

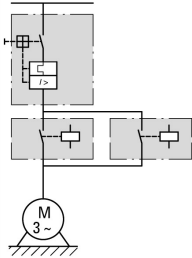




Reversing starter, 380 V 400 V 415 V: 0.37, 0.55 kW, I_r= 1 - 1.6 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage

Part no. **MSC-R-1,6-M7(230V50HZ)**
 Catalog No. **283176**
 Alternate Catalog **XTSR1P6B007BFNL**
 No.
 EL-Nummer **4365054**
 (Norway)

Delivery program

| | | | | |
|---|----------------|----|--------------|--|
| Basic function | | | | Reversing starters (complete devices) |
| Basic device | | | | MSC |
| | | | |  |
| 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 | 0.37 0.55 | |
| Rated operational current | | | | |
| AC-3 | | | | |
| 380 V 400 V 415 V | I _e | A | 1.1 1.5 | |
| Rated short-circuit current 380 - 415 V | I _q | kA | 150 | |
| Setting range | | | | |
| Setting range of overload releases | I _r | A | 1 - 1.6 | |
| | | | |  |
| Coordination | | | | Type of coordination "1" Type of coordination "2" |
| Contact sequence | | | |  |
| Actuating voltage | | | | 230 V 50 Hz, 240 V 60 Hz AC voltage |

Motor-protective circuit-breakers PKZM0-1,6
 PKZM0-1,6

Contactor DILM7-01(...)

DOL starter wiring set

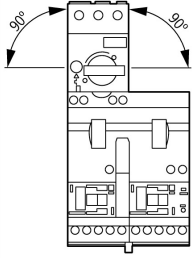
Mechanical connection element and electrical electric contact module PKZM0-XRM12

Notes

- The reversing starter (complete unit) consists of a PKZM0 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.

Technical data

General

| | | | |
|---------------------|--|---|--|
| Standards | | | UL 508 (on request) CSA C 22.2 No. 14 (on request) |
| Mounting position | | |  |
| Altitude | | m | Max. 2000 |
| Ambient temperature | | | -25 - +55 |

Main conducting paths

| | | | |
|---------------------------------------|-----------|------|-----------|
| Rated impulse withstand voltage | U_{imp} | V AC | 6000 |
| Overtoltage category/pollution degree | | | III/3 |
| Rated operational voltage | U_e | V | 230 - 415 |
| Rated operational current | | | |
| Open, 3-pole: 50 – 60 Hz | | | |
| 380 V 400 V | I_e | A | 1.6 |

Additional technical data

| | | | |
|--|---------|---|---|
| Motor protective circuit breaker PKZM0, PKE | | | PKZM0 motor-protective circuit-breakers, see motor-protective circuit-breakers/ PKZM0 product group DILM contactors, see contactor product group DILET timing relay, ETR, see contactors, electronic timing relays product group |
| DILM contactors | | | |
| Power consumption of the coil in a cold state and $1.0 \times U_S$ | | | |
| Dual-voltage coil 50 Hz | Sealing | W | 1.2 |

Rating data for approved types

| | | | |
|--------------------|--|---|------|
| Auxiliary contacts | | | |
| Pilot Duty | | | |
| AC operated | | | A600 |
| DC operated | | | P300 |
| General Use | | | |
| AC | | V | 600 |
| AC | | A | 15 |
| DC | | V | 250 |
| DC | | A | 1 |

Design verification as per IEC/EN 61439

| | | | |
|--|------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I_n | A | 1.6 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 1.9 |
| Equipment heat dissipation, current-dependent | P_{vid} | W | 5.7 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 1.4 |
| Heat dissipation capacity | P_{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 55 |
| 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 [AJZ718013])

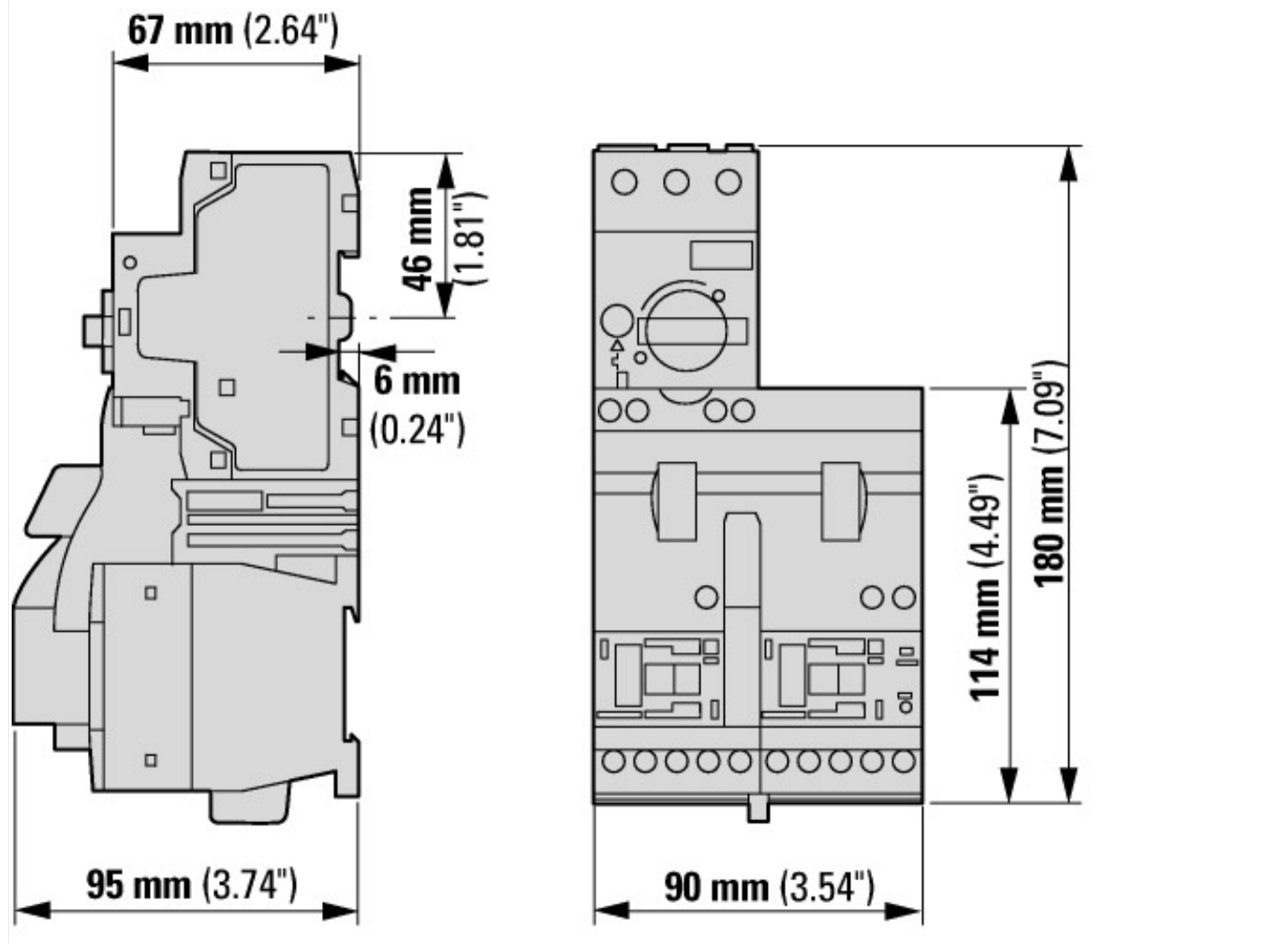
| | | |
|--|----|-------------------|
| Kind of motor starter | | Reversing starter |
| With short-circuit release | | Yes |
| Rated control supply voltage U_s at AC 50HZ | V | 230 - 230 |
| Rated control supply voltage U_s at AC 60HZ | V | 0 - 0 |
| Rated control supply voltage U_s at DC | V | 0 - 0 |
| Voltage type for actuating | | AC |
| Rated operation power at AC-3, 230 V, 3-phase | kW | 0.25 |
| Rated operation power at AC-3, 400 V | kW | 0.55 |
| Rated power, 460 V, 60 Hz, 3-phase | kW | 0 |
| Rated power, 575 V, 60 Hz, 3-phase | kW | 0 |
| Rated operation current I_e | A | 1.5 |
| Rated operation current at AC-3, 400 V | A | 1.6 |
| Overload release current setting | A | 1 - 1.6 |
| Rated conditional short-circuit current, type 1, 480 Y/277 V | A | 0 |
| Rated conditional short-circuit current, type 1, 600 Y/347 V | A | 0 |
| Rated conditional short-circuit current, type 2, 230 V | A | 50000 |
| Rated conditional short-circuit current, type 2, 400 V | A | 50000 |
| Number of auxiliary contacts as normally open contact | | 0 |
| Number of auxiliary contacts as normally closed contact | | 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 | | 0 |

| | | |
|---|----|---------|
| Suitable for emergency stop | | No |
| Coordination class according to IEC 60947-4-3 | | Class 2 |
| 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 | mm | 90 |
| Height | mm | 180 |
| Depth | mm | 95 |

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]...

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 to 12 A ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402006Z2018_04.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