

Residual current circuit breaker (RCCB), 125A, 4p, 300mA, type A



**Part no.** FRCMM-125/4/03-A  
**171176**  
**EL Number** 1666597  
**(Norway)**

General specifications		
Product name		Eaton Moeller series xEffect - FRCmM-125 Type A RCCB
Part no.		FRCMM-125/4/03-A
EAN		4015081676620
Product Length/Depth		85 millimetre
Product height		75.5 millimetre
Product width		72 millimetre
Product weight		0.41 kilogram
Compliances		RoHS conform
Certifications		IEC/EN 61008
Product Tradename		xEffect - FRCmM-125 Type A
Product Type		RCCB
Product Sub Type		None
Delivery program		
Application		Switchgear for industrial and advanced commercial applications xEffect - Switchgear for industrial and advanced commercial applications
Number of poles		Four-pole
Tripping time		Non-delayed
Amperage Rating		125 A
Rated short-circuit strength		10 kA with back-up fuse
Fault current rating		300 mA
Sensitivity type		Pulse-current sensitive
Impulse withstand current		250 A (8/20 µs) surge-proof Partly surge-proof 250 A
Type		FRCmM-125 Residual current circuit breakers Type A
Technical Data - Electrical		
Voltage rating (IEC/EN 60947-2)		240 V AC / 415 V AC
Rated operational voltage (Ue) - max		415 V
Rated insulation voltage (Ui)		440 V
Rated impulse withstand voltage (Uimp)		4 kV
Rated fault current - min		0.3 A
Rated fault current - max		0.3 A
Frequency rating		50 Hz
Short-circuit rating		125 A (max. admissible back-up fuse)
Leakage current type		A
Rated residual making and breaking capacity		1250 A
Admissible back-up fuse overload - max		80 A gG/gL
Rated short-time withstand current (Icw)		10 kA
Surge current capacity		0.25 kA
Test circuit range		184 V AC - 440 V AC
Pollution degree		2
Lifespan, electrical		4000 operations
Technical Data - Mechanical		
Frame		45 mm
Width in number of modular spacings		4
Built-in width (number of units)		70 mm (4 SU)
Built-in depth		70.5 mm

Mounting Method		Quick attachment for DIN-rail EN 50022 DIN rail
Mounting position		As required
Degree of protection		IP20, IP40 with suitable enclosure IP20
Status indication		Toggle-center position
Terminals (top and bottom)		Twin-purpose terminals
Terminal capacity (solid wire)		1.5 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) 1.5 mm <sup>2</sup> - 50 mm <sup>2</sup>
Connectable conductor cross section (solid-core) - min		1.5 mm <sup>2</sup>
Connectable conductor cross section (solid-core) - max		50 mm <sup>2</sup>
Terminal capacity (stranded cable)		1.5 mm <sup>2</sup> - 5 mm <sup>2</sup> 1.5 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x)
Connectable conductor cross section (multi-wired) - min		1.5 mm <sup>2</sup>
Connectable conductor cross section (multi-wired) - max		16 mm <sup>2</sup>
Terminal protection		Finger and hand touch safe, DGUV VS3, EN 50274
Contact position indicator color		Red / green
Busbar material thickness		0.8 mm - 2 mm
Lifespan, mechanical		10000 operations
Permitted storage and transport temperature - min		-25 °C
Permitted storage and transport temperature - max		60 °C
Climatic proofing		25-55 °C / 90-95% relative humidity according to IEC 60068-2
<b>Design verification as per IEC/EN 61439 - technical data</b>		
Rated operational current for specified heat dissipation (In)		125 A
Heat dissipation per pole, current-dependent		0 W
Equipment heat dissipation, current-dependent		22.5 W
Static heat dissipation, non-current-dependent		0 W
Heat dissipation capacity		0 W
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		60 °C
<b>Design verification as per IEC/EN 61439</b>		
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.
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.
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.
<b>Additional information</b>		
Features		Additional equipment possible

		Residual current circuit breaker
Fitted with:		Interlocking device
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
Used with		Type A FRcM-125 Residual current circuit breakers

## Technical data ETIM 9.0

Circuit breakers and fuses (EG000020) / Residual current circuit breaker (RCCB) (EC000003)		
Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB) (ec@ss13-27-14-22-01 [AAB906019])		
Number of poles		4
Rated voltage	V	415
Rated current	A	125
Rated fault current	A	0.3
Rated insulation voltage Ui	V	440
Rated impulse withstand voltage Uimp	kV	4
Power loss	W	
Mounting method		DIN rail
Leakage current type		A
Selective protection		No
Short-time delayed tripping		No
Short-circuit breaking capacity (Icw)	kA	10
Surge current capacity	kA	0.25
Voltage type		AC
With interlocking device		Yes
Frequency		50 Hz
Additional equipment possible		Yes
Degree of protection (IP)		IP20
Width in number of modular spacings		4
Built-in depth	mm	70.5
Ambient temperature during operating	°C	-25 - 60
Pollution degree		2
Connectable conductor cross section multi-wired	mm <sup>2</sup>	1.5 - 16
Connectable conductor cross section solid-core	mm <sup>2</sup>	1.5 - 50
RAL-number (similar)		7035
Explosion-proof		No