

RCD/MCB combination switch, 13A, 100mA, miniature circuit-br. type B trip characteristic, 2p, residual current circuit-br. trip characteristic: A



Part no. Article no. Catalog No. FRBMM-B13/2/01-A 170804 FRBMM-B13/2/01-A

Similar to illustration

Delivery program

Basic function			Combined RCD/MCB devices
Number of poles			2 pole
Tripping characteristic			В
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	А	13
Rated switching capacity according to IEC/EN 61009		kA	10
Rated fault current	$I_{\Delta N}$	А	0.1
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	I _n	А	13
Tripping characteristic			В

Design verification as per IEC/EN 61439

Rated operational current for specified heat dissipation In A Ia Heat dissipation per pole, current-dependent Pvid W Ia Equipment heat dissipation, current-dependent Pvid W Ia Static heat dissipation, non-current-dependent Pvid W Ia Heat dissipation capacity Pvid W Ia Operating ambient temperature min. Pcies V Ia Image: Static heat dissipation capacity Image: Static heat dissipaticapacity Image: Static heat	Design vernication as per 120/214 01455			
Heat dissipation per pole, current-dependent Pvid We Equipment heat dissipation, current-dependent Pvid We Static heat dissipation, non-current-dependent Pvis We Itel dissipation capacity Paiss We Itel dissipation capacity Operating ambient temperature min. Paiss Ve Itel dissipation capacity Operating ambient temperature max. *C Itel dissipation capacity Itel dissipation capacity Itel dissipation fasterials and parts *C Itel dissipation capacity Itel dissipation capacity Itel dissipation of resistance *C Itel dissipation capacity Itel dissipation capacity Itel dissipation capacity *C Itel dissipation capacity Itel dissipation capacity Operating ambient temperature max. *C Itel dissipation capacity Itel dissipation capacity Itel dissipation of resistance *C *C Itel capacity Itel capacity Itel dissipation of resistance of insulating materials to anormal heat and fire due to internal electric effects Meets the product standard's requirements. Meets the product standard's requirements. Itel dissipation of resistance of insulating materials to anormal heat and fire due to internal electric effects <td>Technical data for design verification</td> <td></td> <td></td> <td></td>	Technical data for design verification			
Equipment heat dissipation, current-dependent Pvid Val Static heat dissipation, non-current-dependent Pvs Val 0 Heat dissipation capacity Pdiss Val 0 Operating ambient temperature min. Pdiss °C 3 Operating ambient temperature max. °C 4 3 ID2 Strength of materials and parts °C 4 3 1D2 Strength of materials and parts Mest the product standard's requirements. Mest the product standard's requirements. 1D2.31 Verification of resistance of insulating materials to normal head and fire due to internal electric effects Mest the product standard's requirements. 1D2.42 Resistance to ultra-violet (UV) radiation Mest the product standard's requirements. 1D2.51 Lifting M	Rated operational current for specified heat dissipation	In	А	13
It is the it dissipation, non-current-dependent Pus We 0 Static heat dissipation, non-current-dependent Pdiss We 0 It det dissipation capacity Pdiss We 0 Operating ambient temperature min. °C -25 Operating ambient temperature max. °C 40 It L2 Strength of materials and parts 0 -0 It 0.2.2 Corrosion resistance It we internal stability of enclosures Mets the product standard's requirements. It 0.2.3.1 Verification of thermal stability of enclosures Mets the product standard's requirements. It 0.2.3.2 Verification of resistance of insulating materials to normal heat and fire due to internal electric effects Mets the product standard's requirements. It 0.2.4 Resistance to ultra-violet (UV) radiation Mets the product standard's requirements. It 0.2.5 Lifting Dees not apply, since the entire switchgear needs to be evaluated. It 0.2.6 Mechanical impact Mets the product standard's requirements. It 0.2.7 Inscriptions Mets the product standard's requirements.	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 *C 40 IEC/EN 61439 design verification *C 40 IEC/EN 61439 design verification *C 40 ID.2.2 Corrosion resistance *C 40 ID.2.3.1 Verification of thermal stability of enclosures *C Meets the product standard's requirements. ID.2.3.2 Verification of resistance of insulating materials to normal heat and fire due to internal electric effects Meets the product standard's requirements. ID.2.4 Resistance to ultra-violet (UV) radiation *C Meets the product standard's requirements. ID.2.5 Lifting Des not apply, since the entire switchgear needs to be evaluated. ID.2.6 Mechanical impact Des not apply, since the entire switchgear needs to be evaluated. ID.2.7 Inscriptions Meets the product standard's requirements.	Equipment heat dissipation, current-dependent	P _{vid}	W	4
Operating ambient temperature min. out <	Static heat dissipation, non-current-dependent	P _{vs}	W	0
Operating ambient temperature max. °C 40 Operating ambient temperature max. °C 40 Increase of the second	Heat dissipation capacity	P _{diss}	W	0
Interview	Operating ambient temperature min.		°C	-25
IEC/EN 61439 design verification Image: Comparison of the set of	Operating ambient temperature max.		°C	40
10.2 Strength of materials and parts Image: Controsion resistance Meets the product standard's requirements. 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 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 Dees not apply, since the entire switchgear needs to be evaluated. 10.2.6 Mechanical impact Dees not apply, since the entire switchgear needs to be evaluated. 10.2.7 Inscriptions Meets the product standard's requirements.				0
10.2.2 Corrosion resistanceMeets the product standard's requirements.10.2.3.1 Verification of thermal stability of enclosuresMeets the product standard's requirements.10.2.3.2 Verification of resistance of insulating materials to normal heat and fire due to internal electric effectsMeets the product standard's requirements.10.2.4 Resistance to ultra-violet (UV) radiationMeets the product standard's requirements.10.2.5 LiftingMeets the product standard's requirements.10.2.6 Mechanical impactDoes not apply, since the entire switchgear needs to be evaluated.10.2.7 InscriptionsMeets the product standard's requirements.	IEC/EN 61439 design verification			
10.2.3.1 Verification of thermal stability of enclosuresMeets the product standard's requirements.10.2.3.2 Verification of resistance of insulating materials to normal heat and fire due to internal electric effectsMeets the product standard's requirements.10.2.4 Resistance to ultra-violet (UV) radiationMeets the product standard's requirements.10.2.5 LiftingDoes not apply, since the entire switchgear needs to be evaluated.10.2.6 Mechanical impactDoes not apply, since the entire switchgear needs to be evaluated.10.2.7 InscriptionsMeets the product standard's requirements.	10.2 Strength of materials and parts			
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. 10.2.3.3 Verification of resistance of insulating materials to abnormal heat 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.	10.2.2 Corrosion resistance			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 effectsMeets the product standard's requirements.10.2.4 Resistance to ultra-violet (UV) radiationMeets the product standard's requirements.10.2.5 LiftingDoes not apply, since the entire switchgear needs to be evaluated.10.2.6 Mechanical impactDoes not apply, since the entire switchgear needs to be evaluated.10.2.7 InscriptionsMeets the product standard's requirements.	10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
and fire due to internal electric effects and fire due to internal electric effects 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.	10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.5 LiftingDoes not apply, since the entire switchgear needs to be evaluated.10.2.6 Mechanical impactDoes not apply, since the entire switchgear needs to be evaluated.10.2.7 InscriptionsMeets the product standard's requirements.				Meets the product standard's requirements.
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.	10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.7 Inscriptions 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.
10.3 Degree of protection of ASSEMBLIES 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 poles (total)		2
Number of protected poles		2
Nominal rated voltage	V	240
Nominal rated current	А	13
Rated fault current	А	0.1
Leakage current type		A
Current limiting class		3
Rated short-circuit breaking capacity EN 60898	kA	10
Rated short-circuit breaking capacity IEC 60947-2	kA	0
Frequency		50 Hz
Release characteristic		В
Concurrently switching N-neutral		No
Over voltage category		3
Pollution degree		2
Width in number of modular spacings		2
Built-in depth	mm	75.5
Suitable for flush-mounted installation		No
Degree of protection (IP)		IP20
Surge current capacity	kA	0.25
Voltage type		AC
Antinuisance tripping version		No

Dimensions

