DATASHEET - FRCMM-125/4/003-G/A

Residual current circuit breaker (RCCB), 125A, 4p, 30mA, type G/A

Part no.	**FRCMM-125/4/003-G/A**
Catalog No.	**171178**
Alternate Catalog No.	**FRCMM-125/4/003-G/A**
EL-Nummer (Norway)	**1666599**

Similar to illustration

Delivery program

Basic function			Residual current circuit-breakers
Number of poles			4 pole
Application			Switchgear for industrial and advanced commercial applications
Rated current	I_n	A	125
Rated short-circuit strength	I_{cn}	kA	10 with back-up fuse
Rated fault current	$I_{\Delta N}$	A	0.03
Type			Type G/A (ÖVE E 8601)
Tripping		s...	Short time-delayed
Product range			FRCmM-125
Sensitivity			Pulse-current sensitive
Impulse withstand current			Surge-proof, 3 kA
Contact sequence			

Technical data

Electrical

Types conform to			IEC/EN 61008
Current test marks			As per inscription
Tripping		s...	10 ms delayed
Rated voltage according to IEC/EN 60947-2	U_n	V AC	240/415
Rated frequency	f	Hz	50
Limit values of the operating voltage			
Test circuit		V AC	185 - 440
Rated fault current	$I_{\Delta n}$	mA	30
Sensitivity			Pulse-current sensitive
Rated insulation voltage	U_i	V	440
Rated impulse withstand voltage	U_{imp}	kV	4 (1.2/50µs)
Rated short-circuit strength	I_{cn}	kA	10 with back-up fuse
Impulse withstand current			3 kA (8/20 µs) surge-proof
Max. admissible back-up fuse			
Short-circuit	gG/gL	A	125
Overload	gG/gL	A	80
Rated making and breaking capacity / Rated residual making and breaking capacity	$I_m / I_{\Delta m}$	A	1250
lifespan			
Electrical	Operations		≥ 4000
Mechanical	Operations		≥ 10000

Mechanical

Standard front dimension		mm	45

Device height		mm	80
Built-in width		mm	70 (4TE)
Mounting			Quick attachment for DIN-rail EN 50022
Degree of Protection			IP20, IP40 with suitable enclosure
Terminals top and bottom			Twin-purpose terminals
Terminal protection			Busbar tag shroud to BGV A3, ÖVE-EN 6
Terminal cross-section			
Solid		mm^2	1.5 - 50 2 x (1.5 - 16)
Stranded		mm^2	1.5 - 50 2 x (1.5 - 16)
Thickness of busbar material		mm	0.8 - 2
Admissible ambient temperature range		°C	-25 - +40
Permissible storage and transport temperatures		°C	-25 - +60
Climatic proofing			25-55°C/90-95% relative humidity according to IEC 60068-2
Mounting position			As required
Contact position indicator			red / green
Trip indication			toggle-center postition

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	125
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	22.5
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60
			Starting at 40 °C, the max. permissible continuous current decreases by 2.2% for every 1 °C
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties			
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 7.0

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

Number of poles		4
Rated voltage	V	415
Rated current	A	125
Rated fault current	mA	30
Rated insulation voltage Ui	V	440
Rated impulse withstand voltage Uimp	kV	4
Mounting method		DIN rail
Leakage current type		A
Selective protection		No
Short-time delayed tripping		Yes
Short-circuit breaking capacity (Icw)	kA	10
Surge current capacity	kA	3
Frequency		50 Hz
Additional equipment possible		Yes
With interlocking device		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 - 40
Pollution degree		2
Connectable conductor cross section multi-wired	mm²	1.5 - 16
Connectable conductor cross section solid-core	mm²	1.5 - 50

Dimensions