DATASHEET - FRBM4-C20/3N/003-A



RCD/MCB combination, 20 A, 30 mA, MCB trip characteristic: C, 3p+N, RCD trip characteristic: A



Part no. FRBM4-C20/3N/003-A Catalog No. 171000

Alternate Catalog

No.

FRBM4-C20/3N/003-A

Similar to illustration

Delivery program

Delivery program			
Basic function			Combined RCD/MCB devices
Number of poles			3 pole+N
Tripping characteristic			C
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	Α	20
Rated switching capacity according to IEC/EN 61009		kA	4.5
Rated fault current	$I_{\Delta N}$	Α	0.03
Туре			Туре А
Tripping		s	non-delayed
Product range			FRBm4
Sensitivity			Pulse-current sensitive
Impulse withstand current			Partly surge-proof 250 A
Contact sequence			1 3 5 N T H 2 4 6 N

Technical data

Electrical

Protected pole			4
Rated voltage according to IEC/EN 60947-2	Un	V AC	240
Rated frequency	f	Hz	50
Rated fault current	$I_{\Delta n}$	mA	30
Sensitivity			Pulse-current sensitive
Rated current	In	Α	20
Tripping characteristic			C

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	20
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	5.4
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

Technical data ETIM 7.0

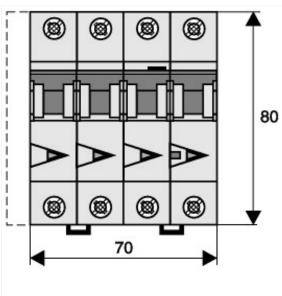
Circuit breakers and fuses (EG000020) / Earth leakage circuit breaker (EC000905)

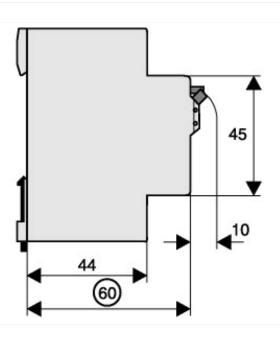
Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / MCB/RCCB combination (ecl@ss10.0.1-27-14-22-07 [AFZ810015])

Number of poles (total) 4

Rated voltage V 415 Rated insulation voltage Uinp VV 500 Rated current A 20 Rated faut current A 0.03 Rated faut current type A 0.03 Current limiting class 3 3 Rated short-circuit breaking capacity acc. EN 61009 KA 4.5 Rated short-circuit breaking capacity Icc 60947-2 KA 4.5 Surge current capacity KA 4.5 Voltage type C 0.25 Fequency C 0.25 Release characteristic C 0.0 Concurrently switching N-neutral Yes Yes With interlocking device No No Over voltage category 2 2.5 + 40 With in number of modular spacings Yes 2.5 + 40 <t< th=""><th></th><th></th><th></th></t<>			
Rated insulation voltage Uimp V 500 Rated aimpulse withstand voltage Uimp kV 4 Rated current A 20 Rated fault current A 0.03 Leakage current type A A Current limiting class 3 Rated short-circuit breaking capacity acc. EN 61009 KA 4.5 Rated short-circuit breaking capacity Ice 06947-2 KA 4.5 Rated short-circuit breaking capacity Ice acc. EN 61009-1 KA 4.5 Rated short-circuit breaking capacity Ice acc. EN 61009-1 KA 4.5 Rated short-circuit breaking capacity Ice acc. EN 61009-1 KA 4.5 Release characteristic C C Voltage type C C Frequency Yes No Release characteristic C Very old acceptance type in the foliation of fo	Number of protected poles		4
Rated impulse withstand voltage Ulimp AV 4 Rated current AV 20 Rated fault current AV 0.03 Leakage current type AV AV Current limiting class 3 3 Rated short-circuit breaking capacity acc. EN 61009 KA 4.5 Rated short-circuit breaking capacity Icc 60947-2 KA 4.5 Rated short-circuit breaking capacity Icc acc. EN 61009-1 KA 4.5 Disconnection characteristic VA 4.5 Surge current capacity KA 4.5 Voltage type C 50 Hz Frequency VA 50 Hz Release characteristic C 50 Hz Concurrently switching N-neutral Yes NO With interlocking device Yes AV Over voltage category Yes 2-25 40 Within in number of modular spacings Yes 2-25 40 Within in number of modular spacings Yes NO Suitable for flush-mounted installation Yes NO <	Rated voltage	V	415
Rated current A 20 Rated fault current A 0.03 Leakage current type A A Current limiting class 3 3 Rated short-circuit breaking capacity acc. EN 61009 KA 4.5 Rated short-circuit breaking capacity IEC 60947-2 KA 4.5 Rated short-circuit breaking capacity Incacc. EN 61009-1 KA 4.5 Surge current capacity KA 4.5 Voltage type KA 0.25 Voltage type KA 0.25 Frequency KA 0.25 Release characteristic C C Concurrently switching N-neutral Yes Yes With interlocking device No 3 Over voltage category 2 25 - 40 Pollution degree 4 25 - 40 Ambient temperature during operating m 7.5 Suitable for flush-mounted installation mm 7.5 Anti-nuisance tripping version mm 7.5 Degree of protection (IP) <	Rated insulation voltage Ui	V	500
Rated fault current Leakage current type Current limiting class Rated short-circuit breaking capacity acc. EN 61009 Rated short-circuit breaking capacity IEC 60947-2 Rated short-circuit breaking c	Rated impulse withstand voltage Uimp	kV	4
Leakage current type Current limiting class Rated short-circuit breaking capacity acc. EN 61009 Rated short-circuit breaking capacity IEC 60947-2 Rated short-circuit breaking capacity lon acc. EN 61009-1 Rated shor	Rated current	Α	20
Current limiting class 3 Rated short-circuit breaking capacity IEC 60947-2 kA 4.5 Rated short-circuit breaking capacity IEC 60947-2 kA 4.5 Rated short-circuit breaking capacity Icn acc. EN 61009-1 kA 4.5 Disconnection characteristic VA 4.5 Surge current capacity KA 0.25 Voltage type AC AC Frequency 50 Hz C Release characteristic C C Concurrently switching N-neutral Yes No With interlocking device No No Over voltage category 3 2 Pollution degree 2 25 - 40 Width in number of modular spacings 4 4 Built-in depth mm 75.5 Suitable for flush-mounted installation mm 75.5 Anti-nuisance tripping version No No Degree of protection (IP) No No Connectable conductor cross section solid-core mm² 1-25	Rated fault current	Α	0.03
Rated short-circuit breaking capacity IEC 60947-2 kA 4.5 Rated short-circuit breaking capacity IEC 60947-2 kA 4.5 Rated short-circuit breaking capacity Icn acc. EN 61009-1 kA 4.5 Disconnection characteristic Voltage type KA 0.25 Voltage type AC AC Frequency Belease characteristic C C Concurrently switching N-neutral Yes No With interlocking device No 3 Over voltage category Yes 2 Pollution degree 2 25-40 Ambient temperature during operating **C 25-40 Width in number of modular spacings **M 75.5 Built-in depth No No Suitable for flush-mounted installation No No Anti-nuisance tripping version No No Degree of protection (IP) P020 P200 Connectable conductor cross section solid-core mm² 1-25	Leakage current type		A
Rated short-circuit breaking capacity IEC 60947-2 Rated short-circuit breaking capacity Icn acc. EN 61009-1 Rated Short-circuit capacity Icn acc. EN 61009-1 Rated Short-circuit breaking capacity Icn acc. EN 61009-1 Rated Short-circuit capacity Icn	Current limiting class		3
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Disconnection characteristic Surge current capacity Voltage type Frequency Release characteristic Concurrently switching N-neutral With interlocking device Over voltage category Pollution degree Ambient temperature during operating With in number of modular spacings Built-in depth Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core Max	Rated short-circuit breaking capacity IEC 60947-2	kA	4.5
Surge current capacity Voltage type Voltage type Frequency Release characteristic Concurrently switching N-neutral With interlocking device Over voltage category Pollution degree Ambient temperature during operating "C" Ves Anti-nuisance tripping version No Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core Mai Acc Acc	Rated short-circuit breaking capacity Icn acc. EN 61009-1	kA	4.5
Voltage type Frequency Release characteristic Concurrently switching N-neutral With interlocking device Voer voltage category Pollution degree Ambient temperature during operating With in number of modular spacings Built-in depth Mind Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core AC Concurrently SWItCA SUITABLE SUITA	Disconnection characteristic		
Frequency Release characteristic Concurrently switching N-neutral With interlocking device Ouer voltage category Pollution degree Ambient temperature during operating Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core Pollution S D Hz C C C C C C C C C C C C C C C C C C C	Surge current capacity	kA	0.25
Release characteristic Concurrently switching N-neutral With interlocking device Over voltage category Pollution degree Ambient temperature during operating Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core Consumer	Voltage type		AC
Concurrently switching N-neutral With interlocking device No Over voltage category Pollution degree Ambient temperature during operating Concurrently switching N-neutral Pollution degree Ambient temperature during operating Concurrently switching N-neutral Pollution degree Ambient temperature during operating Concurrently switching N-neutral Pollution degree Pollution degre	Frequency		50 Hz
With interlocking device Over voltage category Pollution degree Ambient temperature during operating "C" 25 - 40 Width in number of modular spacings With in fully flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core No No No 1 - 25	Release characteristic		С
Over voltage category Over voltage category Pollution degree Ambient temperature during operating CC 25 - 40 Width in number of modular spacings Width in number of modular spacings Width in flush-mounted installation Mnm 75.5 Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core No Mm² 1-25	Concurrently switching N-neutral		Yes
Pollution degree Ambient temperature during operating Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core Degree of modular spacings Degree of modular spacings Consectable conductor cross section solid-core Degree of modular spacings Consectable conductor cross section solid-core Degree of modular spacings Degree of mod	With interlocking device		No
Ambient temperature during operating PC -25 - 40 Width in number of modular spacings Built-in depth Mm 75.5 Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core PC -25 - 40 A d No No No IP20 1 - 25	Over voltage category		3
Width in number of modular spacings Built-in depth Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core Width in number of modular spacings 4 No No No IP20 1 - 25	Pollution degree		2
Built-in depth Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core mm 75.5 No No No 120 120 1-25	Ambient temperature during operating	°C	-25 - 40
Suitable for flush-mounted installation Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core No IP20 1 - 25	Width in number of modular spacings		4
Anti-nuisance tripping version Degree of protection (IP) Connectable conductor cross section solid-core No IP20 1 - 25	Built-in depth	mm	75.5
Degree of protection (IP) Connectable conductor cross section solid-core mm² 1 - 25	Suitable for flush-mounted installation		No
Connectable conductor cross section solid-core mm² 1 - 25	Anti-nuisance tripping version		No
	Degree of protection (IP)		IP20
Connectable conductor cross section multi-wired mm ² 1 - 25	Connectable conductor cross section solid-core	mm²	1 - 25
	Connectable conductor cross section multi-wired	mm²	1 - 25

Dimensions





Additional product information (links)

Product overview (Web) http://www.eaton.eu/Europe/Electrical/ProductsServices/CircuitProtection/DigitalCircuitBreakers/index.htm