

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

Powering Business Worldwide

Part no. FRCDM-25/4/003-G/A
Article no. 168646
Catalog No. FRCDM-25/4/003-G/A

Similar to illustration

De	livery	pro v	gram

Don'tory program			
Basic function			Residual current circuit breakers , digital
Number of poles			4 pole
Application			Switchgear for industrial and advanced 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/A (ÖVE E 8601)
Tripping		Α	Short time-delayed
Product range			FRCdM
Sensitivity			Pulse-current sensitive
Impulse withstand current			Surge-proof, 3 kA
Contact sequence			T N H H Z N

Technical data

Electrical

As per inscription Implication Implica	Electrical			
inping and preating voltage Un V AC 240/415 ated frequency f Hz 50 electronic V AC 50 - 264 Test circuit voltage VAC 50 - 264 ated fault current lead fault current lead insulation voltage ated insulation voltage United short-circuit strength lead sh	Types conform to			ÖVE E 8601
ated operating voltage ated frequency mit values of the operating voltage electronic Test circuit ated fault current ated insulation voltage ated insulation voltage ated insulation voltage ated short-circuit strength ated short-circuit ated short-circuit strength ated	Current test marks			As per inscription
ated frequency mit values of the operating voltage electronic Test circuit Aba ated fault current ated insulation voltage ated insulation voltage ated insulation voltage ated short-circuit strength Aba ated short-circuit strength Aba ated short-circuit strength Aba Aba ated short-circuit strength Aba Aba Aba ated short-circuit strength Aba Aba Aba Aba Aba Aba Aba Aba Aba Ab	Tripping		Α	10 ms delayed
wit values of the operating voltage electronic Test circuit Test circu	Rated operating voltage	U_n	V AC	240/415
lelectronic VAC 50-264 Test circuit VAC 196-264 ated fault current ated fault current ated insulation voltage ated insulation voltage ated insulation voltage ated short-circuit strength IAD ACT	Rated frequency	f	Hz	50
Test circuit Itest circuit Ites current Ites current sensitive Ites current sensiti	Limit values of the operating voltage			
ated fault current ensitivity Li Vi Vo 440 Ated insulation voltage ated impulse withstand voltage Ated impulse withstand voltage Ated impulse withstand current Ated impulse withstand current Aten in pulse withstand current By Operation Aten in pulse with back-up fuse Aten in pulse	electronic		V AC	50 - 264
ensitivity ated insulation voltage Ui V 440 4(1.2/50µs) ated impulse withstand voltage Uimp kA 4(1.2/50µs) 1 ovith back-up fuse Inpulse withstand current Iax. admissible back-up fuse Short-circuit Short-circuit Short-circuit GG/gL A 63 Overload GG/gL A 63 A 63 A 63 A A 63 A A A B A B A B A B B B B	Test circuit		V AC	196 - 264
teted insulation voltage Uinp VV 440 41.2/50µs) ated impulse withstand voltage Ilon Inpulse withstand current Idax. admissible back-up fuse Short-circuit Short-circuit Overload ated making and breaking capacity / Rated residual making and breaking apacity Electrical Mechanical	Rated fault current	$I_{\Delta n}$	mA	30
Ated impulse withstand voltage Limp Lon Lon Lon Lon Lon Lon Lon Lo	Sensitivity			Pulse-current sensitive
tated short-circuit strength pulse withstand current lax. admissible back-up fuse Short-circuit Short-circuit Overload atted making and breaking capacity / Rated residual making and breaking apacity Electrical Mechanical A Operation Lon kA 10 with back-up fuse 3 kA (8/20 μs) surge-proof 4 83 63 63 63 60 Operation 2000 Operation 2000 Operation 100 with back-up fuse 10	Rated insulation voltage	Ui	V	440
and pulse withstand current lax. admissible back-up fuse Short-circuit Overload and admissible packing capacity / Rated residual making and breaking apacity Electrical Mechanical A (8/20 μs) surge-proof 3 kA (8/20 μs) surge-proof 4 63 6 7 60 6 7 60 6 7 60 6 7 7 60 6 7 7 60 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Rated impulse withstand voltage	U _{imp}	kV	4 (1.2/50μs)
Idax. admissible back-up fuse Short-circuit Q6/gL Q6/gL A 63 Overload ated making and breaking capacity / Rated residual making and breaking apacity Electrical Mechanical Q6/gL A 63 Overload O	Rated short-circuit strength	I _{cn}	kA	10 with back-up fuse
Short-circuit gG/gL A 63 Overload gG/gL A 63 ated making and breaking capacity / Rated residual making and breaking and br	Impulse withstand current			3 kA (8/20 μs) surge-proof
Overload gG/gL A 63 ated making and breaking capacity / Rated residual making and breaking apacity espan Electrical Mechanical GP/L A 63 500 Operation 2000 Operation 10000	Max. admissible back-up fuse			
ated making and breaking capacity / Rated residual making and breaking apacity espan Electrical Mechanical Mechanical A 500 Operation 2000 Operation 10000	Short-circuit	gG/gL	Α	63
espan Electrical Mechanical Operation 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	n≦≥ ₁₀₀₀₀
	Dry auxiliary contact			

Rated switching capacity		
30 VDC (resistive load)	Α	2
240 VAC (resistive load)	Α	0.25

Max. switching voltage AC		V	240
Max. switching voltage DC		V	220
Maximum switching current		Α	2
Min. switching capacity (reference value)			10 μA, 10 mV DC
lifespan			
Electrical (at 20 switching operations per minute) 2 A 30 VDC resistive load		Operatio	^{on} \$10 ⁵
Electrical (at 20 switching operations per minute) 1 A 30 VDC resistive load		Operatio	on\$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 - +40
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
Internal resistance (at room temperature, single-pole, 50 Hz)			
Complete unit	Ri	mΩ	0.66

W

60

Design verification as per IEC/EN 61439

Max. switching duty (resistive load)

Design verification as per ILG/LN 01433			
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	40
			0
C/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.

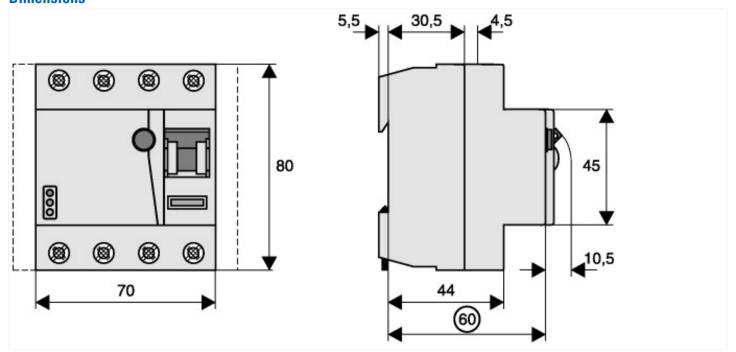
Technical data ETIM 6.0

Circuit breakers and fuses (EG000020) / Residual current circuit breaker (RCCB) (EC000003)

Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB)

Nominal rated voltage Nominal rated current A 25 Rated fault current A 0.03 Mounting method Leakage current type Selective protection Short-circuit breaking capacity (Icw) Surge current capacity KA 10 Surge current capacity KA 3 Frequency Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth V 415 A 25 A 0.03 DIN rail A 10 Va 1	(ecl@ss8.1-27-14-22-01 [AAB906011])		
Nominal rated current Rated fault current A 0.03 Mounting method Leakage current type A DIN rail Leakage current type No Selective protection Short-circuit breaking capacity (Icw) KA 10 Surge current capacity KA 3 Frequency Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth A 7.5	Number of poles		4
Rated fault current Mounting method Leakage current type Selective protection Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Built-in depth A 0.03 DIN rail A 4 10 Surge Current capacity KA 3 Frequency So Hz Yes IP20 1 4 Built-in depth mm 70.5	Nominal rated voltage	V	415
Mounting method Leakage current type A Selective protection No Short-circuit breaking capacity (Icw) KA 10 Surge current capacity Frequency Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Built-in depth DIN rail A A PNO DIN rail A A ID No No No No No No No No No N	Nominal rated current	Α	25
Leakage current type Selective protection Short-circuit breaking capacity (Icw) Surge current capacity KA 3 Frequency Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth A A Balance No No Short-circuit breaking capacity (Icw) KA 3 Frequency 50 Hz Yes IP20 IP20 Additional equipment possible 1 Width in number of modular spacings Mmm 70.5	Rated fault current	Α	0.03
Selective protection Short-circuit breaking capacity (Icw) Surge current capacity Surge current capacity KA Surge current capacity Frequency Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth No No No No 1 1 4 Pos Pos Pos Pos Pos Pos Pos	Mounting method		DIN rail
Short-circuit breaking capacity (Icw) Surge current capacity kA 3 Frequency Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth KA 10 10 10 10 10 10 10 10 10 1	Leakage current type		A
Surge current capacity kA 3 Frequency 50 Hz Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth kA 3 Frequency Fyes IP20 1 4 Built-in depth mm 70.5	Selective protection		No
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-circuit breaking capacity (Icw)	kA	10
Additional equipment possible Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth Yes IP20 1 Ves IP20 1 1 Ves Ves	Surge current capacity	kA	3
Degree of protection (IP) Construction size (in accordance with DIN 43880) Width in number of modular spacings Built-in depth IP20 4 70.5	Frequency		50 Hz
Construction size (in accordance with DIN 43880) 1 Width in number of modular spacings 4 Built-in depth mm 70.5	Additional equipment possible		Yes
Width in number of modular spacings 4 Built-in depth mm 70.5	Degree of protection (IP)		IP20
Built-in depth mm 70.5	Construction size (in accordance with DIN 43880)		1
	Width in number of modular spacings		4
Short-time delayed tripping Yes	Built-in depth	mm	70.5
	Short-time delayed tripping		Yes

Dimensions



Additional product information (links)

Product overview (Web)

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