DATASHEET - FRCMM-25/2/05-A



Residual current circuit breaker (RCCB), 25A, 2p, 500mA, type A



Catalog No. Alternate Catalog No. EL-Nummer (Norway)

Part no.

FRCMM-25/2/05-A 170282 g FRCMM-25/2/05-A

1666278

Similar to illustration

Delivery program

Basic function			Residual current circuit-breakers
Number of poles			2 pole
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	А	25
Rated short-circuit strength	l _{cn}	kA	10 with back-up fuse
Rated fault current	$I_{\Delta N}$	А	0.5
Туре			Туре А
Tripping		s	non-delayed
Product range			FRCmM
Sensitivity			Pulse-current sensitive
Impulse withstand current			Partly surge-proof 250 A
Contact sequence			

Technical data

Types contron toFinal Sector to the sector to t	Electrical			
Tripingnon	Types conform to			IEC/EN 61008
Red voltage according to EVC/N 00947-2V N <b< td=""><td>Current test marks</td><td></td><td></td><td>As per inscription</td></b<>	Current test marks			As per inscription
Retar from values of the operating voltage F Retar from values of the operating voltage Text circuit Man VAC 84-250 Retar from values of the operating voltage Man 94-000 Sensitivity Man 94-000 Retar insulation voltage Jan VAC 84-000 Retar insulation voltage Jan VAC 94-000 Retar insulation voltage Jan VAC 94-000 Nort-circuit Soft-circuit Soft-Circuit Soft-Circuit Nort-circuit Soft-Circuit Soft-Circuit Soft-Circuit Respan Soft-Circuit Soft-Circuit Soft-Circuit Respan Soft-Circuit Soft-Circuit Soft-Circuit	Tripping		s	non-delayed
Link values of the operating voltageIndexVace <td>Rated voltage according to IEC/EN 60947-2</td> <td>Un</td> <td>V AC</td> <td>240</td>	Rated voltage according to IEC/EN 60947-2	Un	V AC	240
TestcircuitImage: Section of the section	Rated frequency	f	Hz	50
Rel dalt current Anno Man	Limit values of the operating voltage			
Sensitive Image: Sensitive Pale-current sensitive Sensitivity Vin Vin </td <td>Test circuit</td> <td></td> <td>V AC</td> <td>184 - 250</td>	Test circuit		V AC	184 - 250
Rated insulation voltage Vi V 4 Rated insulation voltage Uinp Vi 4 4.250µs) Rated insulation voltage Uinp Vi 4.250µs) 4.250µs) Rated insulation voltage Inpulse voltation voltage Vinp A 4.250µs) surge-proof Impulse withstand current So A (8/20 µs) surge-proof So A (8/20 µs) surge-proof So A (8/20 µs) surge-proof Max. admissible back-up fuse So A (9/20 µs) So A (8/20 µs) surge-proof So A (8/20 µs) surge-proof Max. admissible back-up fuse So A (9/20 µs) So A (8/20 µs) surge-proof So A (8/20 µs) surge-proof Nort-circuit So A (9/20 µs) So A (8/20 µs) surge-proof So A (8/20 µs) surge-proof Nort-circuit So A (9/20 µs) So A (8/20 µs) surge-proof So A (8/20 µs) surge-proof Nort-circuit So A (9/20 µs) So A (8/20 µs) surge-proof So A (8/20 µs) surge-proof Nort-circuit So A (9/20 µs) So A (9/20 µs) surge-proof So A (9/20 µs) surge-proof Rest So A (8/20 µs) So A (8/20 µs) So A (8/20 µs) surge-proof So (8/20 µs) surge-proof Rest	Rated fault current	$I_{\Delta n}$	mA	500
Rated impulse withstand voltage Vimp kV 41.2/50µs) Rated short-circuit strength Inpulse withstand current Inpulse withstand current Inpulse withstand current Max. admissible back-up fuse 50.4 (8/20 µs) surge-proof Max. admissible back-up fuse gG/gL A 53 Nort-circuit gG/gL A 53 Nort-dad gG/gL A 53 Rated making and breaking capacity / Rated residual making and breaking $\mu_1 \Delta_m$ μ_2 μ_3 Ifespan Operations Ψ Ψ Ψ Rechanical Operations Ψ Ψ Nechanical Operations Ψ Ψ Stondard front dimension $\mu_1 \Delta_m$ Ψ Ψ Device height Internet Internet Ψ	Sensitivity			Pulse-current sensitive
Rate akort-circuit strength Ien Kanow Iowith back-up fuse Impulse withstand current Impulse withstand current 500 A (8/20 µs) surge-proof Max. admissible back-up fuse Impulse withstand current Impulse withstand current So A (8/20 µs) surge-proof Max. admissible back-up fuse Impulse withstand current Impulse withstand current Impulse withstand current So A (8/20 µs) surge-proof Max. admissible back-up fuse Impulse withstand current Impulse withstand current Impulse withstand current So A (8/20 µs) surge-proof Max. admissible back-up fuse Impulse withstand current Impulse withstand curr	Rated insulation voltage	Ui	V	440
Include withstand current Include withstand current Sol (8/20 µs) surge-proof Max. admissible back-up fuse 9G/L A 63 Short-circuit 9G/L A 63 Overload 9G/L A 50 Retad making and breaking capacity / Rated residual making and breaking capacity M/ I_Am A 50 Iffespan Implement Implement Implement Implement Indextant Operations Implement Implement Implement Indextant Implement Implement Implement Implement Indextant	Rated impulse withstand voltage	U _{imp}	kV	4 (1.2/50µs)
Max. admissible back-up fuse File Max. admissible back-up fuse Short-circuit gG/gL A 63 Overload gG/gL A 50 Rated making and breaking capacity / Rated residual making and breaking m/l_{Am} M_m/l_{Am} M_m/l_{Am} Ifespan Operations m/l_{Am} M_m/l_{Am} M_m/l_{Am} Indechnical Operations M_m/l_{Am} M_m/l_{Am} Machanical Operations M_m/l_{Am} M_m/l_{Am} Standard front dimension M_m/l_{Am} M_m M_m/l_{Am} Device height M_m M_m M_m/l_{Am}	Rated short-circuit strength	l _{cn}	kA	10 with back-up fuse
Short-circuit g/gL A 6 Overload g/gL A 5 Rated making and breaking capacity / Rated residual making and breaking capacity $M^{/}$ Low 500 Ifespan Operations Y 4000 Electrical Operations 2000 Mechanical Operations 2000 Mechanical Imma 45 Device height Imma 45	Impulse withstand current			250 A (8/20 μs) surge-proof
Overload GG/L A 50 Rated making and breaking capacity / Rated residual making and breaking capacity Im/ I_Am A 50 lifespan Im/ I_Am A 500 Electrical Operations E 4000 Mechanical Operations E 20000 Mechanical Operations Mm 450 Device height Im/ I_Am Mm 450	Max. admissible back-up fuse			
Rad and breaking capacity / Rated residual making and breaking Im/ I Am Am Soo lifespan Im/ I Am Am Soo Electrical Operations Mol Mol Mechanical Operations Mol Mol Mechanical Operations Mol Mol Standard front dimension Imm Mol Mol Device height Imm Soo Soo	Short-circuit	gG/gL	А	63
capacity a a b a b a b a b a b a b a b a b a b a	Overload	gG/gL	А	25
Electrical Operations ≥ 4000 Mechanical Operations ≥ 2000 Mechanical mm 45 Device height Imm 80		$I_m / I_{\Delta m}$	A	500
Mechanical Operations 2000 Mechanical Image: Standard front dimension Image: Standard front dimension Device height Image: Standard front dimension Standard front dimension	lifespan			
Mechanical mm 45 Standard front dimension mm 80	Electrical	Operations		≧ 4000
Standard front dimension mm 45 Device height mm 80	Mechanical	Operations		≧ 20000
Device height mm 80	Mechanical			
-	Standard front dimension		mm	45
Built-in width mm 35 (2TE)	Device height		mm	80
	Built-in width		mm	35 (2TE)

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

Design verification as per IEC/EN 61439			
Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	25
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	1.3
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			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 7.0	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		2		
Rated voltage	V	240		
Rated current	А	25		
Rated fault current	mA	500		
Rated insulation voltage Ui	V	440		
Rated impulse withstand voltage Uimp	kV	4		
Mounting method		DIN rail		
Leakage current type		A		
Selective protection		No		
Short-time delayed tripping		No		
Short-circuit breaking capacity (Icw)	kA	10		
Surge current capacity	kA	0.25		
Frequency		50 Hz		
Additional equipment possible		Yes		
With interlocking device		Yes		
Degree of protection (IP)		IP20		
Width in number of modular spacings		2		
Built-in depth	mm	70.5		
Ambient temperature during operating	°C	-25 - 40		
Pollution degree		2		
Connectable conductor cross section multi-wired	mm²	1.5 - 16		
Connectable conductor cross section solid-core	mm²	1.5 - 35		

Dimensions

