

# Specifications



## Eaton 121745

Eaton Moeller® series MSC-DE DOL starter, 380 V 400 V 415 V: 5.5 kW, I<sub>q</sub>= 100 kA, I<sub>r</sub>= 3 - 12 A, 230 V 50 Hz, 240 V 60 Hz, AC voltage, Screw terminals MSC-DE-12-M17(230V50HZ)

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller® series MSC-DE DOL starter
<b>CATALOG NUMBER</b>	121745
<b>MODEL CODE</b>	MSC-DE-12-M17(230V50HZ)
<b>EAN</b>	4015081195558
<b>PRODUCT LENGTH/DEPTH</b>	128 mm
<b>PRODUCT HEIGHT</b>	242 mm
<b>PRODUCT WIDTH</b>	45 mm
<b>PRODUCT WEIGHT</b>	1 kg
<b>CERTIFICATIONS</b>	IEC/EN 60947-4-1 VDE 0660
<b>GLOBAL CATALOG</b>	121745



Powering Business Worldwide

## Product specifications

<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

<b>BROCHURES</b>	<a href="#">eaton-msfs-motor-starter-feeder-system-brochure-br034005en-en-us.pdf</a> <a href="#">eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf</a>
<b>CATALOGS</b>	<a href="#">Product Range Catalog Switching and protecting motors</a> <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-uk251161en.pdf</a> <a href="#">eaton-dol-starter-declaration-of-conformity-eu250678en.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-manual-motor-starters-dol-starter-msc-d-dimensions.eps</a> <a href="#">eaton-manual-motor-starters-dol-starter-msc-d-3d-drawing-002.eps</a> <a href="#">eaton-manual-motor-starters-mounting-msc-d-dol-starter-3d-drawing.eps</a> <a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a>
<b>ECAD MODEL</b>	<a href="#">ETN.121745.edz</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">IL03402010Z</a>
<b>INSTALLATION VIDEOS</b>	<a href="#">WIN-WIN with push-in technology</a>
<b>MCAD MODEL</b>	<a href="#">DA-CD-msc_de_bg2</a> <a href="#">DA-CS-msc_de_bg2</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>

<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>	No
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6000 V AC
<b>MODEL</b>	IEC starter
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>VOLTAGE TYPE</b>	AC
<b>MOUNTING METHOD</b>	DIN rail
<b>CURRENT FLOW TIMES - MIN</b>	<p>500 (Class 5) AC-4 cycle operation, Main conducting paths</p> <p>1000 (Class 20) AC-4 cycle operation, Main conducting paths</p> <p>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> <p>900 (Class 15) AC-4 cycle operation, Main conducting paths</p> <p>For all combinations with an SWD activation, you</p>

	need not adhere to the minimum current flow times and minimum cut-out periods.
<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>	3 A
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), 500 V</b>	50 A
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 230 V</b>	100000 A
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V</b>	100000 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>	230 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	230 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>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3,</b>	12 A

<b>380 V, 400 V, 415 V</b>	
<b>POWER CONSUMPTION, SEALING, 50 HZ</b>	2.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
<b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)</b>	100 kA, Fuse, SCCR (UL/CSA) 60 A, Class J, max. Fuse, SCCR (UL/CSA)
<b>RATED OPERATIONAL CURRENT (IE)</b>	11.3 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V</b>	9 A
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	12 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>	2
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	4.2 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	1.4 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>	12 A
<b>RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ</b>	3 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	5.5 kW

<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	5.5 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
<b>STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT PVS</b>	2.1 W
<b>COORDINATION CLASS (IEC 60947-4-3)</b>	Class 2
<b>DEGREE OF PROTECTION</b>	IP20 NEMA Other
<b>ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT</b>	Screw connection
<b>ACTUATING VOLTAGE</b>	230 V 50 Hz 240 V 60 Hz
<b>POWER CONSUMPTION</b>	2.1 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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