Specifications







Eaton 170391

Eaton Moeller series xEffect - FRCmM Type AC, A, U, R RCCB. Residual current circuit breaker (RCCB), 25A, 2p, 30mA, type AC

General specifications	
PRODUCT NAME	Eaton Moeller series xEffect - FRCmM Type AC, A, U, R RCCB
CATALOG NUMBER	170391
MODEL CODE	FRCMM-25/2/003
EAN	4015081668816
PRODUCT LENGTH/DEPTH	76 mm
PRODUCT HEIGHT	80 mm
PRODUCT WIDTH	35 mm
PRODUCT WEIGHT	0.187 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 61008 EN45545-2 IEC 61373
GLOBAL CATALOG	170391
PRODUCT TYPE	RCCB

Powering Business Worldwide

Product specifications

USED WITH	FRCmM Type AC Residual current circuit breakers
AMPERAGE RATING	25 A
FEATURES	Additional equipment possible Residual current circuit breaker
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

Resources

BROCHURES	eaton-pdd-railrolling-stock-brochure-br011002en-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-rccb-declaration-of-conformity-eu250057en.pdf eaton-rccb-declaration-of-conformity-uk251420en.pdf
DRAWINGS	eaton-circuit-breaker-xeffect-frcmm-na-rccb-dimensions.eps
ECAD MODEL	ETN.FRCMM-25_2_003.edz
INSTALLATION INSTRUCTIONS	eaton-mcb-rccb-rcbo-g9-il019140zu.pdf
MCAD MODEL	eaton-residual-current-circuit-breakers-3d-models-frcmm-2p.stp eaton-residual-current-circuit-breakers-3d-models-f9-ul1053-2p.stp
PEP ECO-PASSPORT	eaton-residual-current-circuit-breakers-pep-eato-00111-v0101-en.pdf
WIRING DIAGRAMS	eaton-circuit-breaker-xeffect-frcmm-rccb-wiring-diagram.eps

	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.
FITTED WITH:	Interlocking device
FRAME	45 mm
FREQUENCY RATING	50 Hz
POLLUTION DEGREE	2
LIFESPAN, MECHANICAL	20000 operations
MOUNTING METHOD	Quick attachment with 2 latch positions for DIN-rail IEC/EN 60715 DIN rail
CLIMATIC PROOFING	25-55 °C / 90-95% relative humidity according to IEC 60068-2
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	2 W
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	10 kA
ADMISSIBLE BACK-UP FUSE OVERLOAD - MAX	25 A gG/gL
BUILT-IN WIDTH	35 mm (2 SU)

(NUMBER OF UNITS)	
BUSBAR MATERIAL THICKNESS	0.8 mm - 2 mm
SHORT-CIRCUIT RATING	63 A (max. admissible back-up fuse)
STATUS INDICATION	White / blue
TERMINAL PROTECTION	Finger and hand touch safe, DGUV VS3, EN 50274
TERMINALS (TOP AND BOTTOM)	Twin-purpose terminals
TEST CIRCUIT RANGE	184 V AC - 250 V AC
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
BUILT-IN DEPTH	70.5 mm
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	16 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	1.5 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	35 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1.5 mm²
FAULT CURRENT RATING	30 mA
HEAT DISSIPATION CAPACITY	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	0 W
PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MAX	60 °C
PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MIN	-35 °C
CONTACT POSITION INDICATOR COLOR	Red / green
MOUNTING POSITION	As required
DEGREE OF PROTECTION	IP20, IP40 with suitable enclosure IP20
IMPULSE WITHSTAND	250 A (8/20 µs) surge-

CURRENT	proof Partly surge-proof 250 A
NUMBER OF POLES	Two-pole
LEAKAGE CURRENT TYPE	AC
LIFESPAN, ELECTRICAL	4000 operations
TYPE	• FRCmM • Residual current circuit breakers • Type AC
SPECIAL FEATURES	• Current test marks as per inscription • Maximum operating temperature is 55 °C: Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C
APPLICATION	• Switchgear for industrial and advanced commercial applications • xEffect - Switchgear for industrial and advanced commercial applications
SENSITIVITY TYPE	AC current sensitive
TERMINAL CAPACITY (CABLE)	M5 (with cross-recessed screw as defined in EN ISO 4757-Z2, PZ2)
RATED FAULT CURRENT - MAX	0.03 A
RATED FAULT CURRENT - MIN	0.03 A
RATED INSULATION VOLTAGE (UI)	440 V
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	25 A
RATED OPERATIONAL VOLTAGE (UE) - MAX	240 V
RATED RESIDUAL MAKING AND BREAKING CAPACITY	500 A
STATIC HEAT	0 W

DISSIPATION, NON-CURRENT-DEPENDENT	
SURGE CURRENT CAPACITY	0.25 kA
WIDTH IN NUMBER OF MODULAR SPACINGS	2
VOLTAGE RATING (IEC/EN 60947-2)	240 V AC
VOLTAGE TYPE	AC
TERMINAL CAPACITY (SOLID WIRE)	1.5 mm² - 35 mm²
TRIPPING TIME	Non-delayed
RATED SHORT-CIRCUIT STRENGTH	10 kA with back-up fuse
TIGHTENING TORQUE	2 Nm - 2.4 Nm
TERMINAL CAPACITY (STRANDED CABLE)	16 mm² (2x)
RAL-NUMBER	7035
COLOR	Gray

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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