DATASHEET - FRBDM-C20/1N/003-G/A

Electronic RCD/MCB combination, 20 A, 30 mA, MCB trip characteristic: C, 1p+N, RCD trip characteristic: A

Part no. **FRBDM-C20/1N/003-G/A**
168271

Similar to illustration

General specifications	
Product name	Eaton Moeller series xEffect - FRBdM RCBO - residual-current circuit breaker with overcurrent protection
Part no.	FRBDM-C20/1N/003-G/A
EAN	4015081648504
Product Length/Depth	86 millimetre
Product height	75 millimetre
Product width	37 millimetre
Product weight	0.25 kilogram
Compliances	RoHS conform CE Marked
Certifications	CE
Product Tradename	xEffect - FRBdM
Product Type	RCBO - Residual-current circuit breaker with overcurrent protection
Product Sub Type	None
Delivery program	
Application	Switchgear for industrial and advanced commercial applications
Product range	FRBdM
Basic function	Combined RCD/MCB devices
Number of poles	Single-pole + N
Number of poles (protected)	1
Number of poles (total)	2
Tripping characteristic	C
Release characteristic	C
Amperage Rating	20 A
Rated current	20 A
Fault current rating	0.03 A
Sensitivity type	Pulse-current sensitive
Type	RCBO
Technical Data - Electrical	
Voltage type	AC
Voltage rating	240 V - 240 V
Rated operational voltage (Ue) - max	240 V
Rated insulation voltage (Ui)	250 V
Rated impulse withstand voltage (Uimp)	4 kV
Rated fault currents of product range	10, 30, 100 MilliAmpere
Impulse withstand current	Surge-proof, 3 kA
Frequency rating	50 Hz
Leakage current type	A
Rated switching capacity	10 kA
Rated switching capacity (IEC/EN 61009)	10 kA
Rated short-circuit breaking capacity (EN 60947-2)	0 kA
Rated short-circuit breaking capacity (EN 61009)	10 kA
Rated short-circuit breaking capacity (EN 61009-1)	10 kA
Rated short-circuit breaking capacity (IEC 60947-2)	0 kA
Surge current capacity	3 kA

Disconnection characteristic			Short-time delayed
Tripping			Short time-delayed
Pollution degree			2
Technical Data - Mechanical			
Width in number of modular spacings			2
Built-in depth			70 mm
Degree of protection			IP20
Connectable conductor cross section (solid-core) - min			1 mm^2
Connectable conductor cross section (solid-core) - max			25 mm^2
Connectable conductor cross section (multi-wired) - min			1 mm^2
Connectable conductor cross section (multi-wired) - max			25 mm^2
Design verification as per IEC/EN 61439 - technical data			
Rated operational current for specified heat dissipation (In)			20 A
Heat dissipation per pole, current-dependent			0 W
Equipment heat dissipation, current-dependent			5 W
Static heat dissipation, non-current-dependent			0 W
Heat dissipation capacity			0 W
Ambient operating temperature - max			40 °C
Ambient operating temperature - min			-25 °C
Design verification as per IEC/EN 61439			
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.
10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.6 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.
10.9.2 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.
Additional information			
Current limiting class			3
Features			Anti-nuisance tripping version Concurrently switching N-neutral

Technical data ETIM 9.0

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@ss13-27-14-22-07 [AFZ810020])			
Number of poles (total)			2
Number of protected poles			1
Rated voltage		V	240
Rated insulation voltage Ui		V	250
Rated impulse withstand voltage Uimp		kV	4
Rated current		A	20

Rated fault current		A	0.03
Leakage current type			A
Current limiting class			3
Power loss		W	5.4
Rated short-circuit breaking capacity according to EN 61009		kA	10
Rated short-circuit breaking capacity according to IEC 60947-2		kA	0
Rated short-circuit breaking capacity Icn according to EN 61009-1		kA	10
Disconnection characteristic			Short-time delayed
Surge current capacity		kA	3
Voltage type			AC
Frequency			50 Hz
Release characteristic			C
Concurrently switching neutral conductor			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	70
Flush-mounted installation			No
Anti-nuisance tripping version			Yes
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

© 04/2023 by Eaton Industries GmbH