NmRBM-20/2/C/01-A - RCD/MCB combination, 20 A, 100 mA, MCB trip characteristic: C, 2p, RCD trip characteristic: A

193786
NmRBM-20/2/C/01-A

Overview
Specifications
Resources

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DELIVERY PROGRAM

Basic function
Combined RCD/MCB devices

Number of poles
2 pole

Tripping characteristic
C

Application
Switchgear for residential and commercial applications

Rated current [I_n]
20 A

Rated switching capacity according to IEC/EN 61009
10 kA

Rated fault current [$I_{\Delta N}$]

0.1 A

Type
Type A

Tripping
non-delayed s…

Product range
NmRBM

Sensitivity
Pulse-current sensitive

Impulse withstand current
Partly surge-proof 250 A

TECHNICAL DATA

Electrical

Standards
IEC/EN 61009

Rated operational voltage [U_e]
[U_e]
Rated operating voltage [U_e]
230 V AC

Rated frequency [f]
50 Hz

Limit values of the operating voltage
0.85 x 1.1 x Un V AC

Rated fault currents [$I_{\Delta n}$]
100 mA

Rated non-tripping current [IΔno]
0.5 x $I_{\Delta n}$

Sensitivity
Pulse-current sensitive

Sensitivity
DC and pulsed current

Rated switching capacity [I_{cn}]
10 kA

Rated current [I_e]
20 A

Rated impulse withstand voltage [U_{imp}]
4 (1.2/50 µs) kV

Characteristic
C

Selectivity Class
3

Mechanical

Standard front dimension
45 mm

Enclosure height
Enclosure width
80 mm

Mounting
Tristable slide catch enables removal from existing combination.

Terminals top and bottom
Twin-purpose terminals

Terminal protection
finger and hand touch safe, DGUV VS3, EN 50274

Degree of protection
Switch
IP20

Degree of protection
Integrated
IP40

Terminal cross-section
Solid
1 - 25 mm²

Admissible ambient temperature range
-25 … +40 °C

Climatic proofing
according to IEC 68-2 (25 - 55 °C, 90 - 95 % Humidity)

Thickness of busbar material
Material thickness
0.8 … 2 mm

DESIGN VERIFICATION AS PER IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_n]
20 A

Equipment heat dissipation, current-dependent [P_{vid}]
5.9 W

Operating ambient temperature min.
-25 °C

Operating ambient temperature max.
+40 °C

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 Strength of materials and parts
10.2.3.1 Verification of thermal stability of enclosures
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.3.2 Verification of resistance of insulating materials to normal heat
Meets the product standard's requirements.

10.2 Strength of materials and parts
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 Strength of materials and parts
10.2.4 Resistance to ultra-violet (UV) radiation
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.5 Lifting
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
10.2.6 Mechanical impact
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
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 Insulation properties
10.9.3 Impulse withstand voltage
Is the panel builder's responsibility.

10.9 Insulation properties
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 8.0

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
2

Rated voltage
230 V

Rated insulation voltage Ui
250 V

Rated impulse withstand voltage Uimp
4 kV

Rated current
20 A

Rated fault current
0.1 A

Leakage current type
A

Current limiting class
3

Rated short-circuit breaking capacity according to EN 61009
10 kA

Rated short-circuit breaking capacity according to IEC 60947-2
0 kA

Rated short-circuit breaking capacity Icn according to EN 61009-1
10 kA

Disconnection characteristic
Undelayed

Surge current capacity
0.25 kA

Voltage type
AC

Frequency
50 Hz

Release characteristic
C

Concurrently switching neutral conductor
No

With interlocking device
No

Over voltage category
3

Pollution degree
2

Ambient temperature during operating
-25 - 40 °C

Width in number of modular spacings
2

Built-in depth
70 mm

Flush-mounted installation
No

Anti-nuisance tripping version
No

Degree of protection (IP)
IP20

Connectable conductor cross section solid-core

1 - 25 mm²

Connectable conductor cross section multi-wired
1 - 25 mm²

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