

## Eaton 170706

Eaton Moeller series xEffect - FRBm6/M  
RCBO - residual-current circuit breaker with  
overcurrent protection. RCD/MCB, 20A,  
30mA, MCB trip type B, 1-phase+N, RCCB  
trip type: A, G

<b>PRODUCT NAME</b>	Eaton Moeller series xEffect - FRBm6/M RCBO - residual-current circuit breaker with overcurrent protection
<b>CATALOG NUMBER</b>	170706
<b>PRODUCT LENGTH/DEPTH</b>	80 mm
<b>PRODUCT HEIGHT</b>	75 mm
<b>PRODUCT WIDTH</b>	35 mm
<b>PRODUCT WEIGHT</b>	0.193 kg
<b>COMPLIANCES</b>	CE Marked RoHS conform
<b>CERTIFICATIONS</b>	CE EN45545-2 IEC 61373

<b>VOLTAGE RATING</b>	240 V - 240 V
<b>SURGE CURRENT CAPACITY</b>	0.25 kA
<b>VOLTAGE TYPE</b>	AC
<b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>	2
<b>FEATURES</b>	Concurrently switching N-neutral
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.

<a href="#">xEffect FR RCCB FAZ%20MCB.pdf</a>
<a href="#">eaton-xeffect-frbm6-rcbo-catalog-ca003015en-en-us.pdf</a>
<a href="#">eaton-xeffect-frbm6m-dimensions.jpg</a>
<a href="#">eaton-xeffect-frbm6m-wiring-diagram.jpg</a>
<a href="#">eaton-xeffect-frbm6m-3d-drawing-005.jpg</a>
<a href="#">eaton-xeffect-frbm6m-characteristic-curve.jpg</a>

<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>OPERATING AMBIENT TEMPERATURE - MAX</b>	40 °C
<b>OPERATING AMBIENT TEMPERATURE - MIN</b>	-25 °C
<b>PRODUCT RANGE</b>	FRBmM
<b>RATED CURRENT</b>	20 A
<b>RATED FAULT CURRENTS OF PRODUCT RANGE</b>	10, 30, 100, 300 MilliAmpere
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	20 A
<b>RATED SWITCHING CAPACITY (IEC/EN 61009)</b>	10 kA
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT</b>	0 W
<b>TRIPPING CHARACTERISTIC</b>	B
<b>BUILT-IN DEPTH</b>	75.5 mm

<b>CURRENT LIMITING CLASS</b>	3
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60947-2)</b>	15 kA
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>FAULT CURRENT RATING</b>	0.03 A
<b>HEAT DISSIPATION CAPACITY</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT</b>	0 W
<b>NUMBER OF POLES (PROTECTED)</b>	1
<b>NUMBER OF POLES (TOTAL)</b>	2
<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	240 V
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)</b>	15 kA
<b>RATED SWITCHING CAPACITY</b>	10 kA
<b>BASIC FUNCTION</b>	Combined RCD/MCB devices
<b>MOUNTING METHOD</b>	DIN rail
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>	5.4 W
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	4 kV
<b>DEGREE OF PROTECTION</b>	IP20
<b>OPERATING AMBIENT TEMPERATURE HINT</b>	Keep in mind the derating at temperatures higher than 40 °C
<b>TRIPPING</b>	Non-delayed
<b>OVERVOLTAGE CATEGORY</b>	III
<b>POLLUTION DEGREE</b>	2
<b>IMPULSE WITHSTAND CURRENT</b>	Partly surge-proof, 250 A
<b>LEAKAGE CURRENT TYPE</b>	A
<b>RELEASE</b>	B

CHARACTERISTIC	
SENSITIVITY TYPE	Pulse-current sensitive
FREQUENCY RATING	50 Hz
RATED INSULATION VOLTAGE (UI)	500 V
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1 mm <sup>2</sup>
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	25 mm <sup>2</sup>
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	1 mm <sup>2</sup>
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	25 mm <sup>2</sup>
RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009)	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009-1)	10 kA
NUMBER OF POLES	Single-pole + N
DISCONNECTION CHARACTERISTIC	Undelayed
TYPE	RCBO
APPLICATION	Switchgear for industrial and advanced commercial applications

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

:



Eaton House  
30 Pembroke Road  
Dublin 4,  
Eaton.com

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