

RCD/MCB combination switch, 10A, 100mA, miniature circuit-br. type B trip characteristic, 1-phase+N, residual current circuit-br. trip characteristic: A



Part no. FRBDM-B10/1N/01-G/A Article no. 168279

Catalog No. PDC-TBD6511

Similar to illustration

Delivery program

Delivery program			
Basic function			Combined RCD/MCB devices
Number of poles			1 pole+N
Tripping characteristic			В
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	0.1
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	10
Tripping characteristic			В

Design verification as per IEC/EN 61439

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	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 (II) is observed

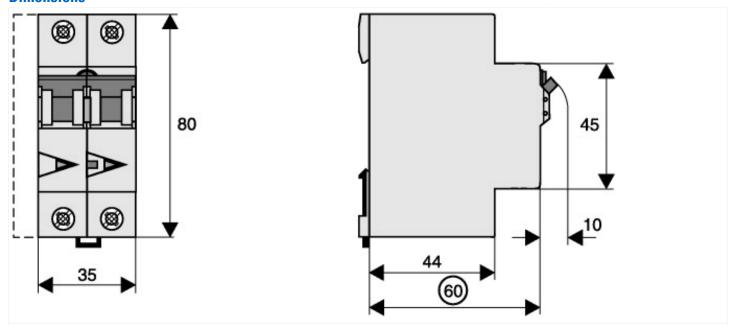
Technical data ETIM 6.0

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 1 Nominal rated voltage V 240 Nominal rated current A 10 Reted pull current A 0.1 Leakage current type A 3 Current limiting class KA 10 Rated short-circuit breaking capacity EN 60898 KA 10 Rated short-circuit breaking capacity EN 60898 KA 0 Release charcteristic SOHz 50 Hz Release charcteristic Yes 9 Concurrently switching N-neutral Yes Yes Over voltage category Yes 2 Pollution degree Yes 2 Width in number of modular spacings Yes 2 Suitable for flush-mounted installation Yes No Suitable for flush-mounted installation Yes No Surge current capacity Yes No Suitable for flush-mounted installation Yes No Surge current capacity Yes No			
Nominal rated voltage V 240 Nominal rated current A 10 Rated fault current A 0.1 Leakage current type A 0.1 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 B Release characteristic B Yes Concurrently switching N-neutral Yes 3 Over voltage category 2 2 Vollution degree 2 2 Width in number of modular spacings mm 70 Suitable for flush-mounted installation Mn 70 Degree of protection (IP) No P20 Surge current capacity KA 3	Number of poles (total)		2
Nominal rated current Rated fault current Rated fault current Reakage current type Current limiting class Rated short-circuit breaking capacity EN 60998 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic Release characteristic Release characteristic Roucurrently 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	Number of protected poles		1
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 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 0.1 A A A 0.1 A 10 B 10 10 10 10 10 10 10 10	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 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 A A A A A B A B A D A D A D A D A D A D A D A D A D A D A D A D A D D	Nominal rated current	А	10
Current limiting class Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic Release characteristic Rover 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 A A D 10 A A D 10 10 A D 10 10 A D 10 10 A D 10	Rated fault current	А	0.1
Rated short-circuit breaking capacity EN 60898 Rated short-circuit breaking capacity IEC 60947-2 Release characteristic Release character	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 B CO Hz Frequency Fes So Hz B CO Hz Fes Pes Yes 2 2 Ves 2 Ves 7 To No IP20 IP20 KA 3 IP20	Current limiting class		3
Frequency Release characteristic Routerrently 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 Frequency Solution Solu	Rated short-circuit breaking capacity EN 60898	kA	10
Release characteristic Concurrently switching N-neutral Over voltage category Pollution degree Width in number of modular spacings Built-in depth mm 70 Suitable for flush-mounted installation Degree of protection (IP) Surge current capacity Release characteristic B Wes Yes 2 Ves 3 7 0 0 0 0 0 0 0 0 0 0 0 0	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 Yes Yes Yes No 2 Pollution degree polyman 70 No IP20 KA 3	Frequency		50 Hz
Over voltage category Suitable for flush-mounted installation Surge current capacity 3 2 3 2 4 5 7 7 7 8 8 8 8 8 8 8 8 8 8	Release characteristic		В
Pollution degree 2 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	Concurrently switching N-neutral		Yes
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 Degree of protection (IP) Surge current capacity No IP20 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