DATASHEET - PFIM-100/4/003

Residual current circuit breaker (RCCB), 100A, 4p, 30mA, type AC

Part no. PFIM-100/4/003
Catalog No. 102823

Similar to illustration

Delivery program

Basic function			Residual current circuit-breakers
Number of poles			4 pole
Application			Residual current circuit-breaker for residential and commercial applications
Rated current	I_n	A	100
Rated short-circuit strength	I_{cn}	kA	10
Rated fault current	$I_{\Delta N}$	A	0.03
Type			Type AC
Tripping		s…	non-delayed
Product range			PFIM
Sensitivity			AC current sensitive
Impulse withstand current			Partly surge-proof 250 A

Technical data

Electrical

Types conform to			IEC/EN 61008
Standards			IEC/EN 61008
Rated operational voltage	U_e	V	
	U_e	V AC	
Rated operating voltage	U_e	V AC	230/400
Rated frequency	f	Hz	50
Limit values of the operating voltage			
Test circuit		V AC	196 - 264
Comment for range of the test button			3-phase application without N (400V AC Phase-Phase) not allowed
Sensitivity			AC current sensitive
Rated insulation voltage	U_i	V	440
Rated impulse withstand voltage	U_{imp}	kV	4
Rated short-circuit strength	I_{cn}	kA	10
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
Max. back-up fuse		A gL/gG	80
Maximum max. as short-circuit protective device		A gL	
Back-up fuse		A gL	100
lifespan			
Electrical	Operations		≧ 4000
Mechanical	Operations		≧ 20000

References

Auxiliary switch for subsequent installation			Z-HK 248432
Tripping signal contact for subsequent installation			Z-NHK 248434
Remote control and automatic switching device			Z-FW/LP 248296
Compact enclosure			KLV-TC-4 276241
Sealing cover set			Z-RC/AK-4MU 101062

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, IP40 with suitable enclosure
Terminals top and bottom			Open mouthed/lift terminals
Terminal protection			finger and hand touch safe, DGUV VS3, EN 50274
Terminal cross-section			
Solid		mm^2	1.5 - 35
Stranded		mm^2	2 x 16
Thickness of busbar material		mm	0.8 - 2
Permissible storage and transport temperatures		°C	-35 - +60
Climatic proofing			25-55°C/90-95% relative humidity according to IEC 60068-2
Thickness of busbar material		mm	
Material thickness		mm	0.8 - 2

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	100
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	60
			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			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 8.0

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	400
Rated current		A	100
Rated fault current		A	0.03
Rated insulation voltage Ui		V	440
Rated impulse withstand voltage Uimp		kV	4
Mounting method			DIN rail
Leakage current type			AC
Selective protection			No
Short-time delayed tripping			No
Short-circuit breaking capacity (Icw)		kA	10
Surge current capacity		kA	0.25
Voltage type			AC
With interlocking device			Yes
Frequency			50 Hz
Additional equipment possible			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 - 60
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
Explosion-proof			No

© 07/2022 by Eaton Industries GmbH