

RCD/MCB combination switch, 40A, 300mA, miniature circuit-br. type B trip characteristic, 1-phase+N, residual current circuit-br. trip characteristic: A



Part no. Article no. Catalog No. FRBMM-B40/1N/03-A 170554 FRBMM-B40/1N/03-A

Similar to illustration

Delivery program			
Basic function			Combined RCD/MCB devices
Number of poles			1 pole+N
Tripping characteristic			В
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	А	40
Rated switching capacity according to IEC/EN 61009		kA	10
Rated fault current	$I_{\Delta N}$	А	0.3
Tripping		А	non-delayed
Product range			FRBmM
Sensitivity			Pulse-current sensitive
Impulse withstand current			Partly surge-proof 250 A
Contact sequence			

Technical data

Electrical			
Sensitivity			Pulse-current sensitive
Rated current	In	А	40
Tripping characteristic			В

Design verification as per IEC/EN 61439

Design vernication as per 120/214 01455			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	40
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	8.2
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
			0
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 6.0

Circuit breakers and fuses (EG000020) / Earth leakage circuit breaker (EC000905)

Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / MCB/RCCB combination (ecl@ss8.1-27-14-22-07 [AFZ810012])

Number of protected poles Image: second			
Nominal rated voltageV40Nominal rated currentAARated fault currentAALakage current typeAACurrent limiting classKAARated short-circuit breaking capacity EK 60987-2KA0FrequencyKA5H2Release characteristicSH2SH2Rourent type for outputMSH2Norrently switching N-neutralMSH2Pollution degreeMSNith in number of modular spacingsMS5Sutable for flush-mounted installationMS5Sutable for flush-mounted installationMS1Sutage current capacityMS1Sutage current capacityMS1Sutage typeMS1Sutage typeS1S1Sutage typeS1S1Sutage typeS1S1Sutage typeS1S1Sutage typeS1S1Sutage typeS1S1	Number of poles (total)		2
Nominal rated current A 4 Nominal rated current A 4 Rated fault current A 5 Leakage current type A 4 Current limiting class A 6 Rated short-circuit breaking capacity EN 60998 A 0 Rated short-circuit breaking capacity EC 60947-2 A 0 Frequency S0 H2 50 H2 Release characteristic S0 H2 8 Concrently switching N-neutral P 9 Pollution degree P 8 Pollution degree P 9 Suitable for flush-mounted installation P 9 Suitable for flush-mounted installation P P Suitage type	Number of protected poles		1
Rate fault current A A Leakage current type A A Current limiting class A A Rated short-circuit breaking capacity EN 60898 KA D Rated short-circuit breaking capacity EC 60947-2 KA D Release characteristic Frequency Frequency B Roll category Frequency B B Our routing of modular spacings Frequency S S Nothin number of modular spacings Frequency S S Nuitable for flush-mounted installation Frequency S S Nuitable for flush-mounted installation Frequency S S Nuitable for flush-mounted installation Frequency Frequency S Nuitable for flush-mounted installation Frequency S S Nuitable for flush-mounted installation Frequency Frequency S Nuitable for flush-mounted installation Frequency S S Nuitable for flush-mounted installation Frequency S S <	Nominal rated voltage	V	240
Leakage current type A A Current limiting class KA 0 Rated short-circuit breaking capacity EN 60989 KA 0 Rated short-circuit breaking capacity EN 60989 KA 0 Reted short-circuit breaking capacity EN 60987-20 KA 0 Frequency KA 0 0 Release characteristic Frequency 0 0 Our voltage category S 9 0 Pollution degree S 0 0 Suitable for flush-mounted installation M 0 0 Suitape of protection (IP) M M 0 0 Surg current capacity M M 0 0 0 Surg current capacity M M 0	Nominal rated current	А	40
Current limiting classImage: state short-circuit breaking capacity EX 60898Image: state short-circuit breaking capacity EX 60897Image: state short-circuit breaking capacity EX 60897Notate	Rated fault current	А	0.3
Rated short-circuit breaking capacity EN 60898 KA I Rated short-circuit breaking capacity IEC 60947-2 KA 0 Frequency SH 50 Release characteristic SH 50 Concurrently switching N-neutral SH Yes Over votage category SH SH Pollution degree SH S With in number of modular spacings SH S Suitable for flush-mounted installation SH SH Surge current capacity SH SH Surge current capacity SH SH Surge type SH SH	Leakage current type		A
Rated short-circuit breaking capacity IEC 60947-2 KA 0 Frequency 50 Hz 50 Hz Release characteristic 6 6 6 Concurrently switching N-neutral 6 6 3 Over voltage category 6 6 2 2 Pollution degree 2 3 2 2 With in number of modular spacings 6 6 2 2 2 Suitable for flush-mounted installation 6 6 8 2	Current limiting class		3
Frequency50 HzRelease characteristicBConcurrently switching N-neutralMConcurrently switching N-neutralMOver voltage categoryMPollution degreeCWitch in number of modular spacingsMBuilt-in depthNSuitable for flush-mounted installationMDegree of protection (IP)NSurge current capacityMVoltage typeMNoSurge typeMNoSurge typeMNoSurge typeMNoSurge typeMNoSurge typeMSurge type	Rated short-circuit breaking capacity EN 60898	kA	10
Release characteristic B Release characteristic B Concurrently switching N-neutral Se Over voltage category Se Pollution degree Se Width in number of modular spacings mm Built-in depth So Suitable for flush-mounted installation mm Degree of protection (IP) MA Surge current capacity MA Voltage type MA	Rated short-circuit breaking capacity IEC 60947-2	kA	0
Concurrently switching N-neutralMarket BOver voltage categorySiPollution degree2Width in number of modular spacingsmmSuitable for flush-mounted installationmmDegree of protection (IP)Market BSurge current capacityMarket BVotage typeMarket BNotage typeMarket BNotage typeMarket BNotage typeMarket BNotage typeNotage type <td>Frequency</td> <td></td> <td>50 Hz</td>	Frequency		50 Hz
Over voltage categorySee See See See See See See See See See	Release characteristic		В
Pollution degree 2 Width in number of modular spacings 2 Built-in depth mm 755 Suitable for flush-mounted installation Mm No Degree of protection (IP) KA 120 Surge current capacity MM 25 Votage type MA 025	Concurrently switching N-neutral		Yes
Width in number of modular spacingsImage: Space of protection (IP)Image: Space of protection	Over voltage category		3
Built-in depth mm 75.5 Suitable for flush-mounted installation Mm No Degree of protection (IP) Mm IP20 Surge current capacity MM 0.25 Voltage type Mm AC	Pollution degree		2
Suitable for flush-mounted installation Mo Degree of protection (IP) IP20 Surge current capacity IP20 Votage type IP20	Width in number of modular spacings		2
Degree of protection (IP) IP20 Surge current capacity KA 0.25 Voltage type KA AC	Built-in depth	mm	75.5
Surge current capacity kA 0.25 Voltage type kA AC	Suitable for flush-mounted installation		No
Voltage type AC	Degree of protection (IP)		IP20
	Surge current capacity	kA	0.25
Antinuisance tripping version No	Voltage type		AC
	Antinuisance tripping version		No

Dimensions

