IP)         No           Supporting protocol for CAN         No           Supporting protocol for PROFIBUS         No           Supporting protocol for PROFIBUS         No           Supporting protocol for FROFIBUS         No           Supporting protocol for F	Overload release current setting	Α	8 - 12
Rated conditional short-circuit current, type 2, 230 V Rated conditional short-circuit current, type 2, 400 V Rumber of auxiliary contacts as normally open contact Rumber of auxiliary contacts as normally closed contact Rumber of commenature compensated overload protection Rumber of electrical connection of main circuit Rype of electrical connection of main circuit Rumber of electrical connection for auxiliary- and control current circuit Rumber of command positions Rumber of command positions Rumber of command positions Rumber of command positions Rumber of indicator lights Rumber of indicator lights Rumber of indicator lights Rumber of protection (IP) Rumber of indicator lights Rumber of protection (IP) Rumper	Rated conditional short-circuit current, type 1, 480 Y/277 V	А	0
Rated conditional short-circuit current, type 2, 400 V  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally closed contact  Ambient temperature, upper operating limit  Temperature compensated overload protection  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 (IPE)  Supporting protocol for PROFIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for ASI  Supporting protocol for MODBUS	Rated conditional short-circuit current, type 1, 600 Y/347 V	Α	0
Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally closed contact  Ambient temperature, upper operating limit  C 6 60  Temperature compensated overload protection  Release class  Release class  Cype 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 (IP)  Degree of protection (NEMA)  Supporting protocol for TCP/IP  Supporting protocol for PROFIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for MODBUS  Supporting protocol for MODBUS	Rated conditional short-circuit current, type 2, 230 V	А	50000
Number of auxiliary contacts as normally closed contact         °C         60           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         O           Suitable for emergency stop         No           Coordination class according to IEC 60947-4-3         Class 2           Number of indicator lights         No           Stetranal reset possible         No           With fuse         No           Degree of protection (IP)         IP00           Degree of protection (IREMA)         Voher           Supporting protocol for PROFIBUS         No           Supporting protocol for CAN         No           Supporting protocol for CAN         No           Supporting protocol for INTERBUS         No           Supporting protocol for ASI         No           Supporting protocol for ASI         No	Rated conditional short-circuit current, type 2, 400 V	Α	50000
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         Yes           Rail mounting possible         Yes           With transformer         No           Number of command positions         O           Suitable for emergency stop         No           Coordination class according to IEC 60947-4-3         Class 2           Number of indicator lights         O           Suttenal reset possible         No           With fuse         No           Degree of protection (IP)         No           Degree of protection (NEMA)         HP0           Supporting protocol for TCP/IP         No           Supporting protocol for PR0FIBUS         No           Supporting protocol for CAN         No           Supporting protocol for INTERBUS         No           Supporting protocol for ASI         No           Supporting protocol for MODBUS         No	Number of auxiliary contacts as normally open contact		0
Temperature compensated overload protection Release class CLASS 10 CLASS 10 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 No Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for CAN Supporting protocol for INTERBUS Supporting protocol for INTERBUS Supporting protocol for MDDBUS	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 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 INTERBUS Supporting protocol for INTERBUS Supporting protocol for ASI Supporting protocol for MODBUS CLASS 10 CLASS 10 Screw connection Scre	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 Oegree of protection (NPMA) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for CAN Supporting protocol for CAN Supporting protocol for INTERBUS Supporting protocol for INTERBUS Supporting protocol for ASI Supporting protocol for MODBUS Supporting protocol for MODBUS Supporting protocol for MODBUS Signature of the support in t	Temperature compensated overload protection		Yes
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 CAN  Supporting protocol for INTERBUS  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for MODBUS  Supporting protocol for MODBUS	Release class		CLASS 10
Rail mounting possible  With transformer  No 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  No With fuse  No Degree of protection (IP)  Degree of protection (IP)  Degree of protection (NEMA)  Supporting protocol for TCP/IP  Supporting protocol for TCP/IP  Supporting protocol for PROFIBUS  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for ASI  Supporting protocol for MODBUS	Type of electrical connection of main circuit		Screw connection
With transformer Number of command positions Suitable for emergency stop Coordination class according to IEC 60947-4-3 Number of indicator lights Cexternal reset possible With fuse No 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 Supporting protocol for ASI Supporting protocol for MODBUS	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 CAN  Supporting protocol for CAN  Supporting protocol for CAN  Supporting protocol for NEBBUS  Supporting protocol for ASI  Supporting protocol for MODBUS  No  Supporting protocol for MODBUS	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 PR0FIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for ASI  Supporting protocol for MODBUS  No  No  No  No  No  No  No  No  No  N	With transformer		No
Coordination class according to IEC 60947-4-3  Number of indicator lights  External reset possible  With fuse  No  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  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for MODBUS  Supporting protocol for MODBUS	Number of command positions		0
Number of indicator lights  External reset possible No With fuse No 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 Supporting protocol for ASI Supporting protocol for ASI Supporting protocol for MODBUS  No Supporting protocol for MODBUS	Suitable for emergency stop		No
External reset possible  With fuse  No  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  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for ASI  Supporting protocol for MODBUS  No  No  No  No  No  No  No  No  No  N	Coordination class according to IEC 60947-4-3		Class 2
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  Supporting protocol for ASI  Supporting protocol for MODBUS  No  Supporting protocol for MODBUS  No  No  No  No  No  No  No  No  No  N	Number of indicator lights		0
Degree of protection (IP)  Degree of protection (NEMA)  Degree of protection (NEMA)  Supporting protocol for TCP/IP  Supporting protocol for PROFIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for ASI  Supporting protocol for MODBUS  No  No	External reset possible		No
Degree of protection (NEMA)  Supporting protocol for TCP/IP  No Supporting protocol for PROFIBUS  No Supporting protocol for CAN  Supporting protocol for INTERBUS  No Supporting protocol for ASI  Supporting protocol for MODBUS  No Supporting protocol for MODBUS	With fuse		No
Supporting protocol for TCP/IP  Supporting protocol for PROFIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for MODBUS  No  No	Degree of protection (IP)		IP00
Supporting protocol for PROFIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for MODBUS  No  Supporting protocol for MODBUS	Degree of protection (NEMA)		Other
Supporting protocol for CAN Supporting protocol for INTERBUS No Supporting protocol for ASI Supporting protocol for MODBUS No	Supporting protocol for TCP/IP		No
Supporting protocol for INTERBUS  Supporting protocol for ASI  Supporting protocol for MODBUS  No	Supporting protocol for PROFIBUS		No
Supporting protocol for ASI Supporting protocol for MODBUS No	Supporting protocol for CAN		No
Supporting protocol for MODBUS No	Supporting protocol for INTERBUS		No
	Supporting protocol for ASI		No
Supporting protocol for Data-Highway 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	156

# 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-...-M17[...32]BBA...

## **Assets (links)**

**Declaration of CE Conformity** 

00003118

**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	
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	