

## 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

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

<b>AMPERAGE RATING</b>	6 A
<b>VOLTAGE RATING</b>	415 V - 415 V
<b>SURGE CURRENT CAPACITY</b>	0.25 kA
<b>VOLTAGE TYPE</b>	AC
<b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>	4
<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.
<b>10.2.6 MECHANICAL</b>	Does not apply, since the

<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">DA-DC-03 FRBM-3</a>
	<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-3d-drawing-012.jpg</a>
	<a href="#">eaton-xeffect-frbm6m-dimensions-003.jpg</a>
	<a href="#">eaton-xeffect-frbm6m-wiring-diagram-004.jpg</a>
	<a href="#">eaton-xeffect-frbm6m-3d-drawing-015.jpg</a>
	<a href="#">eaton-xeffect-frbm6m-characteristic-curve.jpg</a>

<b>IMPACT</b>	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>	6 A
<b>RATED FAULT CURRENTS OF PRODUCT RANGE</b>	10, 30, 100, 300 MilliAmpere
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	6 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>	D
<b>BUILT-IN DEPTH</b>	75.5 mm
<b>CURRENT LIMITING</b>	3

<b>CLASS</b>	
<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>	0.1 A
<b>HEAT DISSIPATION CAPACITY</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT</b>	0 W
<b>NUMBER OF POLES (PROTECTED)</b>	3
<b>NUMBER OF POLES (TOTAL)</b>	3
<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	415 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>	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 CHARACTERISTIC</b>	D

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

<b>PROJECT NAME:</b>
<b>PROJECT NUMBER:</b>
<b>PREPARED BY:</b>
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