

RCD/MCB combination switch, 13A, 30mA, miniature circuit-breaker type C trip characteristic, 2p, residual current circuit-breaker trip characteristic: A



Part no. FRBDM-C13/2/003-G/A
Article no. 168203
Catalog No. PDC-TBD6546

Similar to illustration

Del	livery	program
		DIUGIGII

Delivery program			
Basic function			Combined RCD/MCB devices
Number of poles			2 pole
Tripping characteristic			С
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	Α	13
Rated switching capacity according to IEC/EN 61009		kA	10
Rated fault current	$I_{\Delta N}$	Α	0.03
Tripping		Α	Short time-delayed
Product range			FRBdM
Sensitivity			Pulse-current sensitive
Impulse withstand current			Surge-proof, 3 kA
Contact sequence			

Technical data

Electrical

Sensitivity			Pulse-current sensitive
Rated current	In	Α	13
Tripping characteristic			C

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	13
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	3.4
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.

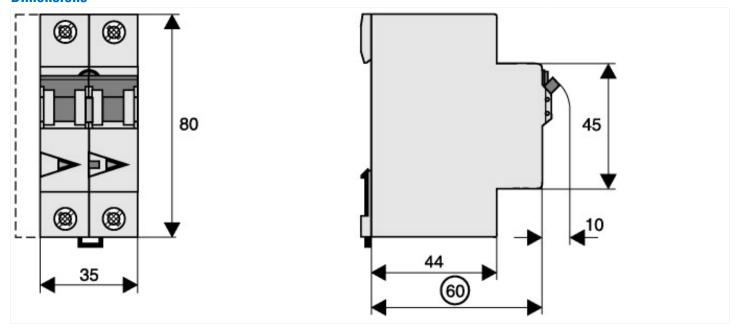
Technical data ETIM 6.0

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 2 Nominal rated voltage V 240 Nominal rated current A 13 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 EC 60947-2 KA 0 Frequency 50 Hz C Release characteristic C C Concurrently switching N-neutral No No Over voltage category 3 2 Pollution degree 2 2 Width in number of modular spacings mm 70 Built-in depth No No Suitable for flush-mounted installation mm 70 Degree of protection (IP) No No Suitable for flush-mounted installation No No Suitable for flush-mounted installation No No Suitable for flush-mounted installation No			
Nominal rated voltage V 240 Nominal rated current A 13 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 EC 60947-2 kA 0 Frequency 50 Hz C Release characteristic C No Concurrently switching N-neutral No 3 Over voltage category 3 2 Pollution degree 2 2 Width in number of modular spacings mm 70 Suitable for flush-mounted installation No No Degree of protection (IP) No No Surge current capacity KA 3 3	Number of poles (total)		2
Nominal rated current Rated fault current Rated fault current Rated fault current Rated fault current Relakage current type Current limiting class Rated short-circuit breaking capacity EN 60998 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic 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	Number of protected poles		2
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 B A B A B A A B A B A	Nominal rated voltage	V	240
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 B A B A B A B A B B	Nominal rated current	Α	13
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 D 10 10 10 10 10 10 10 10 10 1	Rated fault current	Α	0.03
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 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 C 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 C C C C C C C C C C C	Current limiting class		3
Frequency Release characteristic Concurrently switching N-neutral Over voltage category Outlin degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity 50 Hz C C C C C C 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 Over voltage category 3 Pollution degree 2 Width in number of modular spacings Built-in depth mm 70 Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity KA 3 C Release C No No 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 Pollution degree Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity No No No No No IP20	Frequency		50 Hz
Over voltage category Over voltage category 3 Pollution degree 2 Width in number of modular spacings Built-in depth mm 70 Suitable for flush-mounted installation No Degree of protection (IP) Surge current capacity A 3 1 1 1 1 1 1 1 1 1 1 1 1	Release characteristic		С
Pollution degree 2 Width in number of modular spacings 2 Built-in depth 70 Suitable for flush-mounted installation No Degree of protection (IP) IP20 Surge current capacity kA 3	Concurrently switching N-neutral		No
Width in number of modular spacings 2 Built-in depth mm 70 Suitable for flush-mounted installation No Degree of protection (IP) IP20 Surge current capacity kA 3	Over voltage category		3
Built-in depth mm 70 Suitable for flush-mounted installation No Degree of protection (IP) IP20 Surge current capacity kA 3	Pollution degree		2
Suitable for flush-mounted installation No Degree of protection (IP) IP20 Surge current capacity kA 3	Width in number of modular spacings		2
Degree of protection (IP) Surge current capacity IP20 kA 3	Built-in depth	mm	70
Surge current capacity kA 3	Suitable for flush-mounted installation		No
	Degree of protection (IP)		IP20
Voltage type AC	Surge current capacity	kA	3
	Voltage type		AC
Antinuisance tripping version Yes	Antinuisance tripping version		Yes

Dimensions



Additional product information (links)

Product overview (Web)

http://www.eaton.eu/Europe/Electrical/ProductsServices/CircuitProtection/DigitalCircuitBreakers/index.htm