

Specifications



Eaton 102990

Eaton Moeller® series MSC-R Reversing starter, 380 V 400 V 415 V: 4 kW, $I_r = 6.3 - 10$ A, 230 V 50 Hz, 240 V 60 Hz, AC voltage MSC-R-10-M9(230V50HZ)/BBA

General specifications

PRODUCT NAME	Eaton Moeller® series MSC-R Reversing starter
CATALOG NUMBER	102990
MODEL CODE	MSC-R-10-M9(230V50HZ)/BBA
EAN	4015081028290
PRODUCT LENGTH/DEPTH	200 mm
PRODUCT HEIGHT	153 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	1.56 kg
CERTIFICATIONS	UL60947-4-1A CSA CSA Class No.: 3211-04 UL CE IEC/EN 60947-4-1 UL File No.: E123500 CSA File No.: 012528 UL 508 (on request) CSA-C22.2 No. 14 (on request) CSA-C22.2 No. 14-10 UL Category Control No.: NKJH

Climatic environmental conditions

ALTITUDE	Max. 2000 m
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C

Design verification

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.
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	Does not apply, since the

AGAINST ELECTRIC SHOCK	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.
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	8.4 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	2.8 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	9 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1.4 W

Electrical rating

RATED OPERATIONAL CURRENT (IE)	8.5 A
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RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	9 A
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RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ	2.2 kW
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RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	4 kW
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RATED OPERATIONAL VOLTAGE	230 - 415 V AC
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SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	15 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)
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SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
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Features & functions

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

CLASS	CLASS 10 A
CONNECTION	Screw terminals
CONNECTION TO SMARTWIRE-DT	No
COORDINATION TYPE	1
DEGREE OF PROTECTION	IP20 NEMA Other
MODEL	IEC/UL starter
MOUNTING METHOD	Mounting on Busbar 60 mm
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
OVERLOAD RELEASE CURRENT SETTING - MAX	10 A
OVERLOAD RELEASE CURRENT SETTING - MIN	6.3 A
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
SUITABLE FOR	Also motors with efficiency class IE3
TYPE	Starter with Bi-Metal release
VOLTAGE TYPE	AC

Short-circuit rating

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V	100 A
SHORT-CIRCUIT RELEASE (IRM) - MAX	155 A

Magnet system

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 - MAX	230 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	230 V

Resources

BROCHURES	eaton-msfs-motor-starter-feeder-system-brochure-br034005en-en-us.pdf
	eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf
CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-reversing-starter-declaration-of-conformity-eu250675en.pdf

	eaton-reversing-starter-declaration-of-conformity-uk251158en.pdf
DRAWINGS	eaton-manual-motor-starters-busbar-msc-r-reversing-starter-dimensions-002.eps eaton-general-ie-ready-dilm-contactor-standards.eps
ECAD MODEL	ETN.102990.edz
INSTALLATION INSTRUCTIONS	eaton-reversing-starter-up-to-12a-il03402006z.pdf IL03402015Z
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CS-msc r bba bg1 eaton-motor-starter-mcad-drawings-msc-r-bba-bg1.dwg
SALES NOTES	eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf
WIRING DIAGRAMS	eaton-manual-motor-starters-starter-msc-r-reversing-starter-wiring-diagram.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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