

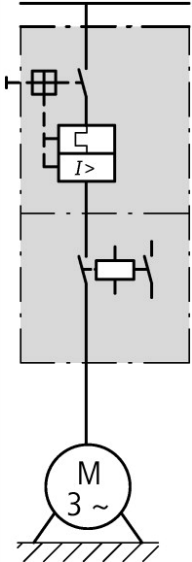




DOL starter, 3p, 4.0kW/400V/AC3, 150kA

Part no. MSC-D-10-M9(24VDC)
Catalog No. 283166
Alternate Catalog No. XTSC010B009BTDNL
EL-Nummer (Norway) 4365045

Delivery program

| | | | | |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|----------|-------------------------------------------------------------------------------------------------------------------------|
| Basic function | | | | DOL 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 | 4 | |
| Rated operational current | | | | |
| AC-3 | | | | |
| 380 V 400 V 415 V | I_e | A | 8.5 | |
| Rated short-circuit current 380 - 415 V | I_q | kA | 150 | |
| Setting range | | | | |
| Setting range of overload releases | I_r | A | 6.3 - 10 | |
| |  | | | |
| Coordination | | | | Type of coordination "1" |
| Contact sequence | | | |  |
| Actuating voltage | | | | 24 V DC DC |
| Motor-protective circuit-breakers PKZM0-10 | | | | |
| Contactor DILM9-10(...) | | | | |
| DOL starter wiring set | | | | |
| Mechanical connection element and electrical electric contact module PKZM0-XDM12 | | | | |

Notes

BK25/3-PKZ0-E extension terminal and if necessary B3.../...-PKZ0 three-phase commoning link can be added to motor-starter combinations to make Type F starters in accordance with UL508.

Notes

The DOL starters (complete units) consist of a PKZM0 motor protective circuit breaker and a DILM contactor.

With the adapter-less top-hat rail mounting of starters up to 15 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 2.5 mm external diameter or 4 conductors up to 3.5 mm external diameter.

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

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 | | | IEC/EN 60947-4-1, VDE 0660 |
| Mounting position | | | |

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 | 9 |

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 | | | |
| Current heat loss | | | |
| Current heat loss at I_e to AC-3/400 V | | W | 9 |

Power consumption

| | | | |
|-------------|---------|---|-----|
| DC operated | Sealing | W | 2.6 |
|-------------|---------|---|-----|

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 | 9 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 3 |
| Equipment heat dissipation, current-dependent | P_{vid} | W | 9 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 2.6 |
| 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

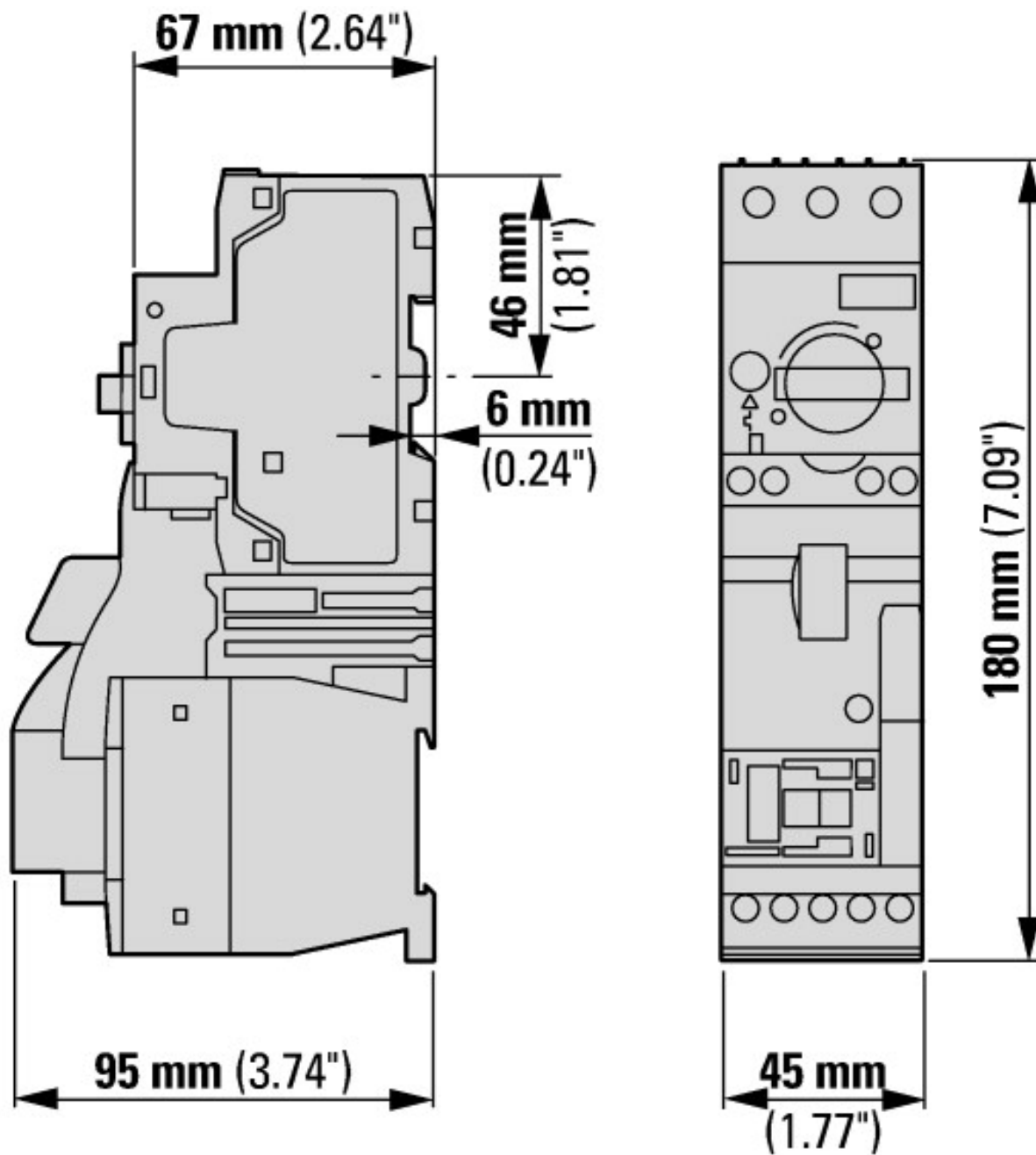
| | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|------------------|
| Low-voltage industrial components (EG000017) / Motor starter/Motor 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 | | | Direct starter |
| With short-circuit release | | | Yes |
| Rated control supply voltage Us at AC 50HZ | | V | 0 - 0 |
| Rated control supply voltage Us at AC 60HZ | | V | 0 - 0 |
| Rated control supply voltage Us at DC | | V | 24 - 24 |
| Voltage type for actuating | | | DC |
| Voltage type for actuating | | | DC |
| Rated operation power at AC-3, 230 V, 3-phase | | kW | 2.2 |
| Rated operation power at AC-3, 400 V | | kW | 4 |
| Rated power, 460 V, 60 Hz, 3-phase | | kW | 0 |
| Rated power, 575 V, 60 Hz, 3-phase | | kW | 0 |
| Rated operation current Ie | | A | 8.5 |
| Rated operation current at AC-3, 400 V | | A | 9 |
| 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, 600 V/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 |
| Number of auxiliary contacts as normally open contact | | | 1 |
| 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 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 | | mm | 45 |
| Height | | mm | 180 |
| Depth | | mm | 95 |

Approvals

| | | | |
|--------------------------------------|--|--|--------------------------------------------------------------------------|
| Product Standards | | | IEC/EN 60947-4-1; UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CE marking |
| UL File No. | | | E36332 |
| UL Category Control No. | | | NLRV |
| CSA File No. | | | 12528 |
| CSA Class No. | | | 3211-24 |
| North America Certification | | | UL listed, CSA certified |
| Specially designed for North America | | | No |

Dimensions



MSC-D-...-M7[...15]...

Assets (links)

[Declaration of CE Conformity](#)

00002885

[Instruction Leaflets](#)

IL034038ZU2018_06