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MSC-R-10-M9(230V50HZ)/BBA - Reversing starter, 380 V 400 V 415 V: 4 kW, Ir= 6.3 - 10 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage



102990 MSC-R-10-M9(230V50HZ)/BBA

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102990 MSC-R-10-M9(230V50HZ)/BBA

Reversing starter, 380 V 400 V 415 V: 4 kW, Ir= 6.3 - 10 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage

Alternate Catalog No.

XTSR010B009BFNL-A

EL-Nummer (Norway)

4315451

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: 230 V 50 Hz, 240 V 60 Hz, AC voltage, Standards: UL 508 (on request), CSA C 22.2 Nb. 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 [Ie]

8.5 A

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

100 kA

Setting range

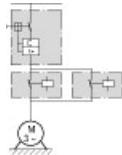
Setting range of overload releases [Ir] [A]

6.3 - 10 A

Coordination

Type of coordination "1"

Contact sequence



Actuating voltage

230 V 50 Hz, 240 V 60 Hz

AC voltage

Motor-protective circuit-breakers

PKZM0-10 Type

Contactor

DILM9-01(...) Part no.

DOL starter wiring set

Mechanical connection element and electrical electric contact module

PKZM0-XRM12 Type

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 Page

Technical data PKZM0	PKZM0
Accessories PKZ	072896
Technical data DILM	DILM
Accessories DIL	281199

Technical data

General

Standards

UL 508 (on request)

CSA C22.2 No. 14 (on request)

Altitude

Max. 2000 m

Ambient temperature

-25 - +55

Main conducting paths

Rated impulse withstand voltage [U_{imp}]

6000 V AC

Overshoot category/pollution degree

III/3

Rated operational voltage [U_a]

230 - 415 V

Rated operational currentOpen, 3-pole: 50 - 60 Hz 380 V 400 V [I_a]

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

DILM contactorsPower consumption of the coil in a cold state and 1.0 x U_s Dual-voltage coil 50 Hz [Sealing]

1.2 W

Rating data for approved types

Auxiliary contactsPilot Duty AC operated

A600

Auxiliary contactsPilot Duty DC operated

P300

Auxiliary contactsGeneral Use AC

600 V

Auxiliary contactsGeneral Use AC

15 A

Auxiliary contactsGeneral Use DC

250 V

Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_h]

9 A

Heat dissipation per pole, current-dependent [P_{id}]

2.8 W

Equipment heat dissipation, current-dependent [P_{id}]

8.4 W

Static heat dissipation, non-current-dependent [P_{s}]

1.4 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 Us at AC 50Hz

230 - 230 V

Rated control supply voltage Us at AC 60Hz

0 - 0 V

Rated control supply voltage Us at DC

0 - 0 V

Voltage type for actuating

AC

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 Ie

8.5 A

Rated operation current at AC-3, 400 V

9 A

Overload release current setting

6.3 - 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

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)

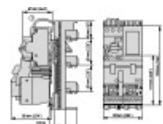
Other

Supporting protocol for TCP/IP
Nb
Supporting protocol for PROFIBUS
Nb
Supporting protocol for CAN
Nb
Supporting protocol for INTERBUS
Nb
Supporting protocol for ASI
Nb
Supporting protocol for MODBUS
Nb
Supporting protocol for Data-Highway
Nb
Supporting protocol for DeviceNet
Nb
Supporting protocol for SUCONET
Nb
Supporting protocol for LON
Nb
Supporting protocol for PROFINET IO
Nb
Supporting protocol for PROFINET CBA
Nb
Supporting protocol for SERCOS
Nb
Supporting protocol for Foundation Fieldbus
Nb
Supporting protocol for EtherNet/IP
Nb
Supporting protocol for AS-Interface Safety at Work
Nb
Supporting protocol for DeviceNet Safety
Nb
Supporting protocol for INTERBUS-Safety
Nb
Supporting protocol for PROFIsafe
Nb
Supporting protocol for SafetyBUS p
Nb
Supporting protocol for other bus systems
Nb
Width
90 mm
Height
200 mm
Depth
154 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.
3211-04
North America Certification
UL listed, CSA certified
Specially designed for North America
Nb

Dimensions



□ I = 73 mm

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

CAD data

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

DWG files

- [DA-CD-msc_r_bba_bg1](#)
File
(Web)

edz files

- [DA-CE-ETN.MSC-R-10-M9\(230V50HZ\)_BBA](#)
File
(Web)

Step files

- [DA-CS-msc_r_bba_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)

Product photo

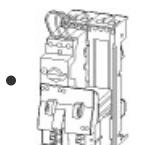


2115PC-23

Photo

Reversing starter on busbar adapter

3D drawing

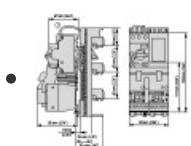


2115DRW-15

Line drawing

Reversing starter on busbar adapter

Dimensions single product



2115DIM-6

Line drawing

Reversing starter on busbar adapter

 1 = 73 mm

Standards



0000SPC-571

Logo

IE3-ready logo 4c

Wiring diagram



 121S030

Line drawing

Reversing starters

Instruction Leaflet

- Reversing starter up to 12 A (IL03402006Z)
Asset
(PDF, multilingual)
- Busbar adapter (IL03402015Z)
Asset
(PDF, multilingual)

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