## Eaton 170749

Eaton Moeller series xEffect - FRBm6/M RCBO - residual-current circuit breaker with overcurrent protection. RCD/MCB, 6A, 100mA, MCB trip type D, 3p, RCCB trip type: A

PRODUCT NAME	Eaton Moeller series xEffect - FRBm6/M RCBO - residual-current circuit breaker with overcurrent protection
CATALOG NUMBER	170749
PRODUCT LENGTH/DEPTH	80 mm
PRODUCT HEIGHT	75.5 mm
PRODUCT WIDTH	70 mm
PRODUCT WEIGHT	0.39 kg
COMPLIANCES	CE Marked RoHS conform
CERTIFICATIONS	CE EN45545-2 IEC 61373



AMPERAGE RATING6 AVOLTAGE RATING415 V - 415 VSURGE CURRENT CAPACITY0.25 kAVOLTAGE TYPEACWIDTH IN NUMBER OF MODULAR SPACINGS410.10 TEMPERATURE RISEThe panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.10.11 SHORT-CIRCUIT RATINGIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.12 ELECTROMAGNETIC COMPATIBILITYIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.13 MECHANICAL FUNCTIONThe device meets the requirements, provided the information in the instruction leaflet (IL) is observed.10.2.2 CORROSION RESISTANCEMeets the product standard's requirements.10.2.3.1 VERIFICATION OF THERMAL STABILITY OF INSULATING MATERIALS TO NORMAL HEATMeets the product standard's requirements.10.2.3.2 VERIFICATION OF RESISTANCE OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTSMeets the product standard's requirements.10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATIONMeets the product standard's requirements.10.2.5 LIFTINGDoes not apply, since the entire switchgear needs to be evaluated.10.2.6 MECHANICALDoes not apply, since the entire switchgear needs to be evaluated.		
SURGE CURRENT CAPACITY  VOLTAGE TYPE  AC  WIDTH IN NUMBER OF MODULAR SPACINGS  10.10 TEMPERATURE RISE  10.11 SHORT-CIRCUIT RATING  10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  Does not apply, since the entire switchgear needs to be evaluated.	AMPERAGE RATING	6 A
CAPACITY  VOLTAGE TYPE  AC  WIDTH IN NUMBER OF MODULAR SPACINGS  10.10 TEMPERATURE RISE  10.11 SHORT-CIRCUIT RATING  10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE 10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSULATING MATERIALS TO NORMAL HEAT  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  Does not apply, since the entire switchgear needs to be evaluated.	VOLTAGE RATING	415 V - 415 V
WIDTH IN NUMBER OF MODULAR SPACINGS       4         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 ENCLOSURES       Meets the product standard's requirements.         10.2.3.2 VERIFICATION 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.		0.25 kA
The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. Is the panel builder's responsibility. The specifications for the switchgear must be observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed.    10.13 MECHANICAL   The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.    10.2.2 CORROSION   Meets the product standard's requirements.     10.2.3.1 VERIFICATION OF ENCLOSURES   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   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.	VOLTAGE TYPE	AC
10.10 TEMPERATURE RISE  10.11 SHORT-CIRCUIT RATING  10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RISSITANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSULATING MATERIALS TO NORMAL HEAT  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  10.20 LIFTING  10.10 TEMPERATURE RISE  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  In device meets the requirements, provided the information in the instruction leaflet (IL) is observed.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.		4
responsibility. The specifications for the switchgear must be observed.  10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  PISS the panel builder's responsibility. The switchgear must be observed.  Is the panel builder's responsibility. The switchgear must be observed.  Is the panel builder's responsibility. The switchgear needs to be evaluated.	10.10 TEMPERATURE RISE	responsible for the temperature rise calculation. Eaton will provide heat dissipation
10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.		responsibility. The specifications for the switchgear must be
10.13 MECHANICAL FUNCTION  requirements, provided the information in the instruction leaflet (IL) is observed.  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  Meets the product standard's requirements.		responsibility. The specifications for the switchgear must be
RESISTANCEstandard's requirements.10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURESMeets the product standard's requirements.10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEATMeets the product standard's requirements.10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTSMeets the product standard's requirements.10.2.4 RESISTANCE TO 		requirements, provided the information in the instruction leaflet (IL) is
THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  Meets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.		
RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.	THERMAL STABILITY OF	-
INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  Does not apply, since the entire switchgear needs to be evaluated.	RESISTANCE OF INSULATING MATERIALS	•
ULTRA-VIOLET (UV) RADIATION  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.	INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT.	-
<b>10.2.5 LIFTING</b> entire switchgear needs to be evaluated.	ULTRA-VIOLET (UV)	•
<b>10.2.6 MECHANICAL</b> Does not apply, since the	10.2.5 LIFTING	entire switchgear needs to
	10.2.6 MECHANICAL	Does not apply, since the

DECLARATIONS OF CONFORMITY	DA-DC-03 FRBM-3
	xEffect FR RCCB FAZ%20MCB.pdf
	eaton-xeffect-frbm6-rcbo-catalog- ca003015en-en-us.pdf
	eaton-xeffect-frbm6m-3d-drawing-012.jpg
	eaton-xeffect-frbm6m- dimensions-003.jpg
	eaton-xeffect-frbm6m-wiring- diagram-004.jpg
	eaton-xeffect-frbm6m-3d-drawing-015.jpg
	eaton-xeffect-frbm6m- characteristic-curve.jpg

MADACT	
IMPACT	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	ls the panel builder's responsibility.
10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH	ls the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	ls the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	ls the panel builder's responsibility.
OPERATING AMBIENT TEMPERATURE - MAX	40 °C
OPERATING AMBIENT TEMPERATURE - MIN	-25 °C
PRODUCT RANGE	FRBmM
RATED CURRENT	6 A
RATED FAULT CURRENTS OF PRODUCT RANGE	10, 30, 100, 300 MilliAmpere
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	6 A
RATED SWITCHING CAPACITY (IEC/EN 61009)	10 kA
STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT	0 W
TRIPPING CHARACTERISTIC	D
BUILT-IN DEPTH	75.5 mm
CURRENT LIMITING	3

CLASS	
RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60947-2)	15 kA
AMBIENT OPERATING TEMPERATURE - MAX	40 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
FAULT CURRENT RATING	0.1 A
HEAT DISSIPATION CAPACITY	0 W
HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT	0 W
NUMBER OF POLES (PROTECTED)	3
NUMBER OF POLES (TOTAL)	3
RATED OPERATIONAL VOLTAGE (UE) - MAX	415 V
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)	15 kA
RATED SWITCHING CAPACITY	10 kA
BASIC FUNCTION	Combined RCD/MCB devices
MOUNTING METHOD	DIN rail
EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT	4 W
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
DEGREE OF PROTECTION	IP20
OPERATING AMBIENT TEMPERATURE HINT	Keep in mind the derating at temperatures higher than 40 °C
TRIPPING	Non-delayed
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	2
IMPULSE WITHSTAND CURRENT	Partly surge-proof, 250 A
LEAKAGE CURRENT TYPE	A
RELEASE CHARACTERISTIC	D

SENSITIVITY TYPE	Pulse-current sensitive
FREQUENCY RATING	50 Hz
RATED INSULATION VOLTAGE (UI)	500 V
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	25 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	1 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	25 mm²
RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009)	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009-1)	10 kA
NUMBER OF POLES	Three-pole
DISCONNECTION CHARACTERISTIC	Undelayed
ТҮРЕ	RCBO
APPLICATION	Switchgear for industrial and advanced commercial applications

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
:	



Eaton House 30 Pembroke Road Dublin 4, Eaton.com Follow us on social media to get the latest product and support information.









