

Eaton 171180

Eaton Moeller series xEffect - FRCmM-125
Type A RCCB. Residual current circuit
breaker (RCCB), 125A, 4p, 300mA, type G/A

PRODUCT NAME	Eaton Moeller series xEffect - FRCmM-125 Type A RCCB
CATALOG NUMBER	171180
PRODUCT LENGTH/DEPTH	76 mm
PRODUCT HEIGHT	80 mm
PRODUCT WIDTH	70 mm
PRODUCT WEIGHT	0.41 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 61008 ÖVE E 8601

USED WITH	FRCmM-125 Residual current circuit breakers Type G/A (ÖVE E 8601)
AMPERAGE RATING	125 A
FEATURES	Residual current circuit breaker Additional equipment possible
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.

MCAD MODEL	eaton-residual-current-circuit-breakers-drawings-dfs-4.dwg
	eaton-residual-current-circuit-breakers-3d-models-dfs-4.stp
	eaton-frcm-wiring-diagram.jpg
	eaton-xeffect-frcmm-125-rccb-catalog-ca003020en-en-us.pdf
	eaton-frcm-dimensions.jpg

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.
FITTED WITH:	Interlocking device
FRAME	45 mm
FREQUENCY RATING	50 Hz
POLLUTION DEGREE	2
MOUNTING METHOD	Quick attachment for DIN-rail EN 50022 DIN rail
CLIMATIC PROOFING	25-55 °C / 90-95% relative humidity according to IEC 60068-2
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	22.5 W
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	10 kA

ADMISSIBLE BACK-UP FUSE OVERLOAD - MAX	80 A gG/gL
BUILT-IN WIDTH (NUMBER OF UNITS)	70 mm (4 SU)
BUSBAR MATERIAL THICKNESS	0.8 mm - 2 mm
SHORT-CIRCUIT RATING	125 A (max. admissible back-up fuse)
STATUS INDICATION	Toggle-center position
TERMINAL PROTECTION	Finger and hand touch safe, DGUV VS3, EN 50274
TERMINALS (TOP AND BOTTOM)	Twin-purpose terminals
TEST CIRCUIT RANGE	184 V AC - 440 V AC
AMBIENT OPERATING TEMPERATURE - MAX	60 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
BUILT-IN DEPTH	70.5 mm
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	16 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	1.5 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	50 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1.5 mm ²
FAULT CURRENT RATING	300 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	-25 °C
CONTACT POSITION	Red / green

INDICATOR COLOR	
MOUNTING POSITION	As required
LIFESPAN, MECHANICAL	10000 operations
DEGREE OF PROTECTION	IP20, IP40 with suitable enclosure IP20
IMPULSE WITHSTAND CURRENT	3 kA (8/20 µs) surge-proof
NUMBER OF POLES	Four-pole
LEAKAGE CURRENT TYPE	A
LIFESPAN, ELECTRICAL	4000 operations
TYPE	• FRCmM-125 • Residual current circuit breakers • Type G/A (ÖVE E 8601)
SPECIAL FEATURES	• Current test marks as per inscription • Maximum operating temperature is 60 °C: Starting at 40 °C, the max. permissible continuous current decreases by 2.2% for every 1 °C
APPLICATION	• Switchgear for industrial and advanced commercial applications • xEffect - Switchgear for industrial and advanced commercial applications
FUNCTIONS	Short-time delayed tripping
SENSITIVITY TYPE	Pulse-current sensitive
RATED FAULT CURRENT - MAX	0.3 A
RATED FAULT CURRENT - MIN	0.3 A
RATED INSULATION VOLTAGE (UI)	440 V

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	125 A
RATED OPERATIONAL VOLTAGE (UE) - MAX	415 V
RATED RESIDUAL MAKING AND BREAKING CAPACITY	1250 A
STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT	0 W
SURGE CURRENT CAPACITY	3 kA
WIDTH IN NUMBER OF MODULAR SPACINGS	4
VOLTAGE RATING (IEC/EN 60947-2)	240 V AC / 415 V AC
VOLTAGE TYPE	AC
TERMINAL CAPACITY (SOLID WIRE)	1.5 mm ² - 16 mm ² (2x) 1.5 mm ² - 50 mm ²
TRIPPING TIME	10 ms delayed Short time-delayed
RATED SHORT-CIRCUIT STRENGTH	10 kA with back-up fuse
TERMINAL CAPACITY (STRANDED CABLE)	1.5 mm ² - 5 mm ² 1.5 mm ² - 16 mm ² (2x)
RAL-NUMBER	7035
COLOR	Gray

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

:



Eaton House
30 Pembroke Road
Dublin 4,
Eaton.com

© 2025

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

