## DATASHEET - MSC-D-4-M7(230V50HZ)/BBA

DOL starter, 380 V 400 V 415 V: 1.1, 1.5 kW, Ir= 2.5 - 4 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage



| Part no.              | MSC-D-4-M7(230V50HZ)/BBA<br>102953 |
|-----------------------|------------------------------------|
| EL Number<br>(Norway) | 4315414                            |

| Product name  | Eaton Moeller® series MSC-D DOL starter   |
|---|---|
| Part no.  | MSC-D-4-M7(230V50HZ)/BBA  |
| EAN   | 4015081027927   |
| Product Length/Depth                                    | 154 millimetre  |
| Product height  | 200 millimetre  |
| Product width   | 45 millimetre   |
| Product weight  | 0.875 kilogram  |
| Certifications  | CSA-C22.2 No. 14 (on request)<br>UL Category Control No.: NKJH<br>CSA Class No.: 3211-04<br>UL60947-4-1A<br>CSA-C22.2 No. 14-10<br>IEC/EN 60947-4-1<br>UL 508 (on request)<br>CE<br>CSA<br>UL<br>CSA File No.: 012528<br>UL File No.: E123500 |
| Product Tradename                                       | MSC-D   |
| Product Type  | DOL starter   |
| Product Sub Type  | None  |
| Catalog Notes   | IE3-ready devices are identified by the logo on their packaging.  |
|   |   |
| Fitted with:  | Short-circuit release   |
| Functions   | Temperature compensated overload protection   |
|   |   |
| Class   | CLASS 10  |
| Connection  | Screw terminals   |
| Connection to SmartWire-DT                              | No  |
| Coordination type                                       | 2   |
| Degree of protection                                    | IP20<br>NEMA Other  |
| Model   | Direct starter  |
| Mounting method   | Rail mounting possible  |
| Number of auxiliary contacts (normally closed contacts) | 0   |
| Number of auxiliary contacts (normally open contacts)   | 1   |
| Overload release current setting - min                  | 2.5 A   |
| Overload release current setting - max                  | 4 A   |
| Overvoltage category                                    | III   |
| Pollution degree  | 3   |
| Rated impulse withstand voltage (Uimp)                  | 6000 V AC   |
| Suitable for  | Also motors with efficiency class IE3   |
| Туре  | DOL starter (complete device)   |
| Voltage type  | AC  |
|   |   |
| Altitude  | Max. 2000 m   |
| Ambient operating temperature - min                     | -25 °C  |
| Ambient operating temperature - max                     | 55 °C   |
|   |   |
| Rated operational current (le)                          | 3.6 A   |

| Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V                      | 4 A  |
|--|--|
| Rated operational power at AC-3, 220/230 V, 50 Hz                                | 0.75 kW  |
| Rated operational power at AC-3, 380/400 V, 50 Hz                                | 1.5 kW   |
| Rated operational voltage  | 230 - 415 V AC   |
| Switching capacity (auxiliary contacts, general use)                             | 1 A, 250 V DC, (UL/CSA)<br>15 A, 600 V AC, (UL/CSA)  |
| Switching capacity (auxiliary contacts, pilot duty)                              | A600, AC operated (UL/CSA)<br>P300, DC operated (UL/CSA)   |
| Rated conditional short-circuit current (Iq), type 2, 380 V, 400 V, 415 V        | 50000 A  |
| Short-circuit current rating (basic rating)                                      | 15 A, max. CB, SCCR (UL/CSA)<br>5 kA, SCCR (UL/CSA)<br>35 A, max. Fuse, SCCR (UL/CSA)  |
| Short-circuit release (Irm) - max  | 62 A   |
|  |  |
| Power consumption, sealing, 50 Hz  | 1.2 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                             | 230 V  |
| Rated control supply voltage (Us) at AC, 50 Hz - max                             | 230 V  |
| Rated control supply voltage (Us) at AC, 60 Hz - min                             | 0 V  |
| Rated control supply voltage (Us) at AC, 60 Hz - max                             | 0 V  |
| Rated control supply voltage (Us) at DC - min                                    | 0 V  |
| Rated control supply voltage (Us) at DC - max                                    | 0 V  |
| Equipment heat dissipation, current-dependent Pvid                               | 6 W  |
| Heat dissipation capacity Pdiss  | 0 W  |
| Heat dissipation per pole, current-dependent Pvid                                | 2 W  |
| Rated operational current for specified heat dissipation (In)                    | 4 A  |
| Static heat dissipation, non-current-dependent Pvs                               | 1.4 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.   |
| 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 8.0**

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])

Type of motor starter

Direct online starter (DOL)

| With short-circuit release   |    | Yes              |
|--|----|------------------|
| Rated control supply voltage Us at AC 50HZ                               | V  | 230 - 230        |
| Rated control supply voltage Us at AC 60HZ                               | V  | 0 - 0            |
| Rated control supply voltage Us at DC                                    | V  | 0 - 0            |
| Voltage type for actuating   |    | AC               |
| Rated operation power at AC-3, 230 V, 3-phase                            | kW | 0.75             |
| Rated operation power at AC-3, 400 V                                     | kW | 1.5              |
| Rated power, 460 V, 60 Hz, 3-phase                                       | kW | 0                |
| Rated power, 575 V, 60 Hz, 3-phase                                       | kW | 0                |
| Rated operation current le   | A  | 3.6              |
| Rated operation current at AC-3, 400 V                                   | A  | 4                |
| Overload release current setting   | A  | 2.5 - 4          |
| 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  | 50,000           |
| Rated conditional short-circuit current, type 2, 400 V                   | A  | 50,000           |
| 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  |    | 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 Modhus   |    | 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 PB0FINET IO                                      |    | No               |
| Supporting protocol for PBOFINET CBA                                     |    | No               |
| Supporting protocol for SERCOS   |    | No               |
| Supporting protocol for Foundation Fieldhus                              |    | No               |
| Supporting protocol for EtherNet/IP                                      |    | No               |
| Supporting protocol for AS-Interface Safety at Work                      |    | Νο               |
| Supporting protocol for DeviceNet Safety                                 |    | No               |
| Supporting protocol for INTERBIJS-Safety                                 |    | No               |
| Supporting protocol for PROFIsafe  |    | No               |
| Supporting protocol for SafetyBIIS n                                     |    | No               |
| Supporting protocol for other bus systems                                |    | No               |
| Width  | mm | 45               |

| Height | mm | 200 |
|--------|----|-----|
| Depth  | mm | 154 |