

NmRB4-32/3N/C/003-A - RCD/MCB combination, 32 A, 30 mA, MCB trip characteristic: C, 3p+N, RCD trip characteristic: A



193860  
NmRB4-32/3N/C/003-A

Overview

Specifications

Resources



Delivery program

Technical data

Design verification as  
per IEC/EN 61439

Technical data ETIM8.0

## DELIVERY PROGRAM

Basic function  
Combined RCD/MCB devices

Number of poles  
3 pole+N

Tripping characteristic  
C

Application  
Switchgear for residential and commercial  
applications

Rated current [ $I_n$ ]  
32 A

Rated switching capacity acc. to IEC/EN 60947-2  
[ $I_{cu}$ ]  
4.5 kA

Rated switching capacity according to IEC/EN  
61009

4.5 kA

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

Type  
Type A

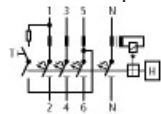
Tripping  
non-delayed s...

Product range  
NmRB4

Sensitivity  
Pulse-current sensitive

Impulse withstand current  
Partly surge-proof 250 A

Contact sequence



## TECHNICAL DATA

### Electrical

Standards  
IEC/EN 61009

Tripping  
non-delayed s...

Rated operating voltage [ $U_e$ ]  
230/400 V AC

Limit values of the operating voltage  
 $0.85 \times 1.1 \times U_n$  V AC

Rated frequency [f]  
50 Hz

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

Rated non-tripping current [ $I_{\Delta no}$ ]  
 $0.5 \times I_{\Delta n}$

Sensitivity  
DC and pulsed current

Rated switching capacity [ $I_{cn}$ ]  
4.5 kA

Rated current [ $I_e$ ]  
32 A

Rated impulse withstand voltage [ $U_{imp}$ ]  
4 (1.2/50  $\mu$ s) kV

Characteristic  
C

Maximum max. as short-circuit protective device  
100 A gL

Selectivity Class  
3

Lifespan  
Electrical  
> 4000 Operations

Lifespan  
Mechanical  
> 20000 Operations

## Mechanical

Standard front dimension  
45 mm

Enclosure height  
80 mm

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

Mounting width  
70 (4 SU) mm

Mounting  
Tristable slide catch enables removal from existing combination.

Degree of protection  
Switch  
IP20

Degree of protection  
Integrated  
IP40

Terminals top and bottom  
Twin-purpose terminals

Terminal capacities  
Solid  
1 - 25 mm<sup>2</sup>

Thickness of busbar material  
0.8 ... 2 mm

Admissible ambient temperature range  
-25 ... +40 °C

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

## DESIGN VERIFICATION AS PER IEC/EN 61439

**Technical data for design verification**

Rated operational current for specified heat dissipation [ $I_n$ ]  
32 A

Equipment heat dissipation, current-dependent  
[ $P_{vid}$ ]  
12.8 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 to enclosures without lifting aids.

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.

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 (ec@ss10.0.1-27-14-22-07 [AFZ810015])

Number of poles (total)  
4

Number of protected poles  
4

Rated voltage  
400 V

Rated insulation voltage  $U_i$   
500 V

Rated impulse withstand voltage  $U_{imp}$   
4 kV

Rated current  
32 A

Rated fault current  
0.03 A

Leakage current type  
A

Current limiting class  
3

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

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

Rated short-circuit breaking capacity I<sub>cn</sub> according  
to EN 61009-1  
4.5 kA

Disconnection characteristic  
Undelayed

Surge current capacity  
0.25 kA

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  
-25 - 40 °C

Width in number of modular spacings  
4

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 mm<sup>2</sup>

Connectable conductor cross section multi-wired  
1 - 25 mm<sup>2</sup>



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