

Residual current circuit-breaker FRCmM, 4 Pole, Rated current In: 40 A, Rated short-circuit strength Icn: 10 with back-up fuse kA, Rated fault current IΔN: 0.3 A, Switchgear for industrial and advanced commercial applications

**Part no. FRCMM-40/4/03-S/A-RT
305110**

Product name	Eaton Moeller series xEffect - FRCmM-NA RCCB
Part no.	FRCMM-40/4/03-S/A-RT
EAN	9010238213821
Product Length/Depth	80 millimetre
Product height	76 millimetre
Product width	70 millimetre
Product weight	0.32 kilogram
Compliances	RoHS conform
Certifications	IEC/EN 61008 EN45545-2 IEC 61373
Product Tradename	xEffect - FRCmM-NA
Product Type	RCCB
Product Sub Type	None
Globally Marketable	Yes
Application	xEffect - Switchgear for industrial and advanced commercial applications Switchgear for industrial and advanced commercial applications
Number of poles	Four-pole
Amperage Rating	40 A
Rated short-circuit strength	10 kA with back-up fuse
Fault current rating	300 mA
Sensitivity type	Pulse-current sensitive
Impulse withstand current	5 kA (8/20 μs) surge-proof
Type	FRCmM Residual current circuit breakers Type A
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 (1.2/50 μs) 4 kV
Rated fault current - min	0.3 A
Rated fault current - max	0.3 A
Frequency rating	50 Hz / 60 Hz
Short-circuit rating	63 A (max. admissible back-up fuse)
Leakage current type	A
Rated residual making and breaking capacity	500 A
Admissible back-up fuse overload - max	40 A gG/gL
Rated short-time withstand current (Icw)	10 kA
Surge current capacity	5 kA
Test circuit range	196 V AC - 456 V AC
Pollution degree	2
Lifespan, electrical	4000 operations
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 with 2 latch positions for DIN-rail IEC/EN 60715 DIN rail
Mounting position		As required
Degree of protection		IP20, IP40 with suitable enclosure IP20
Status indication		White / blue
Terminals (top and bottom)		Twin-purpose terminals
Terminal capacity (solid wire)		1.5 mm ² - 35 mm ²
Connectable conductor cross section (solid-core) - min		1.5 mm ²
Connectable conductor cross section (solid-core) - max		35 mm ²
Terminal capacity (stranded cable)		16 mm ² (2x)
Connectable conductor cross section (multi-wired) - min		1.5 mm ²
Connectable conductor cross section (multi-wired) - max		16 mm ²
Terminal capacity (cable)		M5 (with cross-recessed screw as defined in EN ISO 4757-Z2, PZ2)
Terminal protection		Finger and hand touch safe, DGUV VS3, EN 50274
Contact position indicator color		Red / green
Tightening torque		2 Nm - 2.4 Nm
Busbar material thickness		0.8 mm - 2 mm
Lifespan, mechanical		20000 operations
Permitted storage and transport temperature - min		-35 °C
Permitted storage and transport temperature - max		60 °C
Climatic proofing		25-55 °C / 90-95% relative humidity according to IEC 60068-2
Rated operational current for specified heat dissipation (In)		40 A
Heat dissipation per pole, current-dependent		3.28 W
Equipment heat dissipation, current-dependent		8.8 W
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		75 °C
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.

Technical data ETIM 8.0

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)
(ec1@ss10.0.1-27-14-22-01 [AAB906014])

Number of poles		4
Rated voltage	V	415
Rated current	A	40
Rated fault current	A	0.3
Rated insulation voltage U_i	V	440
Rated impulse withstand voltage U_{imp}	kV	4
Mounting method		DIN rail
Leakage current type		A
Selective protection		No
Short-time delayed tripping		No
Short-circuit breaking capacity (I_{cw})	kA	10
Surge current capacity	kA	5
Voltage type		AC
With interlocking device		No
Frequency		50/60 Hz
Additional equipment possible		No
Degree of protection (IP)		IP20
Width in number of modular spacings		4
Built-in depth	mm	70.5
Ambient temperature during operating	°C	-25 - 75
Pollution degree		2
Connectable conductor cross section multi-wired	mm ²	1.5 - 16
Connectable conductor cross section solid-core	mm ²	1.5 - 35
Explosion-proof		No