



Residual current circuit breaker (RCCB), 80A, 4p, 500mA, type S/F

Part no. **FRCMM-80/4/05-S/F**
 Catalog No. **187447**

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	80
Rated short-circuit strength	I_{cn}	kA	10 with back-up fuse
Rated fault current	$I_{\Delta N}$	A	0.5
Type			Type S/F
Tripping		s...	selective switch off
Product range			FRCmM
Sensitivity			Pulse-current sensitive
Impulse withstand current			surge-proof 5 kA

Technical data

Electrical

Types conform to			IEC/EN 62423
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	184 - 440
Rated fault current	$I_{\Delta n}$	mA	500
Sensitivity			Pulse-current sensitive
Enhanced sensitivity			Frequency mix (10 Hz, 50 Hz, 1000 Hz)
Rated insulation voltage	U_i	V	440
Rated impulse withstand voltage	U_{imp}	kV	4 (1.2/50 μ s)
Rated short-circuit strength	I_{cn}	kA	10 with back-up fuse
Impulse withstand current			5 kA (8/20 μ 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		\geq 4000
Mechanical	Operations		\geq 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 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		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 _n	A	80
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	18.8
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
			Starting at 40 °C, the max. permissible continuous current decreases by 3% 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) (ecl@ss10.0.1-27-14-22-01 [AAB906014])	
Number of poles	4

Rated voltage	V	240
Rated current	A	80
Rated fault current	mA	500
Rated insulation voltage U_i	V	440
Rated impulse withstand voltage U_{imp}	kV	4
Mounting method		DIN rail
Leakage current type		Other
Selective protection		Yes
Short-time delayed tripping		No
Short-circuit breaking capacity (I_{cw})	kA	10
Surge current capacity	kA	5
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	mm ²	1.5 - 16
Connectable conductor cross section solid-core	mm ²	1.5 - 35