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Powering Business Worldwide

MSC-R-10-M9(24VDC) - Reversing starter, 380 V 400 V 415 V: 4 kW, Ir= 6.3 - 10 A, 24 V DC, DC voltage



283202 MSC-R-10-M9(24VDC)

[Overview](#) [Specifications](#) [Resources](#)



283202 MSC-R-10-M9(24VDC)

Reversing starter, 380 V 400 V 415 V: 4 kW, Ir= 6.3 - 10 A, 24 V DC, DC voltage

Alternate Catalog No.

XTSR010B009BTDNL

EL-Nummer (Norway)

4365073

Reversing starter, Basic device: MSC, Notes: Also suitable for motors with efficiency class IE3, Motor ratings Motor rating AC-3 380 V 400 V 415 V: P= 4 kW, Setting range of overload releases: Ir= 6.3 - 10 A, Coordination: Type of coordination "1", Actuating voltage: 24 V DC, DC voltage, Standards: UL 508 (on request), CSA C22.2 No. 14 (on request)

- Delivery program
- Technical data
- Design verification as per IEC/EN 61439
- Technical data ETIM 7.0
- Approvals
- Dimensions

Delivery program

Basic function

Reversing starters (complete devices)

Basic device

MSC



Notes

Also suitable for motors with efficiency class IE3.

Connection technique

Screw terminals

Connection to SmartWire-DT

no

Motor ratings

Motor rating [P]AC-3380 V 400 V 415 V [P]

4 kW

Rated operational currentAC-3380 V 400 V 415 V [I_n]

8.5 A

Rated short-circuit current 380 - 415 V [I_k]

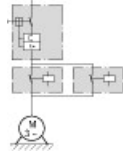
150 kA

Setting range

Setting range of overload releases  [I_r]

6.3 - 10 A

Coordination
 Type of coordination "1"
 Contact sequence



Actuating voltage
 24 V DC
 DC voltage

Motor-protective circuit-breakers

PKZMD-10 Type

Contactors

DILM9-01(...) Part no.

DOL starter wiring set

Mechanical connection element and electrical electric contact module
 FKZMD-XRM12 Type

Notes

The reversing starter (complete unit) consists of a FKZMD motor-protective circuit-breaker and two DILM contactors.

With the adapter-less top-hat rail mounting of starters up to 12 A, only the motor-protective circuit-breaker on the top-hat rail requires an adapter. The contactors are provided with mechanical support via a mechanical connection element.

Control wire guide with max. 6 conductors up to 2.5mm external diameter or 4 conductors up to 3.5mm external diameter.

From 16 A, the motor-protective circuit-breakers and contactors are mounted on the top-hat rail adapter plate.

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

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

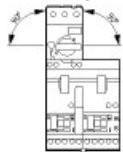
When using the auxiliary contacts DILA-XHIT... (□ 101042) the plug-in electrical connector can be removed without the removal of the front mounting auxiliary contact.

For further information	Page
Technical data FKZMD	□ FKZMD
Accessories FKZ	□ 072896
Technical data DILM	□ DILM
Further actuating voltages	□ 276537
DILM accessories	□ 281199

Technical data

General
 Standards

UL 508 (on request)
 CSA C 22.2 No. 14 (on request)
 Mounting position



Altitude
 Max. 2000 m
 Ambient temperature
 -25 - +55
 Main conducting paths
 Rated impulse withstand voltage [U_{imp}]
 6000 V AC
 Overvoltage category/pollution degree
 III/3
 Rated operational voltage [U_e]
 230 - 415 V
 Rated operational current
 Open, 3-pole: 50 – 60 Hz 380 V 400 V [I_e]
 9 A
 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]
 3 W
 Rating data for approved types
 Auxiliary contacts Pilot Duty AC operated
 A600
 Auxiliary contacts Pilot Duty DC operated
 P300
 Auxiliary contacts General Use AC
 600 V
 Auxiliary contacts General Use AC
 15 A
 Auxiliary contacts General Use DC
 250 V
 Auxiliary contacts General Use DC
 1 A

Design verification as per IEC/EN 61439

Technical data for design verification
 Rated operational current for specified heat dissipation [I_r]
 9 A
 Heat dissipation per pole, current-dependent [P_{vid}]
 3 W
 Equipment heat dissipation, current-dependent [P_{vid}]
 9 W
 Static heat dissipation, non-current-dependent [P_{vs}]
 2.6 W
 Heat dissipation capacity [P_{diss}]
 0 W
 Operating ambient temperature min.
 -25 °C
 Operating ambient temperature max.
 +55 °C
 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 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 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 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 10.2.5 Lifting
 Does not apply, since the entire switchgear needs to be evaluated.
 10.2 Strength of materials and parts 10.2.6 Mechanical impact
 Does not apply, since the entire switchgear needs to be evaluated.
 10.2 Strength of materials and parts 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 Insulation properties 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

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

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

Kind of motor starter

Reversing starter

With short-circuit release

Yes

Rated control supply voltage U_s at AC 50Hz

0 - 0 V

Rated control supply voltage U_s at AC 60Hz

0 - 0 V

Rated control supply voltage U_s at DC

24 - 24 V

Voltage type for actuating

DC

Rated operation power at AC-3, 230 V, 3-phase

2.2 kW

Rated operation power at AC-3, 400 V

4 kW

Rated power, 460 V, 60 Hz, 3-phase

0 kW

Rated power, 575 V, 60 Hz, 3-phase

0 kW

Rated operation current I_e

8.5 A

Rated operation current at AC-3, 400 V

9 A

Overload release current setting

10 - 10 A

Rated conditional short-circuit current, type 1, 480 Y/277 V

0 A

Rated conditional short-circuit current, type 1, 600 Y/347 V

0 A

Rated conditional short-circuit current, type 2, 230 V

0 A

Rated conditional short-circuit current, type 2, 400 V

0 A

Number of auxiliary contacts as normally open contact

0

Number of auxiliary contacts as normally closed contact

0

Ambient temperature, upper operating limit

60 °C

Temperature compensated overload protection

Yes

Release class

CLASS 10 A

Type of electrical connection of main circuit

Screw connection

Type of electrical connection for auxiliary- and control current circuit

Screw connection

Rail mounting possible

Yes
With transformer
No
Number of command positions
0
Suitable for emergency stop
No
Coordination class according to IEC 60947-4-3
Class 1
Number of indicator lights
0
External reset possible
No
With fuse
No
Degree of protection (IP)
IP20
Degree of protection (NEMA)
Other
Supporting protocol for TCP/IP
No
Supporting protocol for PROFIBUS
No
Supporting protocol for CAN
No
Supporting protocol for INTERBUS
No
Supporting protocol for ASI
No
Supporting protocol for MODBUS
No
Supporting protocol for Data-Highway
No
Supporting protocol for DeviceNet
No
Supporting protocol for SUCONET
No
Supporting protocol for LON
No
Supporting protocol for PROFINET IO
No
Supporting protocol for PROFINET CBA
No
Supporting protocol for SERCOS
No
Supporting protocol for Foundation Fieldbus
No
Supporting protocol for EtherNet/IP
No
Supporting protocol for AS-Interface Safety at Work
No
Supporting protocol for DeviceNet Safety
No
Supporting protocol for INTERBUS-Safety
No
Supporting protocol for PROFIsafe
No
Supporting protocol for SafetyBUS p
No
Supporting protocol for other bus systems
No
Width
90 mm
Height
180 mm
Depth
95 mm

Approvals

Product Standards
UL60947-4-1A; CSA-C22.2 No. 14-10; IEC60947-4-1; CE marking
UL File No.
E123500
UL Category Control No.
NKJH
CSA File No.
12528
CSA Class No.
3211-24
North America Certification
UL listed, CSA certified
Specially designed for North America
No

Dimensions



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

CAD data

- [Product-specific CAD data](#)
(Web)
- [3D Preview](#)
(Web)

DWG files

- [DA-CD-msc_r_bg1](#)
File
(Web)

edz files

- [DA-CE-ETN.MSC-R-10-M9\(24VDC\)](#)
File
(Web)

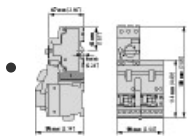
Step files

- [DA-CS-msc_r_bg1](#)
File
(Web)

Additional product information

- [Motor starters and "Special Purpose Ratings" for the North American market](#)
(PDF)
- [Busbar Component Adapters for modern Industrial control panels](#)
(PDF)

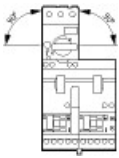
Dimensions single product



2115DIM-2

Line drawing
Reversing starters

3D drawing



2115DRW-6

Line drawing

Reversing starters, mounting position

2111004

Line drawing

Reversing starter MSC-R

Product photo

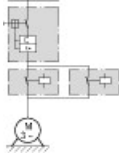


2110PIC-126

Photo

Auxiliary circuit-breakers and motor-protective circuit-breakers

Wiring diagram



121S030



Line drawing

Reversing starters

Instruction Leaflet

- [Reversing starter up to 12 A \(IL03402006Z\)](#)
Asset
(PDF, multilingual)

Standards

- 
0000SPC-571
Logo
IE3-ready logo 4c
- 
000Z153
Logo
xStart logo

Declaration of Conformity

EU

- [MSC Frame size 1 \(DA-DC-00004107\)](#)
Asset
(PDF)

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