

RCD/MCB combination switch, 10A, 30mA, miniature circuit-breaker type C trip characteristic, 3p, residual current circuit-breaker trip characteristic: A



Part no. FRBMM-C10/3/003-A Article no. 170738 Catalog No. FRBMM-C10/3/003-A

Similar to illustration

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Delivery program			
Basic function			Combined RCD/MCB devices
Number of poles			3 pole
Tripping characteristic			C
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	Α	10
Rated switching capacity according to IEC/EN 61009		kA	10
Rated fault current	$I_{\Delta N}$	Α	0.03
Tripping		Α	non-delayed
Product range			FRBmM
Sensitivity			Pulse-current sensitive
Impulse withstand current			Partly surge-proof 250 A
Contact sequence			1 3 5 T

Technical data

Electrical

Sensitivity			Pulse-current sensitive
Rated current	In	Α	10
Tripping characteristic			C

Design verification as per IEC/EN 61439

Design vernication as per illo/liv 01433			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	10
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	6.3
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 3 Nominal rated voltage V 415 Nominal rated current A 10 Rated fault current A 0.03 Leakage current type A A Current limiting class 3 3 Rated short-circuit breaking capacity EN 60898 KA 10 Rated short-circuit breaking capacity IEC 60947-2 KA 0 Frequency 50 Hz C Release characteristic C C Concurrently switching N-neutral No 3 Over voltage category 3 2 Pollution degree 2 2 Width in number of modular spacings 4 4 Built-in depth No No Suitable for flush-mounted installation No No Degree of protection (IP) No No Suitable for flush-mounted installation No No Suitable for flush-mounted installation No No Degree of protection (IP) No No <th></th> <th></th> <th></th>			
Nominal rated voltage Nominal rated current Nominal rated current Rated fault current Leakage current type Leakage current type Current limiting class Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity EN 60897-2 Release characteristic Concurrently switching N-neutral Over voltage category Over voltage category Rollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity V	Number of poles (total)		3
Nominal rated current Rated fault current Leakage current type Current limiting class Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity EC 60947-2 Release characteristic Concurrently switching N-neutral Over voltage category Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity A 10 A 20 A 10 A	Number of protected poles		3
Rated fault current Leakage current type Current limiting class Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic Concurrently switching N-neutral Over voltage category Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity A A A A A A A A A A A A A	Nominal rated voltage	V	415
Leakage current type Current limiting class Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic Concurrently switching N-neutral Over voltage category Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity A A A A A B A D A Degree of protection (IP) No A A Degree of protection (IP) KA Degree of protection (IP) Surge current capacity A A Degree of protection (IP) RA Degree of protection (IP) No Degree of protection (IP) KA Degree of protection (IP) Concurrently switch in in the protection (IP) KA Degree of protection (IP)	Nominal rated current	Α	10
Current limiting class Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic Concurrently switching N-neutral Over voltage category Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity KA 10 0 0 0 0 0 0 0 0 0 0 0 0	Rated fault current	Α	0.03
Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity IEC 60947-2 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic CCConcurrently switching N-neutral Over voltage category Over voltage category Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity KA 10 C C C C C C C C C C C C C	Leakage current type		A
Rated short-circuit breaking capacity IEC 60947-2 Frequency Release characteristic Concurrently switching N-neutral Over voltage category Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity KA 0 C Concurrently switching N-neutral No Pollution degree 2 Wath in number of modular spacings Mm 75.5 No Pollution degree No Pollution degree of protection (IP) Release characteristic KA O Degree of protection (IP) KA O Degree of protection (IP)	Current limiting class		3
Frequency Release characteristic Concurrently switching N-neutral Over voltage category Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity Frequency So Hz C C C C DEGREE No So Hz C C C C DEGREE No So Hz C C C C DEGREE No So Hz C C C C C C C C C C C C C	Rated short-circuit breaking capacity EN 60898	kA	10
Release characteristic Concurrently switching N-neutral Over voltage category 3 Pollution degree 2 Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity C C Concurrently switching N-neutral No 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Rated short-circuit breaking capacity IEC 60947-2	kA	0
Concurrently switching N-neutral Over voltage category 3 Pollution degree 2 Width in number of modular spacings Built-in depth mm 75.5 Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity No	Frequency		50 Hz
Over voltage category Over voltage category 2 Width in number of modular spacings Built-in depth mm 75.5 Suitable for flush-mounted installation No Degree of protection (IP) Surge current capacity A 3 4 No No No Degree of protection (IP) Surge current capacity KA 0.25	Release characteristic		С
Pollution degree 2 Width in number of modular spacings 4 Built-in depth 75.5 Suitable for flush-mounted installation No Degree of protection (IP) IP20 Surge current capacity kA 0.25	Concurrently switching N-neutral		No
Width in number of modular spacings 4 Built-in depth mm 75.5 Suitable for flush-mounted installation No Degree of protection (IP) IP20 Surge current capacity kA 0.25	Over voltage category		3
Built-in depth mm 75.5 Suitable for flush-mounted installation No Degree of protection (IP) IP20 Surge current capacity kA 0.25	Pollution degree		2
Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity No IP20 kA 0.25	Width in number of modular spacings		4
Degree of protection (IP) Surge current capacity IP20 kA 0.25	Built-in depth	mm	75.5
Surge current capacity kA 0.25	Suitable for flush-mounted installation		No
	Degree of protection (IP)		IP20
	Surge current capacity	kA	0.25
Voltage type AC	Voltage type		AC
Antinuisance tripping version No	Antinuisance tripping version		No

Dimensions

