

Digital residual current circuit-breaker, 25A, 4p, 30mA, type G/B+

Powering Business Worldwide*

Part no. FRCDM-25/4/003-G/B+
Article no. 167880
Catalog No. FRCDM-25/4/003-G/B.

Similar to illustration

Delivery programme

/ F - 3			
Basic function			Residual current circuit breakers , digital
Pole			4 pole
Application			Switchgear for industrial and commercial applications
Rated current	In	Α	25
Rated short-circuit strength	I _{cn}	kA	10 with back-up fuse
Rated fault current	$I_{\Delta N}$	Α	0.03
Туре			Type G/B+ (ÖVE E 8601)
Tripping		Α	Short time-delayed
Product range			FRCdM
Sensitivity			All current sensitive
Impulse withstand current			Surge-proof, 3 kA
Contact sequence			1 3 5 N 3 N 3 N 3 N 3 N 3 N 3 N 3 N 3

Technical data

Electrical

File of the presence of the p	Lieutical			
sipping A 10 ms delayed ated operating voltage VAC 24/415 ated frequency f Hz 50 mit values of the operating voltage VAC 50 - 456 electronic VAC 50 - 456 Test circuit VAC 196 - 264 ated fault current Jan mA 30 ated fault current Ui V 440 ated insulation voltage Uimp VV 4(12/50µs) ated short-circuit strength Ion KA 10 with back-up fuse ated admissible back-up fuse Boff-circuit A 3 kA (8/20 µs) surge-proof ated making and breaking capacity / Rated residual making and breaking Im/ I _A A 3 ated making and breaking capacity / Rated residual making and breaking Im/ I _A A 50 ated making and breaking capacity / Rated residual making and breaking Im/ I _A A 50 ated making and breaking capacity / Rated residual making and breaking Im/ I _A Depentity 500 ated making and breaking Im/	Types conform to			
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sated frequency mit values of the operating voltage electronic Test circuit All Current sensitive ated fault current ated insulation voltage ated insulation voltage ated dinsulation voltage ated dinsulation voltage ated short-circuit strength All current sensitive V AU All current sensitive	Tripping		Α	10 ms delayed
mit values of the operating voltage electronic Test circuit Test circu	Rated operating voltage	U_n	V AC	240/415
rest circuit Test circuit sensitive Test c	Rated frequency	f	Hz	50
Test circuit ated fault current ated insulation voltage Uimp Alo Uimp VA 40 41.2/50µs) ated impulse withstand voltage Alo Alo Alo Alo Alo Alo Alo Al	Limit values of the operating voltage			
ated fault current and institutivy ated insulation voltage Ui Ui V 40 41.2/50µs) ated impulse withstand voltage ated short-circuit strength applies withstand current Bondr-circuit Short-circuit Short-circuit Short-circuit Short-circuit All current sensitive	electronic		V AC	50 - 456
All current sensitive and insulation voltage Ui Vi V 440 440 410.2/50µs) and dimpulse withstand voltage Ivi Vi	Test circuit		V AC	196 - 264
Ated insulation voltage Light dispulse withstand voltage Light dispulse withstand voltage Light dispulse withstand current Light dispulse withstand voltage Light dispulse with stand voltage Light dispulse wit	Rated fault current	$I_{\Delta n}$	mA	30
ted impulse withstand voltage Linguise withstand voltage Linguise withstand current Lax. admissible back-up fuse Short-circuit Short-circuit Short-circuit Overload Addisagrapacity / Rated residual making and breaking apacity Electrical Mechanical	Sensitivity			All current sensitive
And the destruction of the pulse with stand current In pulse with back-up fuse In pulse with back-up fu	Rated insulation voltage	Ui	V	440
Inpulse withstand current lax. admissible back-up fuse Short-circuit Overload atted making and breaking capacity / Rated residual making and breaking apacity Electrical Mechanical A (8/20 µs) surge-proof 3 kA (8/20 µs) surge-proof 4 3 4 6 3 4 6 3 4 6 3 4 6 3 6 4 6 3 6 6 4 6 4	Rated impulse withstand voltage	U_{imp}	kV	4 (1.2/50µs)
Short-circuit 9G/gL A 63 Overload 9G/gL A 63 ated making and breaking capacity / Rated residual making and breaking apacity Electrical Operation 2000 Mechanical Operation 2000 Mech	Rated short-circuit strength	I _{cn}	kA	10 with back-up fuse
Short-circuit Overload gG/gL A 63 overload ated making and breaking capacity / Rated residual making and breaking apacity espan Electrical Mechanical GG/gL A 63 Overload Operation 1m / I _{Am} A 00 Operation 1m / I _A	Impulse withstand current			3 kA (8/20 µs) surge-proof
Overload gG/gL A ated making and breaking capacity / Rated residual making and breaking apacity espan Electrical Mechanical GG/gL A 500 500 500 600 600 600 600 60	Max. admissible back-up fuse			
A spacity Electrical Mechanical A 500 Toperation 2000 Operation 2000 Ope	Short-circuit	gG/gL	Α	63
espan Electrical Mechanical Operation = 10000	Overload	gG/gL	Α	63
Electrical Operation = 2000 Mechanical Operation = 10000	Rated making and breaking capacity / Rated residual making and breaking capacity	$I_m/I_{\Delta m}$	Α	500
Mechanical Operation = 10000	lifespan			
	Electrical			
ry auxiliary contact			Operation	10000
	Dry auxiliary contact			

Rated switching capacity

30 VDC (resistive load)

240 VAC (resistive load)

Α

2

0.25

311,111		
Max. switching voltage AC	V	240
Max. switching voltage DC	V	220
Maximum switching current	Α	2
Min. switching capacity (reference value)		10 μ A, 10 mV DC
lifespan		
Electrical (at 20 switching operations per minute) 2 A 30 VDC resistive load	Operation	1\\$10 ⁵
Electrical (at 20 switching operations per minute) 1 A 30 VDC resistive load	Operation	¹ \$5 x 10 ⁵
Terminal capacity	mm²	0.25 - 1.5
Mechanical		
Standard front dimension	mm	45
Device height	mm	80
Built-in width	mm	70 (4TE)
Mounting		Quick attachment with 2 latch positions for DIN-rail IEC/EN 60715
Degree of Protection		IP20 switches IP 40 enclosed
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 - 35
Stranded	mm^2	2 x 16
Terminal cross-section		M5 (with cross-recessed screw as defined in EN ISO 4757-Z2, Pozidriv PZ2)
Tightening torque of fixing screws	N/m	2 - 2.4
Thickness of busbar material	mm	0.8 - 2
Admissible ambient temperature range	°C	-25 - +55
Permissible storage and transport temperatures	°C	-35 - +60
Climatic proofing		according to IEC/EN 61008
Mounting position		As required
Contact position indicator		red / green
Trip indication		white / blue

Design verification as per IEC/EN 61439

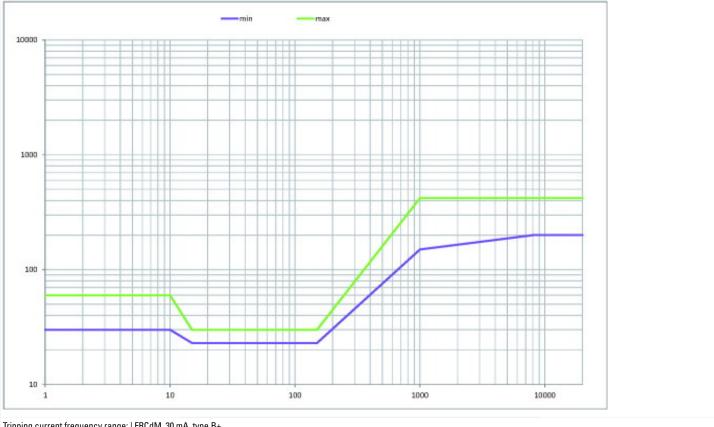
Max. switching duty (resistive load)

-			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	25
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	4.6
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	55
			0
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.

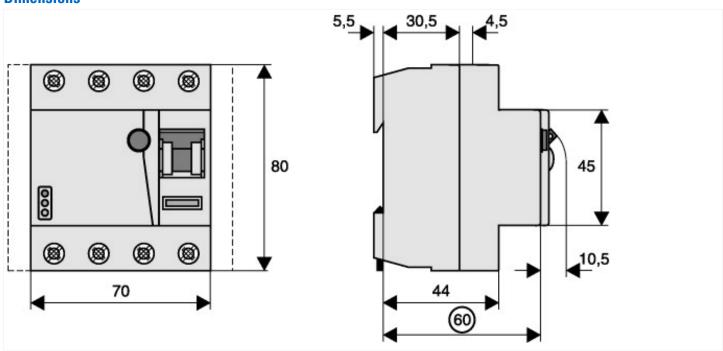
Technical data ETIM 6.0				
Circuit breakers and fuses (EG000020) / Residual current circuit breaker (RCCB)	Circuit breakers and fuses (EG000020) / Residual current circuit breaker (RCCB) (EC000003)			
Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB) (ecl@ss8.1-27-14-22-01 [AAB906011])				
Number of poles			4	
Nominal rated voltage		V	415	
Nominal rated current		Α	25	
Rated fault current		Α	0.03	
Mounting method			DIN rail	
Leakage current type			B+	
Selective protection			No	
Short-circuit breaking capacity (Icw)		kA	10	
Surge current capacity		kA	3	
Frequency			50 Hz	
Additional equipment possible			Yes	
Degree of protection (IP)			IP20	
Construction size (in accordance with DIN 43880)			1	
Width in number of modular spacings			4	
Built-in depth		mm	70.5	
Short-time delayed tripping			Yes	

Characteristics



Tripping current frequency range: | FRCdM, 30 mA, type B+

Dimensions



Additional product information (links)

Product overview (Web)

http://www.eaton.eu/Europe/Electrical/ProductsServices/CircuitProtection/DigitalCircuitBreakers/index.htm