

## Eaton 167699

Eaton Moeller series xEffect - FRCmM-NA  
RCCB. Residual current circuit breaker  
(RCCB), 25A, 4p, 30mA, type A, UL, 110V

<b>PRODUCT NAME</b>	Eaton Moeller series xEffect - FRCmM-NA RCCB
<b>CATALOG NUMBER</b>	167699
<b>PRODUCT LENGTH/DEPTH</b>	76 mm
<b>PRODUCT HEIGHT</b>	80 mm
<b>PRODUCT WIDTH</b>	35 mm
<b>PRODUCT WEIGHT</b>	0.32 kg
<b>COMPLIANCES</b>	RoHS conform
<b>CERTIFICATIONS</b>	UL 1053 ÖVE E 8601 IEC/EN 61008 EN45545-2 IEC 61373
<b>CATALOG NOTES</b>	Protects against special forms of residual pulsating DC which have not been smoothed.

<b>USED WITH</b>	FRCmM-NA-110
	Residual current circuit breakers Type A
<b>AMPERAGE RATING</b>	25 A
<b>FEATURES</b>	Residual current circuit breaker Additional equipment possible
<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 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>FITTED WITH:</b>	Interlocking device
<b>FRAME</b>	45 mm
<b>FREQUENCY RATING</b>	50 Hz / 60 Hz
<b>POLLUTION DEGREE</b>	2
<b>MOUNTING METHOD</b>	Quick attachment with 2 latch positions for DIN-rail IEC/EN 60715 DIN rail
<b>CLIMATIC PROOFING</b>	25-55 °C / 90-95% relative humidity according to IEC 60068-2
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>	3.1 W
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	4 kV
<b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>	10 kA

<b>ADMISSIBLE BACK-UP FUSE OVERLOAD - MAX</b>	25 A gG/gL
<b>AMBIENT HUMIDITY RANGE</b>	5 - 95 %
<b>BUILT-IN WIDTH (NUMBER OF UNITS)</b>	70 mm (4 SU)
<b>SHORT-CIRCUIT RATING</b>	Max. admissible back-up fuse: 63 A gG/gL, 70 A class J fuse (UL)
<b>STATUS INDICATION</b>	White / blue
<b>TERMINAL PROTECTION</b>	Finger and hand touch safe, DGUV VS3, EN 50274
<b>TERMINALS (TOP AND BOTTOM)</b>	Lift terminals
<b>TEST CIRCUIT RANGE</b>	100 V AC - 210 V AC, 94 V AC - 132 V AC (UL)
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>BUILT-IN DEPTH</b>	70.5 mm
<b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX</b>	16 mm <sup>2</sup>
<b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN</b>	1.5 mm <sup>2</sup>
<b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX</b>	35 mm <sup>2</sup>
<b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN</b>	1.5 mm <sup>2</sup>
<b>FAULT CURRENT RATING</b>	30 mA
<b>HEAT DISSIPATION CAPACITY</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT</b>	0.775 W
<b>OVERVOLTAGE TESTED - MAX</b>	530 V
<b>PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MAX</b>	60 °C

<b>PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MIN</b>	-35 °C
<b>CONTACT POSITION INDICATOR COLOR</b>	Red / green
<b>MOUNTING POSITION</b>	As required
<b>LIFESPAN, MECHANICAL</b>	10000 operations
<b>DEGREE OF PROTECTION</b>	IP20 IP20, IP40 with suitable enclosure
<b>IMPULSE WITHSTAND CURRENT</b>	Partly surge-proof 250 A 250 A (8/20 µs) surge-proof
<b>NUMBER OF POLES</b>	Four-pole
<b>LEAKAGE CURRENT TYPE</b>	A
<b>LIFESPAN, ELECTRICAL</b>	4000 operations

<b>TYPE</b>	<ul style="list-style-type: none"> <li>• FRCmM-NA-110</li> <li>• Residual current circuit breakers</li> <li>• Type A</li> </ul>
-------------	---

<b>SPECIAL FEATURES</b>	<ul style="list-style-type: none"> <li>• Current test marks as per inscription</li> <li>• Maximum operating temperature is 55 °C: Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C</li> <li>• The maximum operating current of back-up fuse must not exceed the residual current circuit breaker's rated operational current</li> </ul>
-------------------------	--

<b>APPLICATION</b>	Switchgear for 110-V systems
<b>PICK-UP CURRENT</b>	22 mA
<b>SENSITIVITY TYPE</b>	Pulse-current sensitive
<b>TERMINAL CAPACITY (CABLE)</b>	M5 (with cross-recessed screw as defined in EN ISO 4757-Z2, PZ2)
<b>RATED FAULT CURRENT - MAX</b>	0.03 A

<b>RATED FAULT CURRENT - MIN</b>	0.03 A
<b>RATED INSULATION VOLTAGE (UI)</b>	440 V
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	25 A
<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	190 V
<b>RATED RESIDUAL MAKING AND BREAKING CAPACITY</b>	500 A
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT</b>	0 W
<b>SURGE CURRENT CAPACITY</b>	0.25 kA
<b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>	4
<b>VOLTAGE RATING (IEC/EN 60947-2)</b>	110/190 V
<b>VOLTAGE RATING (UL)</b>	208/120 V, 60 Hz
<b>VOLTAGE TYPE</b>	AC
<b>TERMINAL CAPACITY (SOLID WIRE)</b>	1.5 mm <sup>2</sup> - 35 mm <sup>2</sup>
<b>TRIPPING TIME</b>	Non-delayed
<b>RATED SHORT-CIRCUIT STRENGTH</b>	10 kA with back-up fuse 5 kA (UL, as per CSA)
<b>TERMINAL CAPACITY (STRANDED CABLE)</b>	16 mm <sup>2</sup> (2x)
<b>RAL-NUMBER</b>	7035
<b>COLOR</b>	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.

