

RCD/MCB combination switch, 10A, 30mA, miniature circuit-breaker type C trip characteristic, 2p, residual current circuit-breaker trip characteristic: A



Part no. Article no. Catalog No. FRBMM-C10/2/003-A 170786 FRBMM-C10/2/003-A

Similar to illustration

#### **Delivery program**

Basic function			Combined RCD/MCB devices
Number of poles			2 pole
Tripping characteristic			C
Application			Switchgear for industrial and advanced commercial applications
Rated current	I <sub>n</sub>	А	10
Rated switching capacity according to IEC/EN 61009		kA	10
Rated fault current	$I_{\Delta N}$	А	0.03
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	10
Tripping characteristic			С

## **Design verification as per IEC/EN 61439**

Rated operational current for specified heat dissipation     In     A     10       Heat dissipation per pole, current-dependent     Pvid     Ve     0       Equipment heat dissipation, current-dependent     Pvid     Ve     4.3       Static heat dissipation, non-current-dependent     Pvis     Ve     0       Heat dissipation capacity     Pdiss     Ve     0       Operating ambient temperature min.     Pc     Pc     25       Operating ambient temperature max.     Me     Ne     0	Design vernication as per 120/214 01455			
Heat dissipation per pole, current-dependent       Pvid       We         Equipment heat dissipation, current-dependent       Pvid       We       4.3         Static heat dissipation, non-current-dependent       Pvis       We       0         Heat dissipation capacity       Pdiss       We       0         Operating ambient temperature min.       Pdiss       Ve       25         Operating ambient temperature max.       °C       40         ID2 Strength of materials and parts       °C       40         102.2 Corrosion resistance       Meets the product standard's requirements.         102.3 Verification of termal stability of enclosures       Meets the product standard's requirements.         102.3.1 Verification of resistance of insulating materials to normal heat fire due to internal electric effects       Meets the product standard's requirements.         102.3.3 Verification of resistance of insulating materials to abnormal heat fire due to internal electric effects       Meets the product standard's requirements.         102.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects       Meets the product standard's requirements.         102.4 Resistance to ultra-violet (UV) radiation       Meets the product standard's requirements.       Meets the product standard's requirements.         102.2 Kifting	Technical data for design verification			
Equipment heat dissipation, current-dependent   Pvid   W   43     Static heat dissipation, non-current-dependent   Pvid   W   0     Heat dissipation capacity   Pdiss   W   0     Operating ambient temperature min.   Pdiss   °C   40     Operating ambient temperature max.   °C   40     EEV/EN 61439 design verification   F   6     102.52 tength of materials and parts   Kets the product standard's requirements.     102.32 Verification of tensistance of insulating materials to normal heat and fire due to internal electric effects   Kets the product standard's requirements.     102.32 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects   Kets the product standard's requirements.     102.32 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects   Kets the product standard's requirements.     102.32 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects   Kets the product standard's requirements.     102.42 Resistance to ultra-violet (UV) radiation   Kets the product standard's requirements.     102.52 Lifting   Ces not apply, since the entire switchgear needs to be evaluated.     102.52 Infiguines   Kets the product standard's requirements.     102.51 Lifting   Ces not apply, since the entire switchgear needs to be evaluated. <td>Rated operational current for specified heat dissipation</td> <td>In</td> <td>А</td> <td>10</td>	Rated operational current for specified heat dissipation	In	А	10
Number of the definition	Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
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	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	10
Rated fault current	А	0.03
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		C
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

