


RCCB, 40A, 4p, 300mA, Type S/F
**Part no.
Catalog No.**
**FRCDM-40/4/03-S/F
EP-501266**

Delivery program

Basic function			Residual current circuit-breakers , digital
Number of poles			Four-pole
Application			Switchgear for industrial and advanced commercial applications
Rated short-circuit strength	I_{cn}	kA	40 A
Rated fault current	$I_{\Delta N}$	A	300 mA
Type			Type S/F
Tripping		s...	Selective
Product range			Residual current circuit-breakers , digital
Sensitivity			AC and pulsating DC, smoth DC current up to 10mA
Impulse withstand current			Surge-proof, 5 kA

Technical data

Electrical

Types conform to			IEC/EN 61008 IEC/EN 62423
Standards			IEC/EN 61008 IEC/EN 62423
Current test marks			As per inscription
Tripping		s...	Selective
Rated voltage according to IEC/EN 60947-2	U_n	V AC	240/415
Rated frequency	f	Hz	50/60 Hz
Limit values of the operating voltage			
electronic		V AC	264
Test circuit		V AC	264
Sensitivity			AC and pulsating DC, smoth DC current up to 10mA
Rated insulation voltage	U_i	V	440 V
Rated impulse withstand voltage	U_{imp}	kV	4 kV
Rated short-circuit strength	I_{cn}	kA	40 A
Impulse withstand current			Surge-proof, 5 kA
Max. admissible back-up fuse			
Short-circuit	gG/gL	A	63
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

Dry auxiliary contact

Rated switching capacity			
30 VDC (resistive load)		A	2
240 VAC (resistive load)		A	0,25
Max. switching duty (resistive load)		W	60W
Max. switching voltage AC		V	240 V
Max. switching voltage DC		V	220 V
Maximum switching current		A	2
Min. switching capacity (reference value)			10 μ A, 10 mV DC
lifespan			
Electrical (at 20 switching operations per minute) 2 A 30 VDC resistive load		Operations	≥ 105
Electrical (at 20 switching operations per minute) 1 A 30 VDC resistive load		Operations	$\geq 5 \times 105$
Terminal capacity		mm ²	0.25 - 1.5

Mechanical

Standard front dimension		mm	45
Device height		mm	80
Built-in width		mm	70
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			Twin-purpose 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
Tightening torque of fixing screws		N/m	2 - 2.4
Thickness of busbar material		mm	0.8 - 2
Admissible ambient temperature range		°C	60
Permissible storage and transport temperatures		°C	-35
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	3,225
Equipment heat dissipation, current-dependent	P _{vid}	W	12,9
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	-25°C to +40°C (for higher values see table on ambient temperature)
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
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.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.