### DATASHEET - FRCMM-40/2/03-G/A



Residual current circuit breaker (RCCB), 40A, 2p, 300mA, type G/A



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

Part no.

FRCMM-40/2/03-G/A 170292 J FRCMM-40/2/03-G/A

1666284

Similar to illustration

#### **Delivery program**

Davis function			Desidual summer since it has also
Basic function			Residual current circuit-breakers
Number of poles			2 pole
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	А	40
Rated short-circuit strength	I <sub>cn</sub>	kA	10 with back-up fuse
Rated fault current	$I_{\Delta N}$	А	0.3
Туре			Type G/A (ÖVE E 8601)
Tripping		s	Short time-delayed
Product range			FRCmM
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		s	10 ms delayed
Rated voltage according to IEC/EN 60947-2	Un	V AC	240
Rated frequency	f	Hz	50/60
Limit values of the operating voltage			
Test circuit		V AC	184 - 250
Rated fault current	I <sub>Δn</sub>	mA	300
Sensitivity			Pulse-current sensitive
Rated insulation voltage	Ui	V	440
Rated impulse withstand voltage	U <sub>imp</sub>	kV	4 (1.2/50µs)
Rated short-circuit strength	I <sub>cn</sub>	kA	10 with back-up fuse
Impulse withstand current			3 kA (8/20 μs) surge-proof
Max. admissible back-up fuse			
Short-circuit	gG/gL	А	63
Overload	gG/gL	А	40
Rated making and breaking capacity / Rated residual making and breaking capacity	$I_m / I_{\Delta m}$	A	500
lifespan			
Electrical	Operations		≧ 4000
Mechanical	Operations		≧ 20000
Mechanical			
Standard front dimension		mm	45
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 <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	In	А	40
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	3.9
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	7.8
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	75
			Starting at 40 °C, the max. permissible continuous current decreases by 2.5% for every 1 °C
EC/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 b observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must b 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

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])				
	2			
V	240			
А	40			
mA	300			
V	440			
kV	4			
	DIN rail			
	Α			
	No			
	Yes			
kA	10			
kA	3			
	50/60 Hz			
	Yes			
	Yes			
	IP20			
	2			
mm	70.5			
٦°	-25 - 40			
	2			
mm²	1.5 - 16			
mm²	1.5 - 35			
	n, device / Residual c V A M V KV KV KV KV			

## Dimensions

