



## Digital residual current circuit-breaker, 80A, 4p, 30mA, type G/A

**Part no.** FRCDM-80/4/003-G/A  
**Article no.** 168634  
**Catalog No.** FRCDM-80/4/003-G/A

Similar to illustration

### Delivery program

Basic function			Residual current circuit breakers , digital
Number of poles			4 pole
Application			Switchgear for industrial and advanced commercial applications
Rated current	$I_n$	A	80
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		A	Short time-delayed
Product range			FRCDM
Sensitivity			Pulse-current sensitive
Impulse withstand current			Surge-proof, 3 kA
Contact sequence			

### Technical data

#### Electrical

Types conform to			ÖVE E 8601
Current test marks			As per inscription
Tripping		A	10 ms delayed
Rated operating voltage	$U_n$	V AC	240/415
Rated frequency	f	Hz	50
Limit values of the operating voltage			
electronic		V AC	50 - 264
Test circuit		V AC	196 - 264
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 (1.2/50 $\mu$ s)
Rated short-circuit strength	$I_{cn}$	kA	10 with back-up fuse
Impulse withstand current			3 kA (8/20 $\mu$ s) surge-proof
Max. admissible back-up fuse			
Short-circuit	gG/gL	A	80
Overload	gG/gL	A	80
Rated making and breaking capacity / Rated residual making and breaking capacity	$I_m / I_{\Delta m}$	A	800
lifespan			
Electrical		Operations	2000
Mechanical		Operations	10000

#### Dry auxiliary contact

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

Max. switching duty (resistive load)	W	60
Max. switching voltage AC	V	240
Max. switching voltage DC	V	220
Maximum switching current	A	2
Min. switching capacity (reference value)		10 $\mu$ A, 10 mV DC
lifespan		
Electrical (at 20 switching operations per minute) 2 A 30 VDC resistive load	Operations	$\geq 10^5$
Electrical (at 20 switching operations per minute) 1 A 30 VDC resistive load	Operations	$\geq 5 \times 10^5$
Terminal capacity	mm <sup>2</sup>	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 <sup>2</sup>	1.5 - 35
Stranded	mm <sup>2</sup>	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	R <sub>i</sub>	m $\Omega$ 0.62

## Design verification as per IEC/EN 61439

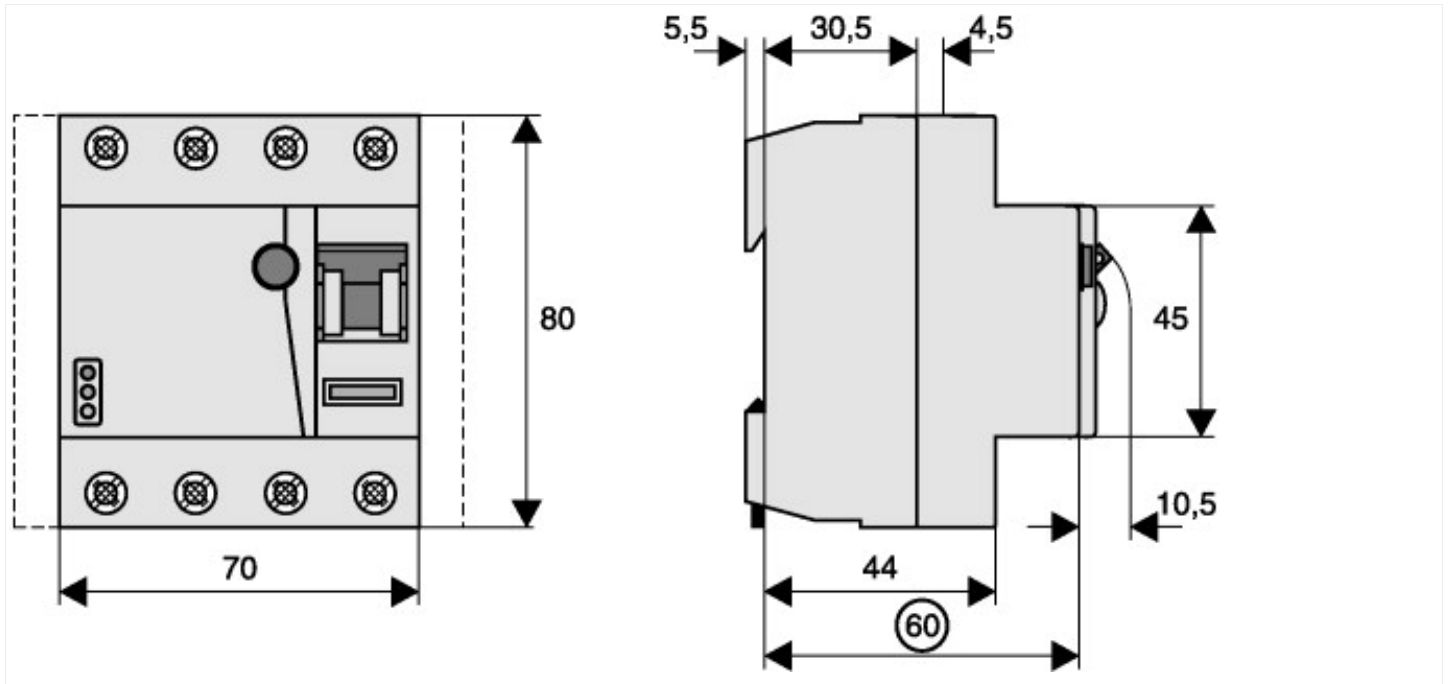
Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	80
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	12.9
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	40
			0

## 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) (ecl@ss8.1-27-14-22-01 [AAB906011])			
Number of poles			4
Nominal rated voltage		V	415
Nominal rated current		A	80
Rated fault current		A	0.03
Mounting method			DIN rail
Leakage current type			A
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

## Dimensions



## Additional product information (links)

Product overview (Web)

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