DATASHEET - MSC-DE-12-M17-SP(24VDC)

DOL starter, Ir= 3 - 12 A, 24 V DC, DC Voltage

Part no. **MSC-DE-12-M17-SP(24VDC)**
167820

General specifications	
Product name	Eaton Moeller® series MSC-DE DOL starter
Part no.	MSC-DE-12-M17-SP(24VDC)
EAN	4015081643974
Product Length/Depth	145 millimetre
Product height	272 millimetre
Product width	45 millimetre
Product weight	1.274 kilogram
Certifications	VDE 0660 CSA Class No.: 3211-08 CSA-C22.2 No. 14-10 UL Category Control No.: NKJH UL60947-4-1A UL CSA CSA File No.: 012528 IEC/EN 60947-4-1 CE UL File No.: E123500
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 500 (Class 5) AC-4 cycle operation, Main conducting paths 1000 (Class 20) AC-4 cycle operation, Main conducting paths 900 (Class 15) AC-4 cycle operation, Main conducting paths For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods. Note: Going below the minimum current flow time can cause overheating of the load (motor).
Cut-out periods - min	≤ 500 ms, main conducting paths, AC-4 cycle operation
Degree of protection	NEMA Other 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	DC
Climatic environmental conditions	
Altitude	Max. 2000 m
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	55 °C

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)	1 A, 250 V DC, (UL/CSA) 15 A, 600 V AC, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)	A600, AC operated (UL/CSA) 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)	200 A, max. Fuse, SCCR (UL/CSA) 150 A, max. CB, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
Short-circuit current rating (high fault at 480 V)	75 A, max. CB, SCCR (UL/CSA) 100 A, Class J, max. Fuse, SCCR (UL/CSA) 100 kA, Fuse, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA)
Short-circuit current rating (high fault at 600 V)	110 A, Class J/CC, max. Fuse, SCCR (UL/CSA) 100 kA, Fuse, SCCR (UL/CSA)
Short-circuit current rating (type E)	18 kA, 480 Y/277 V, SCCR (UL/CSA) 18 kA, 240 V, SCCR (UL/CSA)
Short-circuit release (Irm) - max	186 A
Magnet system	
Power consumption (sealing) at DC	0.86 W
Rated control supply voltage (Us) at AC, 50 Hz - min	0 V
Rated control supply voltage (Us) at AC, 50 Hz - max	0 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	24 V
Rated control supply voltage (Us) at DC - max	24 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	0.86 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 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	0 - 0
Rated control supply voltage AC 60 Hz		V	0 - 0
Rated control supply voltage DC		V	24 - 24
Voltage type for actuating			DC
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	0.9
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

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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