# DATASHEET - MSC-DE-12-M17-SP(220V50HZ,240V60HZ)

**DOL starter, Ir= 3 - 12 A, 220 V 50 Hz, 240 V 60 Hz, AC voltage**

**Part no.** **MSC-DE-12-M17-SP(220V50HZ,240V60HZ)**
**167808**

| | |
|---|---|
| **General specifications** | |
| Product name | Eaton Moeller® series MSC-DE DOL starter |
| Part no. | MSC-DE-12-M17-SP(220V50HZ,240V60HZ) |
| EAN | 4015081643875 |
| Product Length/Depth | 145 millimetre |
| Product height | 272 millimetre |
| Product width | 45 millimetre |
| Product weight | 1.174 kilogram |
| Certifications | VDE 0660<br>CSA Class No.: 3211-08<br>UL60947-4-1A<br>UL File No.: E123500<br>CE<br>UL<br>CSA-C22.2 No. 14-10<br>IEC/EN 60947-4-1<br>UL Category Control No.: NKJH<br>CSA<br>CSA File No.: 012528 |
| Product Tradename | MSC-DE |
| Product Type | DOL starter |
| Product Sub Type | None |
| **Features & Functions** | |
| Fitted with: | Short-circuit release |
| Functions | Temperature compensated overload protection |
| **General information** | |
| Class | Adjustable |
| Connection | Screw terminals |
| Connection to SmartWire-DT | No |
| Current flow times - min | 700 (Class 10) AC-4 cycle operation, Main conducting paths<br>1000 (Class 20) AC-4 cycle operation, Main conducting paths<br>900 (Class 15) AC-4 cycle operation, Main conducting paths<br>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).<br>For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods. |
| Cut-out periods - min | ≤ 500 ms, main conducting paths, AC-4 cycle operation |
| Degree of protection | NEMA Other<br>IP20 |
| Model | UL Type E starter |
| Mounting method | DIN rail |
| Number of auxiliary contacts (normally closed contacts) | 0 |
| Number of auxiliary contacts (normally open contacts) | 1 |
| Overload release current setting - min | 3 A |
| Overload release current setting - max | 12 A |
| Overvoltage category | III |
| Pollution degree | 3 |
| Rated impulse withstand voltage (Uimp) | 6000 V AC |
| Type | Starter with electronic trip unit |
| Voltage type | AC |
| **Climatic environmental conditions** | |
| Altitude | Max. 2000 m |
| Ambient operating temperature - min | -25 °C |
| Ambient operating temperature - max | 55 °C |

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| **Electrical rating** | |
| Rated operational current (Ie) | 16.7 A |
| Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V | 12 A |
| Rated operational power at AC-3, 220/230 V, 50 Hz | 3 kW |
| Rated operational power at AC-3, 380/400 V, 50 Hz | 7.5 kW |
| Rated operational voltage | 208 - 600 V AC |
| Switching capacity (auxiliary contacts, general use) | 15 A, 600 V AC, (UL/CSA)<br>1 A, 250 V DC, (UL/CSA) |
| Switching capacity (auxiliary contacts, pilot duty) | A600, AC operated (UL/CSA)<br>P300, DC operated (UL/CSA) |
| **Short-circuit rating** | |
| Rated conditional short-circuit current (Iq), type 2, 380 V, 400 V, 415 V | 0 A |
| Short-circuit current rating (basic rating) | 60 A, max. CB, SCCR (UL/CSA)<br>5 kA, SCCR (UL/CSA)<br>60 A, max. Fuse, SCCR (UL/CSA) |
| Short-circuit current rating (high fault at 480 V) | 35 A, Class J/CC, max. Fuse, SCCR (UL/CSA)<br>25 A, max. CB, SCCR (UL/CSA)<br>65 kA, CB, SCCR (UL/CSA)<br>100 kA, Fuse, SCCR (UL/CSA) |
| Short-circuit current rating (high fault at 600 V) | 35 A, Class J/CC, max. Fuse, SCCR (UL/CSA)<br>100 kA, Fuse, SCCR (UL/CSA) |
| Short-circuit current rating (type E) | 18 kA, 240 V, SCCR (UL/CSA)<br>18 kA, 480 Y/277 V, SCCR (UL/CSA) |
| Short-circuit release (Irm) - max | 186 A |
| **Magnet system** | |
| Power consumption, sealing, 50 Hz | 2.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz |
| Rated control supply voltage (Us) at AC, 50 Hz - min | 220 V |
| Rated control supply voltage (Us) at AC, 50 Hz - max | 220 V |
| Rated control supply voltage (Us) at AC, 60 Hz - min | 240 V |
| Rated control supply voltage (Us) at AC, 60 Hz - max | 240 V |
| Rated control supply voltage (Us) at DC - min | 0 V |
| Rated control supply voltage (Us) at DC - max | 0 V |
| **Motor rating** | |
| Assigned motor power at 200/208 V, 60 Hz, 3-phase | 3 HP |
| Assigned motor power at 230/240 V, 60 Hz, 3-phase | 3 HP |
| Assigned motor power at 460/480 V, 60 Hz, 3-phase | 7.5 HP |
| **Design verification** | |
| Equipment heat dissipation, current-dependent Pvid | 4.2 W |
| Heat dissipation capacity Pdiss | 0 W |
| Heat dissipation per pole, current-dependent Pvid | 1.4 W |
| Rated operational current for specified heat dissipation (In) | 12 A |
| Static heat dissipation, non-current-dependent Pvs | 2.1 W |
| 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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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. |
| 10.9.2 Power-frequency electric strength | Is the panel builder's responsibility. |
| 10.9.3 Impulse withstand voltage | Is the panel builder's responsibility. |

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| 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 9.0

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@ss13-27-37-09-05 [AJZ718018])

| | | | |
|---|---|---|---|
| Type of motor starter | | | Direct online starter (DOL) |
| With short-circuit release | | | Yes |
| Rated control supply voltage AC 50 Hz | | V | 220 - 220 |
| Rated control supply voltage AC 60 Hz | | V | 240 - 240 |
| Rated control supply voltage DC | | V | 0 - 0 |
| Voltage type for actuating | | | AC |
| Rated operation power at AC-3, 230 V, 3-phase | | kW | 3 |
| Rated operation power at AC-3, 400 V | | kW | 7.5 |
| Rated power, 460 V, 60 Hz, 3-phase | | kW | 5.52 |
| Rated power, 575 V, 60 Hz, 3-phase | | kW | 0 |
| Rated operation current Ie | | A | 16.7 |
| Rated operation current at AC-3, 400 V | | A | 12 |
| Overload release current setting | | A | 3 - 12 |
| 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 | 0 |
| Rated conditional short-circuit current, type 2, 400 V | | A | 0 |
| Power consumption | | W | 2.1 |
| Number of auxiliary contacts as normally open contact | | | 1 |
| Number of auxiliary contacts as normally closed contact | | | 0 |
| Ambient temperature, upper operating limit | | °C | 55 |
| Temperature compensated overload protection | | | Yes |
| Release class | | | Adjustable |
| Type of electrical connection of main circuit | | | Screw connection |
| Type of electrical connection for auxiliary- and control current circuit | | | Screw connection |
| Rail mounting possible | | | No |
| 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 |

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| 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 | 272 |
| Depth | | mm | 145 |


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