



**Residual current circuit breaker (RCCB), 100A, 4p, 300mA, type U**



**Part no.** FRCMM-100/4/03-U  
**Catalog No.** 170467  
**Alternate Catalog No.** FRCMM-100/4/03-U

Similar to illustration

**Delivery program**

Basic function			Residual current circuit-breakers
Number of poles			4 pole
Application			Residual current circuit-breaker - frequency converter-proof
Rated current	$I_n$	A	100
Rated short-circuit strength	$I_{cn}$	kA	10 with back-up fuse
Rated fault current	$I_{\Delta N}$	A	0.3
Type			Type U
Tripping		s...	selective switch off
Product range			FRCmM
Sensitivity			Pulse-current sensitive
Impulse withstand current			surge-proof 5 kA
Contact sequence			

**Technical data**

**Electrical**

Types conform to			IEC/EN 61008
Current test marks			As per inscription
Tripping		s...	40 ms delay - selective switch off
Rated voltage according to IEC/EN 60947-2	$U_n$	V AC	240/415
Rated frequency	f	Hz	50/60
Limit values of the operating voltage			
Test circuit		V AC	196 - 456
Rated fault current	$I_{\Delta n}$	mA	300
Sensitivity			Pulse-current sensitive
Enhanced sensitivity			Suitable for variable frequency drives
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			5 kA (8/20 µs) surge-proof
Max. admissible back-up fuse			
Short-circuit	gG/gL	A	100
Overload	gG/gL	A	80
Rated making and breaking capacity / Rated residual making and breaking capacity	$I_m / I_{\Delta m}$	A	1000
lifespan			
Electrical	Operations		≥ 4000
Mechanical	Operations		≥ 20000

**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			IP40, IP54 (with moisture-proof enclosure)
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			25-55°C/90-95% relative humidity according to IEC 60068-2
Mounting position			As required
Contact position indicator			red / green
Trip indication			white / blue

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	100
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	4.7
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	18.8
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	75
			Starting at 40 °C, the max. permissible continuous current decreases by 1.2% for every 1 °C
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
10.2.3.1 Verification of thermal stability of enclosures			
10.2.3.2 Verification of resistance of insulating materials to normal heat			
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
10.2.4 Resistance to ultra-violet (UV) radiation			
10.2.5 Lifting			
10.2.6 Mechanical impact			
10.2.7 Inscriptions			
10.3 Degree of protection of ASSEMBLIES			
10.4 Clearances and creepage distances			
10.5 Protection against electric shock			
10.6 Incorporation of switching devices and components			
10.7 Internal electrical circuits and connections			
10.8 Connections for external conductors			
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			
10.9.3 Impulse withstand voltage			
10.9.4 Testing of enclosures made of insulating material			
10.10 Temperature rise			
10.11 Short-circuit rating			
10.12 Electromagnetic compatibility			
10.13 Mechanical function			

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

Number of poles		4
Rated voltage	V	415
Rated current	A	100
Rated fault current	mA	300
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		Yes
Short-time delayed tripping		No
Short-circuit breaking capacity ( $I_{cw}$ )	kA	10
Surge current capacity	kA	5
Frequency		50/60 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	mm <sup>2</sup>	1.5 - 16
Connectable conductor cross section solid-core	mm <sup>2</sup>	1.5 - 35

## Dimensions

