

RCD/MCB combination switch, 16A, 300mA, miniature circuit-br. type B trip characteristic, 1-ph+N, residual current circuit-br. trip characteristic: AC



Part no. Article no. Catalog No.

FRBMM-B16/1N/03-G 170556 FRBMM-B16/1N/03-G

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	16
Rated switching capacity according to IEC/EN 61009		kA	10
Rated fault current	$I_{\Delta N}$	А	0.3
Tripping		А	Short time-delayed
Product range			FRBmM
Sensitivity			AC current sensitive
Impulse withstand current			Surge-proof, 3 kA
Contact sequence			

Technical data

Electrical			
Sensitivity			AC current sensitive
Rated current	In	А	16
Tripping characteristic			В

Design verification as per IEC/EN 61439

Technical data for design verification In A In	Jesigii verincation as per 120/214 01455			
Heat dissipation per pole, current-dependent Pvid W 0 Equipment heat dissipation, current-dependent Pvid W 3.6 Static heat dissipation, non-current-dependent Pvs W 0 Heat dissipation capacity Pdiss W 0 Operating ambient temperature min. Pdiss W 0 Operating ambient temperature max. Pdiss V 0 IEC/EN 61439 design verification Pdiss V 0 10.2.2 Strength of materials and parts Pdiss M Meets the product standard's requirements. 10.2.3.1 Verification of resistance of insulating materials to abnormal heat Meets the product standard's requirements. Meets the product standard's requirements. 10.2.3.2 Verification of resistance of insulating materials to abnormal heat Meets the product standard's requirements. 10.2.3.3 Verification of resistance of insulating materials to abnormal heat Meets the product standard's requirements.	Fechnical data for design verification			
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Static heat dissipation, non-current-dependent Pvs W 0 Heat dissipation capacity Pdiss W 0 Operating ambient temperature min. °C -25 Operating ambient temperature max. °C 40 IC/EN 61439 design verification °C 40 10.2 Strength of materials and parts °C 40 10.2.3.1 Verification of thermal stability of enclosures F 40 10.2.3.2 Verification of resistance of insulating materials to abnormal heat NO NO	Heat dissipation per pole, current-dependent	P _{vid}	W	0
Heat dissipation capacity Pdiss W 0 Operating ambient temperature min. °C -25 Operating ambient temperature max. °C 40 IEC/EN 61439 design verification Image: Comparison of materials and parts Image: Comparison of materials and parts Image: Comparison of thermal stability of enclosures 10.2.2.2 Corrosion resistance Image: Comparison of thermal stability of enclosures Image: Comparison of thermal stability of enclosures Image: Comparison of thermal stability of enclosures 10.2.3.1 Verification of resistance of insulating materials to abnormal heat Image: Comparison of thermal stability of enclosures Image: Comparison of thermal stability of enclosures 10.2.3.2 Verification of resistance of insulating materials to abnormal heat Image: Comparison of the product standard's requirements. Indets the product standard's requirements. Image: Comparison of the product standard's requirements. Indets the product standard's requirements. Image: Comparison of the product standard's requirements. Indets the product standard's requirements. Image: Comparison of the product standard's requirements. Indets the product standard's requirements. Image: Comparison of the product standard's requirements.	Equipment heat dissipation, current-dependent	P _{vid}	W	3.6
Operating ambient temperature min. °C -25 Operating ambient temperature max. °C 40 IEC/EN 61439 design verification °C 0 IEC/EN 61439 design verification °C 6 10.2 Strength of materials and parts °C 6 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 abnormal heat Meets the product standard's requirements. 10.2.3.2 Verification of resistance of insulating materials to abnormal heat Meets the product standard's requirements.	Static heat dissipation, non-current-dependent	P _{vs}	W	0
Operating ambient temperature max. °C 40 IEC/EN 61439 design verification 0 10.2 Strength of materials and parts 6 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 Meets the product standard's requirements.	Heat dissipation capacity	P _{diss}	W	0
Index product standard's requirements.Index product	Operating ambient temperature min.		°C	-25
IEC/EN 61439 design verification IEC/EN 61439 design verification 10.2 Strength of materials and parts IEC/EN 61439 design verification of materials and parts 10.2 Strength of materials and parts 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 Meets the product standard's requirements.	Operating ambient temperature max.		°C	40
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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 Meets the product standard's requirements.	10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat 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.
and fire due to internal electric effects	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.	10.2.4 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.	10.2.5 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.	10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.

10.0.7 Incontations	Mosto the product standard's requirements
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 poles2Number of protected poles1Nominal rated voltageV40Nominal rated currentA16Rated fault currentA0.3Leakage current typeC3Current limiting classKA0Rated short-circuit breaking capacity EN 60998KA0Release characteristicC5Concurrent symeKA0Release characteristicSSH2Our or utage categoryKA0Voltan number of modular spacingsKA0Suitable of fush-mounted installationC3Degree of protection (IP)KA0Surge current capacityKA0Surge current spacingKA0Surge current spacing (IP)KA0Surge current spacing (IP)KA0Surge current spacing (IP)KA0Surge current spacing (IP)KA0Surge current capacityKA0Surge current capacityKA0Surge current capacityKA0Surge current capacityKA0Surge current capacityKANSurge current capacityKA			
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Nomial rated currentImage: A constraint of the constraint o	Number of protected poles		1
Rated fault current A A Leakage current type A A Current limiting class 3 A Rated short-circuit breaking capacity EN 60898 MA 0 Rated short-circuit breaking capacity EN 60898 MA 0 Frequency MA 0 Release characteristic 50 Hz 50 Hz Concurrently switching N-neutral Y So Over voltage category Y So Pollution degree Y So Suitable for flush-mounted installation Ma So Degree of protection (IP) Pa Pa Surge current capacity C Pa Voltage type C C	Nominal rated voltage	V	240
Leakage current type A Current limiting class 3 Rated short-circuit breaking capacity EN 60998 KA 0 Rated short-circuit breaking capacity IEC 60947-2 KA 0 Frequency SD // S 50 // S Release characteristic SD // S 50 // S Concurrently switching N-neutral SO // S S Over voltage category SO // S 3 Pollution degree SO // S S Vidth in number of modular spacings M S Suitable for flush-mounted installation M No Degree of protection (IP) M PO Surge current capacity MA I Voltage type MA I	Nominal rated current	А	16
Current limiting class 3 Rated short-circuit breaking capacity EN 60898 KA 0 Rated short-circuit breaking capacity IEC 60947-2 KA 0 Frequency 50 Hz 50 Hz Release characteristic 50 Hz 50 Hz Concurrently switching N-neutral 60 Yes 3 Over voltage category 74 Yes 3 Pollution degree 2 2 With in number of modular spacings 75 5 Suitable for flush-mounted installation Yes Degree of protection (IP) KA 10 Surge current capacity Yes 10 Voltage type KA 10	Rated fault current	А	0.3
Rated short-circuit breaking capacity EN 60898 IA 0 Rated short-circuit breaking capacity EC 60947-2 KA 0 Frequency DI DI Release characteristic DI DI Concurrently switching N-neutral MA 9 Over voltage category MA 9 Pollution degree Jack 3 With in number of modular spacings Ma 9 Suitable for flush-mounted installation Ma 9 Degree of protection (IP) Ma 9 Surge current capacity Ma 10 Voltage type Ma 0	Leakage current type		AC
Rated short-circuit breaking capacity IEC 60947-2 KA 0 Frequency 50 Hz Release characteristic B Concurrently switching N-neutral KA 9 Over voltage category S 9 Pollution degree S 3 Width in number of modular spacings M 2 Suitable for flush-mounted installation M M Degree of protection (IP) M No Surge current capacity MA 920 Voltage type MA MA	Current limiting class		3
Frequency50 HzRelease characteristicBConcurrently switching N-neutralIOver voltage categoryIPollution degreeIWidth in number of modular spacingsIBuit-in depthISuitable for flush-mounted installationIDegree of protection (IP)ISurge current capacityIVoltage typeIII<	Rated short-circuit breaking capacity EN 60898	kA	10
Release characteristic Image: Biologic characteristic Concurrently switching N-neutral Image: Simple characteristic Over voltage category Image: Simple characteristic Pollution degree Image: Simple characteristic Width in number of modular spacings Image: Simple characteristic Built-in depth Image: Simple characteristic Suitable for flush-mounted installation Image: Simple characteristic Degree of protection (IP) Image: Simple characteristic Surge current capacity Image: Simple characteristic Voltage type Image: Simple characteristic	Rated short-circuit breaking capacity IEC 60947-2	kA	0
Concurrently switching N-neutralYesOver voltage category3Pollution degree2Width in number of modular spacings1Built-in depth75Suitable for flush-mounted installation1Degree of protection (IP)ISurge current capacityKAVoltage typeC	Frequency		50 Hz
Over voltage categoryImage: Constraint of the section of	Release characteristic		В
Pollution degree2Width in number of modular spacingsMG2Buit-in depthmm75.5Suitable for flush-mounted installationMMNoDegree of protection (IP)KA10Surge current capacityKAGAC	Concurrently switching N-neutral		Yes
Width in number of modular spacings Model Built-in depth mm 75.5 Suitable for flush-mounted installation Model No Degree of protection (IP) Model IP20 Surge current capacity KA 0 Voltage type Model AC	Over voltage category		3
Built-in depth mm 75.5 Suitable for flush-mounted installation M M Degree of protection (IP) M IP20 Surge current capacity KA 0 Voltage type KA C	Pollution degree		2
Suitable for flush-mounted installation Mo Degree of protection (IP) IP20 Surge current capacity KA 10 Voltage type KA AC	Width in number of modular spacings		2
Degree of protection (IP) IP20 Surge current capacity IMA Voltage type IMA	Built-in depth	mm	75.5
Surge current capacity kA 10 Voltage type kA AC	Suitable for flush-mounted installation		No
Voltage type AC	Degree of protection (IP)		IP20
	Surge current capacity	kA	10
Antinuisance tripping version Yes	Voltage type		AC
	Antinuisance tripping version		Yes

Dimensions

