

# Specifications



Photo is representative



## Eaton 167818

Eaton Moeller® series MSC-DE DOL starter,  
Ir= 0.3 - 1.2 A, 24 V DC, DC Voltage

### General specifications

|                                 |                                                                                                                                                                                                      |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PRODUCT NAME</b>             | Eaton Moeller® series<br>MSC-DE DOL starter                                                                                                                                                          |
| <b>CATALOG NUMBER</b>           | 167818                                                                                                                                                                                               |
| <b>MODEL CODE</b>               | MSC-DE-1,2-M17-<br>SP(24VDC)                                                                                                                                                                         |
| <b>EAN</b>                      | 4015081643950                                                                                                                                                                                        |
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 145 mm                                                                                                                                                                                               |
| <b>PRODUCT HEIGHT</b>           | 272 mm                                                                                                                                                                                               |
| <b>PRODUCT WIDTH</b>            | 45 mm                                                                                                                                                                                                |
| <b>PRODUCT WEIGHT</b>           | 1.274 kg                                                                                                                                                                                             |
| <b>CERTIFICATIONS</b>           | CE<br>CSA Class No.: 3211-08<br>CSA File No.: 012528<br>UL60947-4-1A<br>IEC/EN 60947-4-1<br>UL Category Control No.:<br>NKJH<br>UL File No.: E123500<br>UL<br>CSA-C22.2 No. 14-10<br>VDE 0660<br>CSA |
| <b>GLOBAL CATALOG</b>           | 167818                                                                                                                                                                                               |

## Product specifications

|                                                                                         |                                                                                                                                  |
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| <b>TYPE</b>                                                                             | Starter with electronic trip unit                                                                                                |
| <b>10.10 TEMPERATURE RISE</b>                                                           | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>                                                       | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>                                              | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>                                                        | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>                                                      | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.                                                                                       |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.                                                                                       |
| <b>10.2.5 LIFTING</b>                                                                   | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.6 MECHANICAL IMPACT</b>                                                         | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.7 INSCRIPTIONS</b>                                                              | Meets the product standard's requirements.                                                                                       |
| <b>10.3 DEGREE OF</b>                                                                   | Does not apply, since the                                                                                                        |

## Resources

|                                   |                                                                                                                                                                                                                                                       |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BROCHURES</b>                  | <a href="#">eaton-msfs-motor-starter-feeder-system-brochure-br034005en-en-us.pdf</a><br><a href="#">eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf</a>                                                                            |
| <b>CATALOGS</b>                   | <a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a><br><a href="#">Product Range Catalog Switching and protecting motors</a>                                                                                       |
| <b>DECLARATIONS OF CONFORMITY</b> | <a href="#">eaton-dol-starter-declaration-of-conformity-eu250678en.pdf</a>                                                                                                                                                                            |
| <b>DRAWINGS</b>                   | <a href="#">eaton-manual-motor-starters-msc-d-dol-starter-dimensions.eps</a><br><a href="#">eaton-manual-motor-starters-mounting-msc-d-dol-starter-3d-drawing.eps</a><br><a href="#">eaton-manual-motor-starters-msc-d-dol-starter-3d-drawing.eps</a> |
| <b>ECAD MODEL</b>                 | <a href="#">ETN.167818.edz</a>                                                                                                                                                                                                                        |
| <b>INSTALLATION INSTRUCTIONS</b>  | <a href="#">IL03402052Z</a>                                                                                                                                                                                                                           |
| <b>INSTALLATION VIDEOS</b>        | <a href="#">WIN-WIN with push-in technology</a>                                                                                                                                                                                                       |
| <b>MCAD MODEL</b>                 | <a href="#">DA-CS-msc de sp</a><br><a href="#">DA-CD-msc de sp</a>                                                                                                                                                                                    |
| <b>SALES NOTES</b>                | <a href="#">eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf</a>                                                                                                                                                                   |
| <b>WIRING DIAGRAMS</b>            | <a href="#">eaton-manual-motor-starters-device-msc-d-dol-starter-wiring-diagram.eps</a>                                                                                                                                                               |

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| <b>PROTECTION OF ASSEMBLIES</b>                                 | entire switchgear needs to be evaluated.                                                                                                                                                                                           |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                   | Meets the product standard's requirements.                                                                                                                                                                                         |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the entire switchgear needs to be evaluated.                                                                                                                                                                 |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated.                                                                                                                                                                 |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.                                                                                                                                                                                             |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.                                                                                                                                                                                             |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.                                                                                                                                                                                             |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.                                                                                                                                                                                             |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.                                                                                                                                                                                             |
| <b>FITTED WITH:</b>                                             | Short-circuit release                                                                                                                                                                                                              |
| <b>POLLUTION DEGREE</b>                                         | 3                                                                                                                                                                                                                                  |
| <b>CLASS</b>                                                    | Adjustable                                                                                                                                                                                                                         |
| <b>CONNECTION TO SMARTWIRE-DT</b>                               | No                                                                                                                                                                                                                                 |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 6000 V AC                                                                                                                                                                                                                          |
| <b>MODEL</b>                                                    | UL Type E starter                                                                                                                                                                                                                  |
| <b>ALTITUDE</b>                                                 | Max. 2000 m                                                                                                                                                                                                                        |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>               | Screw connection                                                                                                                                                                                                                   |
| <b>VOLTAGE TYPE</b>                                             | DC                                                                                                                                                                                                                                 |
| <b>MOUNTING METHOD</b>                                          | DIN rail                                                                                                                                                                                                                           |
| <b>CURRENT FLOW TIMES - MIN</b>                                 | <p>500 (Class 5) AC-4 cycle operation, Main conducting paths<br/> Note: Going below the minimum current flow time can cause overheating of the load (motor).</p> <p>700 (Class 10) AC-4 cycle operation, Main conducting paths</p> |

|                                                                                  |                                                                                                                                                                                                                                                                             |
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|                                                                                  | <p>900 (Class 15) AC-4 cycle operation, Main conducting paths</p> <p>1000 (Class 20) AC-4 cycle operation, Main conducting paths</p> <p>For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods.</p> |
| <b>OVERVOLTAGE CATEGORY</b>                                                      | III                                                                                                                                                                                                                                                                         |
| <b>CONNECTION</b>                                                                | Screw terminals                                                                                                                                                                                                                                                             |
| <b>CUT-OUT PERIODS - MIN</b>                                                     | ≤ 500 ms, main conducting paths, AC-4 cycle operation                                                                                                                                                                                                                       |
| <b>FUNCTIONS</b>                                                                 | Temperature compensated overload protection                                                                                                                                                                                                                                 |
| <b>OVERLOAD RELEASE CURRENT SETTING - MIN</b>                                    | 0.3 A                                                                                                                                                                                                                                                                       |
| <b>POWER CONSUMPTION (SEALING) AT DC</b>                                         | 0.86 W                                                                                                                                                                                                                                                                      |
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 230 V</b>               | 0 A                                                                                                                                                                                                                                                                         |
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V</b> | 0 A                                                                                                                                                                                                                                                                         |
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 480 V/277 V</b>              | 0 A                                                                                                                                                                                                                                                                         |
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 600 V/347 V</b>              | 0 A                                                                                                                                                                                                                                                                         |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>                      | 0 V                                                                                                                                                                                                                                                                         |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>                      | 0 V                                                                                                                                                                                                                                                                         |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>                      | 0 V                                                                                                                                                                                                                                                                         |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60</b>                               | 0 V                                                                                                                                                                                                                                                                         |

|                                                                      |                                                                          |
|----------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>HZ - MIN</b>                                                      |                                                                          |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>                 | 24 V                                                                     |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>                 | 24 V                                                                     |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>   | 1.2 A                                                                    |
| <b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)</b>            | 6 A, Class J/CC, max. Fuse, SCCR (UL/CSA)<br>100 kA, Fuse, SCCR (UL/CSA) |
| <b>SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)</b>          | 1 A, 250 V DC, (UL/CSA)<br>15 A, 600 V AC, (UL/CSA)                      |
| <b>SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)</b>           | A600, AC operated (UL/CSA)<br>P300, DC operated (UL/CSA)                 |
| <b>RATED OPERATIONAL CURRENT (IE)</b>                                | 16.7 A                                                                   |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 1.2 A                                                                    |
| <b>RATED OPERATIONAL VOLTAGE</b>                                     | 208 - 480 V AC                                                           |
| <b>SHORT-CIRCUIT CURRENT RATING (TYPE E)</b>                         | 14 kA, 240 V, SCCR (UL/CSA)<br>14 kA, 480 Y/277 V, SCCR (UL/CSA)         |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                           | 55 °C                                                                    |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                           | -25 °C                                                                   |
| <b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>             | 0.5 HP                                                                   |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>            | 1.2 W                                                                    |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                               | 0 W                                                                      |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>             | 0.4 W                                                                    |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>       | 0                                                                        |

|                                                                              |                    |
|------------------------------------------------------------------------------|--------------------|
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>                 | 1                  |
| <b>NUMBER OF COMMAND POSITIONS</b>                                           | 0                  |
| <b>NUMBER OF PILOT LIGHTS</b>                                                | 0                  |
| <b>OVERLOAD RELEASE CURRENT SETTING - MAX</b>                                | 1.2 A              |
| <b>RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ</b>                     | 0.18 kW            |
| <b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>                     | 7.5 kW             |
| <b>RATED POWER AT 460 V, 60 HZ, 3-PHASE</b>                                  | 0.37 kW            |
| <b>RATED POWER AT 575 V, 60 HZ, 3-PHASE</b>                                  | 0.37 kW            |
| <b>SHORT-CIRCUIT RELEASE (IRM) - MAX</b>                                     | 186 A              |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>                    | 0.86 W             |
| <b>COORDINATION CLASS (IEC 60947-4-3)</b>                                    | Class 2            |
| <b>DEGREE OF PROTECTION</b>                                                  | IP20<br>NEMA Other |
| <b>ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT</b> | Screw connection   |
| <b>ACTUATING VOLTAGE</b>                                                     | 24 V DC            |
| <b>POWER CONSUMPTION</b>                                                     | 0.9 W              |

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|-----------------|
| PROJECT NAME:   |
| PROJECT NUMBER: |
| PREPARED BY:    |
| DATE:           |



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