

Specifications



Eaton 121756

Eaton Moeller® series MSC-DEA DOL starter,
380 V 400 V 415 V: 4 kW, 100 kA, Ir: 3 - 12 A,
Connection to SmartWire-DT: yes, 24 V DC,
DC

General specifications

PRODUCT NAME	Eaton Moeller® series MSC-DEA DOL starter
CATALOG NUMBER	121756
EAN	4015081195664
MODEL CODE	MSC-DEA-12-M9(24VDC)
PRODUCT LENGTH/DEPTH	102 mm
PRODUCT HEIGHT	198 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.78 kg
CERTIFICATIONS	IEC/EN 60947-4-1 VDE 0660

Features & Functions

FITTED WITH:	Short-circuit release
FUNCTIONS	Temperature compensated overload protection

General

CLASS	Adjustable
CONNECTION	Screw terminals
CONNECTION TO SMARTWIRE-DT	In conjunction with PKE-SWD-32 SmartWire DT PKE module Yes
COORDINATION TYPE	1
CURRENT FLOW TIMES - MIN	1000 (Class 20) 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. 500 (Class 5) AC-4 cycle operation, Main conducting paths 700 (Class 10) AC-4 cycle operation, Main conducting paths 900 (Class 15) AC-4 cycle operation, Main conducting paths 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	IP20 NEMA Other
MODEL	IEC starter
MOUNTING METHOD	DIN rail
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	1
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
OVERLOAD RELEASE CURRENT SETTING - MIN	3 A
OVERLOAD RELEASE CURRENT SETTING - MAX	12 A
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PROTOCOL	Other bus systems

Climatic environmental conditions

ALTITUDE Max. 2000 m

AMBIENT OPERATING TEMPERATURE - MIN -25 °C

AMBIENT OPERATING TEMPERATURE - MAX 55 °C

Short-circuit rating

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V 100 A

SHORT-CIRCUIT RELEASE (IRM) - MAX 186 A

RATED IMPULSE WITHSTAND VOLTAGE (UIMP) 6000 V AC

SUITABLE FOR Also motors with efficiency class IE3

TYPE Starter with electronic trip unit

VOLTAGE TYPE DC

Electrical rating

RATED OPERATIONAL CURRENT (IE) 8.5 A

RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V 9 A

RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ 2.2 kW

RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ 4 kW

RATED OPERATIONAL VOLTAGE 230 - 415 V AC

Magnet system

POWER CONSUMPTION (SEALING) AT DC 2.6 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

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	2.2 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.7 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	9 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	2.6 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.

Resources

BROCHURES	eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf
	eaton-msfs-motor-starter-feeder-system-brochure-br034005en-en-us.pdf
CATALOGS	Product Range Catalog Switching and protecting motors
	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-dol-starter-declaration-of-conformity-uk251162en.pdf
	eaton-dol-starter-declaration-of-conformity-eu250679en.pdf
DRAWINGS	eaton-manual-motor-starters-starter-msc-d-dol-starter-dimensions-002.eps
	eaton-manual-motor-starters-starter-msc-d-dol-starter-3d-drawing.eps
	eaton-manual-motor-starters-mounting-msc-d-dol-starter-3d-drawing.eps
	eaton-general-ie-ready-dilm-contactor-standards.eps
ECAD MODEL	ETN.121756.edz
INSTALLATION INSTRUCTIONS	IL034038ZU
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CD-msc_de_bg1
	DA-CS-msc_de_bg1
SALES NOTES	eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf
WIRING DIAGRAMS	eaton-manual-motor-starters-msc-d-dol-starter-wiring-diagram.eps

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.

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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

Follow us on social media to get the latest product and support information.

