



RCD/MCB combination switch, 10A, 30mA, miniature circuit-breaker type C trip characteristic, 1pole+N, residual current circuit-breaker trip characteristic: AC

Part no. FRBM6-C10/1N/003
Catalog No. 177798
Alternate Catalog No. FRBM6-C10/1N/003

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	10
Equipment heat dissipation, current-dependent	P_{vid}	W	2.3
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	40
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 7.0

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@ss10.0.1-27-14-22-07 [AFZ810015])			
Number of poles (total)			2
Number of protected poles			1
Rated voltage		V	240
Rated insulation voltage U_i		V	500
Rated impulse withstand voltage U_{imp}		kV	4
Rated current		A	10
Rated fault current		A	0.03
Leakage current type			AC

Current limiting class		3
Rated short-circuit breaking capacity acc. EN 61009	kA	6
Rated short-circuit breaking capacity IEC 60947-2	kA	6
Rated short-circuit breaking capacity Icn acc. EN 61009-1	kA	6
Disconnection characteristic		
Surge current capacity	kA	0.25
Voltage type		AC
Frequency		50 Hz
Release characteristic		C
Concurrently switching N-neutral		Yes
With interlocking device		No
Over voltage category		3
Pollution degree		2
Ambient temperature during operating	°C	-25 - 40
Width in number of modular spacings		2
Built-in depth	mm	75.5
Suitable for flush-mounted installation		No
Anti- nuisance tripping version		No
Degree of protection (IP)		IP20
Connectable conductor cross section solid-core	mm ²	1 - 25
Connectable conductor cross section multi-wired	mm ²	1 - 25