## DATASHEET - MSC-R-10-M7(230V50HZ)/BBA



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



Powering Business Worldwide

Part no. MSC-R-10-M7(230V50HZ)/BBA

Catalog No. 102989

Alternate Catalog XTSR010B007BFNL-A

No.

**EL-Nummer** 4315450

(Norway)

(Norway)			
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	Р	kW	3
Rated operational current			
AC-3			
380 V 400 V 415 V	I <sub>e</sub>	Α	6.6
Rated short-circuit current 380 - 415 V	$I_q$	kA	100
Setting range			
Setting range of overload releases	I <sub>r</sub>	A	6.3 - 10
Coordination			Type of coordination "1"
Contact sequence			M M M
Actuating voltage			230 V 50 Hz, 240 V 60 Hz
			AC voltage
Motor-protective circuit-breakers PKZM0-10			
Contactor DILM7-01()			
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 → 072896 → 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			111/3
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	7
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 $\ensuremath{\text{U}_{\text{S}}}$			
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		Α	1

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

Design vernication as per icc/civ 01433			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	10
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	2.8
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	8.4
Static heat dissipation, non-current-dependent	$P_{vs}$	W	1.4
Heat dissipation capacity	P <sub>diss</sub>	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

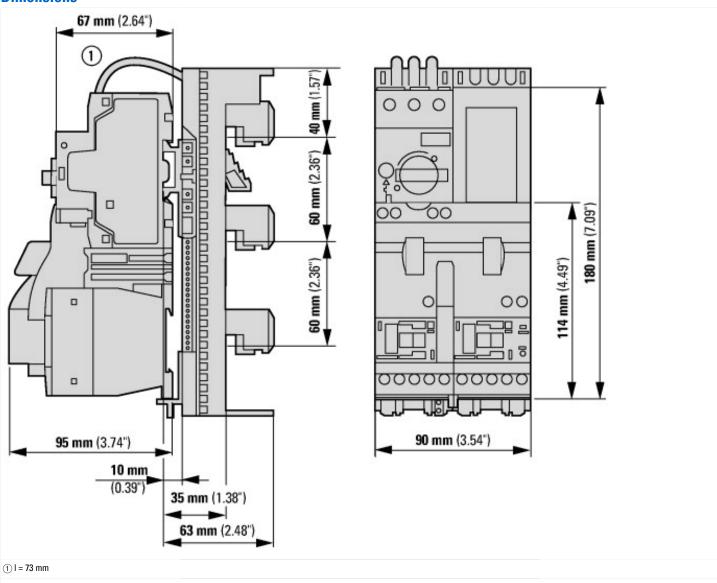
With short circuit releases         Yes           Related central supply-voltage Us at AC 50H/Z         V         20 - 200           Related central supply-voltage Us at AC 50H/Z         V         0 - 0           Willage Kype for exclusing         W         0 - 0           Related operation power at AC 3, 200 V, 3 phase         W         1.5           Related operation power at AC 3, 400 V         W         3           Related power, 690 V, 60 Hz, 3 phase         W         0           Related power, 690 V, 60 Hz, 3 phase         A         6.6           Related power, 690 V, 60 Hz, 3 phase         A         6.6           Related power, 690 V, 60 Hz, 3 phase         A         6.6           Related power, 690 V, 60 Hz, 3 phase         A         6.6           Related power, 670 V, 60 Hz, 3 phase         A         6.6           Related power, 670 V, 60 Hz, 3 phase         A         6.6           Related power, 670 V, 60 Hz, 3 phase         A         6.6           Related power, 670 V, 60 Hz, 3 phase         A         6.6           Related power, 670 V, 60 Hz, 3 phase         A         6.6           Related power, 670 V, 60 Hz, 3 phase         A         6.6           Related power, 670 V, 60 Hz, 3 phase         A         6.0	[AJZ718013])	0,1	
Rated control supply violage Us at AC 59NZ	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         KW         15           Rated operation power at AC-3, 280 V.3 -phase         kW         15           Rated operation power at AC-3, 480 V         kW         0           Rated operation current E         A         6           Rated operation current at AC-3, 480 V         A         6           Rated operation current at AC-3, 400 V         A         6           Voverload release current setting         A         6.3 - 10           Rated conditional short-circuit current, type 1, 480 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 230 V         A         0           Rated conditional short-circuit current, type 2, 240 V         A         0           Rated conditional short-circuit current, type 2, 240 V         A         0           Rated conditional short-circuit current, type 2, 240 V         A         0           Mumber of auxiliary contacts as normally closed contact         B         0           Value of electrical connection of main circuit         C         80           Value of electrical connection of main circuit         N         N      <	With short-circuit release		Yes
Retod control supply voltage Us at DC	Rated control supply voltage Us at AC 50HZ	V	230 - 230
Voltage type for actuating         AC           Rated operation power at AC-3, 200 V, 3-phase         kW         15           Rated operation power at AC-3, 400 V         kW         0           Rated power, 60 V, 60 Mr. 3-phase         kW         0           Rated operation current tem AC-3, 400 V         A         6.5           Rated operation current at AC-3, 400 V         A         7           Overload release current setting         A         6.3 - 10           Rated conditional short-circuit current, type 1, 480 V/277 V         A         0           Rated conditional short-circuit current, type 1, 480 V/277 V         A         0           Rated conditional short-circuit current, type 1, 900 V/377 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           Number of auxiliary contacts as normally clead contact         V         6           Ambiest temperature, upper operating limit         C         60           Tomperature compensated overload protection         Yes         CLASS 10           Release class         Yes         CLASS 10           Release class         Yes         CLASS 10           With transformer	Rated control supply voltage Us at AC 60HZ	V	0 - 0
Rated operation power at AC-3, 20 V. 3-phase         kW         15           Rated power, 40 V. 60 Hz. 3-phase         kW         0           Rated power, 57 V. 50 Hz. 3-phase         kW         0           Rated power, 57 V. 50 Hz. 3-phase         kW         0           Rated power, 57 V. 50 Hz. 3-phase         kW         0           Rated operation current te         A         6.6           Rated operation current at AC-3, 400 V         A         7           Owerload release current setting         A         0         3-10           Rated conditional short-circuit current, type 1, 400 V/277 V         A         0         0           Rated conditional short-circuit current, type 2, 400 V         A         0         0           Rated conditional short-circuit current, type 2, 400 V         A         0         0           Rated conditional short-circuit current, type 2, 400 V         A         0         0           Rated conditional short-circuit current, type 2, 400 V         A         0         0           Rated conditional short-circuit current, type 2, 400 V         A         0         0           Rated conditional short-circuit current, type 2, 400 V         A         0         0           Rated conditional short-circuit current, type 2, 400 V         C	Rated control supply voltage Us at DC	V	0 - 0
Rated operation power at AC-3, 400 V         KW         3           Rated operation power, 460 V, 50 HA, 2-phase         KW         0           Rated power, 575 V, 60 HA, 2-phase         KW         0           Rated operation current te         A         6           Rated operation current at AC-3, 400 V         A         7           Overload release current setting         A         3         10           Rated conditional short-circuit current, type 1, 480 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         0           Rated conditional short-circuit current, type 2, 280 V         A         0           Rated conditional short-circuit current, type 2, 400 V         3         0           Rated conditional short-circuit current, type 2, 400 V         3         0           Release class         C	Voltage type for actuating		AC
Rated power, 60 V, 60 Hz, 3-phase         kW         0           Rated power, 575 V, 60 Hz, 3-phase         kW         0           Rated operation current le         A         6.5           Rated operation current at AC-3, 400 V         A         3-10           Overload release current setting         A         6.0           Rated conditional short-circuit current, type 1, 480 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 200 V;347 V         A         0           Rated conditional short-circuit current, type 2, 400 Vy 47 V         A         0           Rated conditional short-circuit current, type 2, 400 V         A         0           Number of auxiliary contacts as normally closed contact         V         0           Number of auxiliary contacts as normally closed contact         V         0           Reference compensated overload protection         V         0           Slobases class         V         CLASS 10           Type of electrical connection for auxiliary- and control current circuit         V         0           Rall mounting possible         V         0           With transformer         V         0           Number of indicator lights         V         0           Sultable for emergency stap	Rated operation power at AC-3, 230 V, 3-phase	kW	1.5
Rated power, 575 V, 80 Hz, 3-phase         kW         0           Rated operation current at AC3, 400 V         A         6.8           Rated conditional short-circuit current, type 1, 480 Y/277 V         A         5.3 - 10           Rated conditional short-circuit current, type 1, 800 Y/377 V         A         0           Rated conditional short-circuit current, type 1, 800 Y/377 V         A         0           Rated conditional short-circuit current, type 2, 400 V         A         0           Number of auxiliary contacts as normally opon cortext         0         0           Number of auxiliary contacts as normally opon cortext         0         0           Number of auxiliary contacts as normally opon cortext         C         66           Ambient temperature, upper operating limit         *C         68           Temperature compensated overload protection         C         62           Release class         C         CASS 10           Type of electrical connection of main circuit         C         CASS 10           Type of electrical connection for auxiliary- and control current circuit         N         N           Number of indicator lights         C         N         N           Coordination class a coording to IEC 60947-4-3         N         N         N           Number o	Rated operation power at AC-3, 400 V	kW	3
Rated operation current le         A         68           Rated operation current at AC-3,400 V         A         7           Overhaar felease current setting         A         63-10           Rated conditional short-circuit current, type 1,480 Y/277 V         A         0           Rated conditional short-circuit current, type 2,230 V         A         0           Rated conditional short-circuit current, type 2,240 V         A         0           Number of auxiliary contacts as normally open contact         0         0           Number of auxiliary contacts as normally closed contact         *C         60           Temperature compensated overload protection         *C         60           Release class         *C         X2         CLASS 10           Type of electrical connection of main circuit         *C         Screw connection           Type of electrical connection for auxiliary- and control current circuit         *C         Screw connection           With transformer         *No         No           Number of command positions         *C         No           Suitable for emergency stop         *No         No           Coordination class a coording to IEC 60947-4-3         *No         No           Number of indicator lights         *No         No	Rated power, 460 V, 60 Hz, 3-phase	kW	0
Rated operation current at AC-3,400 V         A         7           Overload release current setting         A         63-10           Rated conditional short-circuit current, type 1,600 V/347 V         A         0           Rated conditional short-circuit current, type 2,230 V         A         0           Rated conditional short-circuit current, type 2,240 V         A         0           Rated conditional short-circuit current, type 2,400 V         A         0           Number of auxiliary contacts as normally closed contact         C         60           Number of auxiliary contacts as normally closed contact         C         60           Ambient temperature, upper operating limit         *C         60           Temperature compensated overload protection         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         Yes         Screw connection           Rail mounting possible         Yes         Screw connection           With transformer         Yes         O           Number of command positions         Yes         No           Suitable for emergency stop         Yes         No           Coordination clease according to IEC 6	Rated power, 575 V, 60 Hz, 3-phase	kW	0
Overfoad release current setting         A         63-10           Rated conditional short-circuit current, type 1, 480 Y/277 V         A         0           Rated conditional short-circuit current, type 2, 420 V         A         0           Rated conditional short-circuit current, type 2, 420 V         A         0           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         60           Temperature compensated overload protection         CLASS 10         CLASS 10           Release class         CLASS 10         Screw connection           Yepe of electrical connection of main circuit         Yes         Screw connection           With transformer         No         No           Number of command positions         Yes         CLASS 10           Suitable for emergency stop         Class 1         Class 1           Coordination class according to IEC 60947-4-3         No         Class 1           Number of indicator lights         Po         No           External reset possible         No         No           With fuse         No         No           Degree of protection (IP)	Rated operation current le	Α	6.6
Rated conditional short-circuit current, type 1, 480 Y/277 V A 0 0 Rated conditional short-circuit current, type 2, 230 V A 0 0 Rated conditional short-circuit current, type 2, 230 V A 0 0 Rated conditional short-circuit current, type 2, 2400 V A 0 0 Rumber of auxiliary contacts as normally open contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Release class 0 0 0 0 0 Release class 0 0 0 0 0 0 Release class 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Rated operation current at AC-3, 400 V	Α	7
Rated conditional short-circuit current, type 1, 600 Y/347 V A 0 Rated conditional short-circuit current, type 2, 230 V A 0 Rated conditional short-circuit current, type 2, 400 V A 0 Rumber of auxiliary contacts as normally open contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Rumber of auxiliary contacts as normally closed contact 0 0 Release class 0 0 Release 0 0	Overload release current setting	Α	6.3 - 10
Rated conditional short-circuit current, type 2, 230 V Rated conditional short-circuit current, type 2, 400 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 compensated overload protection Rumber of contact on finan circuit Rumber of contact on finan circuit Rumber of command position of auxiliary- and control current circuit Rumber of command positions Suitable for emergency stop Coordination class according to IEC 60947-4-3 Rumber of indicator lights Rumber of indi	Rated conditional short-circuit current, type 1, 480 Y/277 V	Α	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  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 (INEMA)  Supporting protocol for TCP/IP  Supporting protocol for PROFIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS	Rated conditional short-circuit current, type 1, 600 Y/347 V	Α	0
Number of auxiliary contacts as normally closed contact         0           Ambient temperature, upper operating limit         °C         60           Temperature compensated overload protection         Yes         CLASS 10           Release class         CLASS 10         Crew connection           Type of electrical connection of main circuit         Screw connection         Yes           Real mounting possible         Yes         Screw connection           With transformer         No         No           Number of command positions         O         No           Suitable for emergency stop         Class 1         No           Coordination class according to IEC 60947-4-3         Class 1         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 (IP)         No         No           Supporting protocol for TROPIP         No         No           Supporting protocol for PROFIBUS         No         No           Supporting protocol for CAN         No         No           Supporting protocol for CAN         No	Rated conditional short-circuit current, type 2, 230 V	Α	0
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         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 1           Number of indicator lights         O           External reset possible         No           With fuse         No           Degree of protection (IP)         No           Degree of protection (IRMA)         No           Supporting protocol for TCP/IP         No           Supporting protocol for PROFIBUS         No           Supporting protocol for CAN         No           Supporting proto	Rated conditional short-circuit current, type 2, 400 V	Α	0
Ambient temperature, upper operating limit         °C         60           Temperature compensated overload protection         Yes           Release class         CLASS 10           Type of electrical connection of main circuit         Screw connection           Type of electrical connection for auxiliary- and control current circuit         Screw connection           Rail mounting possible         Yes           With transformer         No           Number of command positions         Yes           Suitable for emergency stop         No           Coordination class according to IEC 60947-4-3         No           Number of indicator lights         Yes           External reset possible         No           With fuse         No           Degree of protection (IP)         No           Degree of protection (NEMA)         IP20           Supporting protocol for TCP/IP         No           Supporting protocol for PROFIBUS         No           Supporting protocol for CAN         No           Supporting protocol for INTERBUS         No	Number of auxiliary contacts as normally open contact		0
Temperature compensated overload protection Release class Release class Type of electrical connection of main circuit Type of electrical connection for auxiliary- and control current circuit 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 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 Supporting protocol for	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 TCP/IP Supporting protocol for ROFIBUS Supporting protocol for CAN Supporting protocol for CAN Supporting protocol for LNEEBUS Supporting protocol for INTERBUS  CLASS 1 CLASS 1 No Screw connection Yes Corew connecti	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  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  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  Screw connection  Yes  Screw connection  Yes  Screw connection  Yes  Yes  No  Other  No  Other  No  Supporting protocol for TCP/IP  No  No  Supporting protocol for CAN  No  No  No	Temperature compensated overload protection		Yes
Type of electrical connection for auxiliary- and control current circuit  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  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  Serw connection  Yes  Screw connection  Yes  Screw connection  Yes  Yes  No  No  Other  No  Other  No  No  Supporting protocol for PROFIBUS  No  No  Supporting protocol for CAN  No  Supporting protocol for INTERBUS	Release class		CLASS 10
Rail mounting possible  With transformer  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  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  No  No  No  No  No  No  No  No  No  N	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  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 CAN  Supporting protocol for INTERBUS  No  No  No  No  No  No  No  No  No  N	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 INTERBUS  Degree of protection (INTERBUS  O  Class 1  No  Class 1  No  No  Other  No  Other  No  No  No  No  No  No  No  No  No  N	Rail mounting possible		Yes
Suitable for emergency stop Coordination class according to IEC 60947-4-3 Number of indicator lights O 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 INTERBUS No	With transformer		No
Coordination class according to IEC 60947-4-3  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  Class 1  O  Class 1  O  Class 1  No  No  No  No  No  No  No  No  No  N	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 PR0FIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  No  Supporting protocol for INTERBUS	Suitable for emergency stop		No
External reset possible  No 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  No Supporting protocol for INTERBUS  No Supporting protocol for INTERBUS  No	Coordination class according to IEC 60947-4-3		Class 1
With fuseNoDegree of protection (IP)IP20Degree of protection (NEMA)OtherSupporting protocol for TCP/IPNoSupporting protocol for PROFIBUSNoSupporting protocol for CANNoSupporting protocol for INTERBUSNo	Number of indicator lights		0
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  Supporting protocol for INTERBUS	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	With fuse		No
Supporting protocol for TCP/IP  Supporting protocol for PROFIBUS  No Supporting protocol for CAN  Supporting protocol for INTERBUS  No	Degree of protection (IP)		IP20
Supporting protocol for PROFIBUS  Supporting protocol for CAN  Supporting protocol for INTERBUS  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 tp://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	