

# Specifications



## Eaton 121753

Eaton Moeller® series MSC-DEA DOL starter, 380 V 400 V 415 V: 0.37 kW, 100 kA, Ir: 0.3 - 1.2 A, Connection to SmartWire-DT: yes, 24 V DC, DC, Screw terminals

### General specifications

|                             |                                           |
|-----------------------------|-------------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton Moeller® series MSC-DEA DOL starter |
| <b>CATALOG NUMBER</b>       | 121753                                    |
| <b>MODEL CODE</b>           | MSC-DEA-1,2-M7(24VDC)                     |
| <b>EAN</b>                  | 4015081195633                             |
| <b>PRODUCT LENGTH/DEPTH</b> | 102 mm                                    |
| <b>PRODUCT HEIGHT</b>       | 198 mm                                    |
| <b>PRODUCT WIDTH</b>        | 45 mm                                     |
| <b>PRODUCT WEIGHT</b>       | 0.78 kg                                   |
| <b>CERTIFICATIONS</b>       | IEC/EN 60947-4-1<br>VDE 0660              |
| <b>GLOBAL CATALOG</b>       | 121753                                    |

## 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 PROTECTION OF ASSEMBLIES</b>                                          | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.4 CLEARANCES AND</b>                                                              | Meets the product                                                                                                                |

## Resources

|                                   |                                                                                                                                                                                                                                                                                                                                                  |
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| <b>BROCHURES</b>                  | <a href="#">eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf</a><br><a href="#">eaton-msfs-motor-starter-feeder-system-brochure-br034005en-en-us.pdf</a>                                                                                                                                                                       |
| <b>CATALOGS</b>                   | <a href="#">Product Range Catalog Switching and protecting motors</a><br><a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a>                                                                                                                                                                                  |
| <b>DECLARATIONS OF CONFORMITY</b> | <a href="#">eaton-dol-starter-declaration-of-conformity-eu250679en.pdf</a><br><a href="#">eaton-dol-starter-declaration-of-conformity-uk251162en.pdf</a>                                                                                                                                                                                         |
| <b>DRAWINGS</b>                   | <a href="#">eaton-manual-motor-starters-starter-msc-d-dol-starter-dimensions-002.eps</a><br><a href="#">eaton-manual-motor-starters-starter-msc-d-dol-starter-3d-drawing.eps</a><br><a href="#">eaton-manual-motor-starters-mounting-msc-d-dol-starter-3d-drawing.eps</a><br><a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a> |
| <b>ECAD MODEL</b>                 | <a href="#">ETN.121753.edz</a>                                                                                                                                                                                                                                                                                                                   |
| <b>INSTALLATION INSTRUCTIONS</b>  | <a href="#">IL034038ZU</a>                                                                                                                                                                                                                                                                                                                       |
| <b>INSTALLATION VIDEOS</b>        | <a href="#">WIN-WIN with push-in technology</a>                                                                                                                                                                                                                                                                                                  |
| <b>MCAD MODEL</b>                 | <a href="#">DA-CD-msc_de_bg1</a><br><a href="#">DA-CS-msc_de_bg1</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-msc-d-dol-starter-wiring-diagram.eps</a>                                                                                                                                                                                                                                                                 |

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| <b>CREEPAGE DISTANCES</b>                                       | 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>                               | In conjunction with PKE-SWD-32 SmartWire DT PKE module<br>Yes                                                                                                                                                                                                                                                             |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 6000 V AC                                                                                                                                                                                                                                                                                                                 |
| <b>MODEL</b>                                                    | IEC 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>                                 | 500 (Class 5) AC-4 cycle operation, Main conducting paths<br>For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods.<br>700 (Class 10) AC-4 cycle operation, Main conducting paths<br>1000 (Class 20) AC-4 cycle operation, Main conducting paths |

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|                                                                                  | Note: Going below the minimum current flow time can cause overheating of the load (motor).<br>900 (Class 15) AC-4 cycle operation, Main conducting paths |
| <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>                                         | 2.6 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> | 100 A                                                                                                                                                    |
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 480 Y/277 V</b>              | 0 A                                                                                                                                                      |
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 600 Y/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 HZ - MIN</b>                      | 0 V                                                                                                                                                      |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>                             | 24 V                                                                                                                                                     |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC -</b>                                 | 24 V                                                                                                                                                     |

|                                                                      |                                       |
|----------------------------------------------------------------------|---------------------------------------|
| <b>MIN</b>                                                           |                                       |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>   | 1.2 A                                 |
| <b>PROTOCOL</b>                                                      | Other bus systems                     |
| <b>RATED OPERATIONAL CURRENT (IE)</b>                                | 1.1 A                                 |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 1.2 A                                 |
| <b>RATED OPERATIONAL VOLTAGE</b>                                     | 230 - 415 V AC                        |
| <b>SUITABLE FOR</b>                                                  | Also motors with efficiency class IE3 |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                           | 55 °C                                 |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                           | -25 °C                                |
| <b>COORDINATION TYPE</b>                                             | 1                                     |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>            | 0.6 W                                 |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                               | 0 W                                   |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>             | 0.2 W                                 |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>       | 1                                     |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>         | 0                                     |
| <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>             | 0.37 kW                               |
| <b>RATED POWER AT 460 V, 60 HZ, 3-PHASE</b>                          | 0 kW                                  |
| <b>RATED POWER AT 575 V, 60 HZ, 3-PHASE</b>                          | 0 kW                                  |
| <b>SHORT-CIRCUIT RELEASE (IRM) - MAX</b>                             | 186 A                                 |

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| <b>STATIC HEAT<br/>DISSIPATION, NON-<br/>CURRENT-DEPENDENT<br/>PVS</b>                       | 2.6 W              |
| <b>COORDINATION CLASS<br/>(IEC 60947-4-3)</b>                                                | Class 1            |
| <b>DEGREE OF PROTECTION</b>                                                                  | IP20<br>NEMA Other |
| <b>ELECTRICAL<br/>CONNECTION TYPE FOR<br/>AUXILIARY- AND<br/>CONTROL-CURRENT<br/>CIRCUIT</b> | Screw connection   |
| <b>ACTUATING VOLTAGE</b>                                                                     | 24 V DC            |
| <b>POWER CONSUMPTION</b>                                                                     | 3 W                |

|                        |
|------------------------|
| <b>PROJECT NAME:</b>   |
| <b>PROJECT NUMBER:</b> |
| <b>PREPARED BY:</b>    |
| <b>DATE:</b>           |



**Eaton Corporation plc**  
Eaton House  
30 Pembroke Road  
Dublin 4, Ireland  
Eaton.com

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