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MCCB NZM1 4pole 50A 25kA therm/mag

Cat Number: NZMB1-4-A50

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 50A, B, frame 1, 4-A50

Technical Specifications:
Product Length/Depth | 84.5 mm
Product Height | 145 mm
Product Width | 120 mm
Product Weight | 1.316 kg
Compliances | RoHS conform
Certifications | IEC
IEC/EN 60947
Rated operational current for specified heat dissipation (In) | 50 A
10.11 Short-circuit rating | Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.4 Clearances and creepage distances | Meets the product standard's requirements.
10.12 Electromagnetic compatibility | Is the panel builder's responsibility. The specifications for the switchgear must be observed.
Mounting Method | DIN rail (top hat rail) mounting optional

Fixed
Built-in device fixed built-in technique
Amperage Rating | 50 A
10.2.5 Lifting | Does not apply, since the entire switchgear needs to be evaluated.
Terminal capacity (copper strip) | Min. 2 segments of 9 mm x 0.8 mm at box terminal
Max. 9 segments of 9 mm x 0.8 mm at box terminal
Handle type | Rocker lever
10.2.3.1 Verification of thermal stability of enclosures | Meets the product standard's requirements.
Ambient storage temperature - min | 40 °C
Protection against direct contact | Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110
Terminal capacity (copper busbar) | M6 at rear-side screw connection
Min. 12 mm x 5 mm direct at switch rear-side connection
Max. 16 mm x 5 mm direct at switch rear-side connection
10.8 Connections for external conductors | Is the panel builder's responsibility.
Special features | Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity Icn)
Rated current = rated uninterrupted current: 50 A
Set value in neutral conductor is synchronous with set value Ir of main pole.
Terminal capacity hint: Up to 95 mm² can be connected depending on the cable manufacturer.
Ambient operating temperature - max | 70 °C
Position of connection for main current circuit | Front side
Current rating of neutral conductor | 200% of phase conductor
Rated insulation voltage (Ui) | 690 V AC
Climatic proofing | Damp heat, cyclic, to IEC 60068-2-30
Damp heat, constant, to IEC 60068-2-78
Terminal capacity (copper stranded conductor/cable) | 25 mm² (2x) direct at switch rear-side connection
25 mm² - 95 mm² (1x) at 1-hole tunnel terminal
6 mm² - 25 mm² (2x) at box terminal
10 mm² - 70 mm² (1x) direct at switch rear-side connection
10 mm² - 70 mm² (1x) at box terminal
Features | Protection unit

Lifespan, electrical | 7500 operations at 400 V AC-1
7500 operations at 415 V AC-1
Electrical connection type of main circuit | Frame clamp
Short-circuit total breaktime | < 10 ms
Rated impulse withstand voltage (Uimp) at main contacts | 6000 V
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz | 25 kA
10.9.3 Impulse withstand voltage | Is the panel builder's responsibility.
Utilization category | A (IEC/EN 60947-2)
Number of poles | Four-pole
Ambient operating temperature - min | -25 °C
10.6 Incorporation of switching devices and components | Does not apply, since the entire switchgear needs to be evaluated.
Overload current setting (Ir) | 40 A - 50 A
10.5 Protection against electric shock | Does not apply, since the entire switchgear needs to be evaluated.
Terminal capacity (control cable) | 0.75 mm² - 2.5 mm² (1x)
0.75 mm² - 1.5 mm² (2x)
Equipment heat dissipation, current-dependent | 13.2 W
Instantaneous current setting (Ii) - min | 6 A
10.13 Mechanical function | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
10.2.6 Mechanical impact | Does not apply, since the entire switchgear needs to be evaluated.
10.9.4 Testing of enclosures made of insulating material | Is the panel builder's responsibility.
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz | 30 kA
Application | Use in unearthed supply systems at 440 V
10.3 Degree of protection of assemblies | Does not apply, since the entire switchgear needs to be evaluated.
Rated short-circuit making capacity Icm at 240 V, 50/60 Hz | 63 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz | 18.5 kA
Degree of protection (IP), front side | IP40 (with insulating surround)
IP66 (with door coupling rotary handle)
Instantaneous current setting (Ii) - max | 10 A
Overload current setting (Ir) - min | 40 A
Short delay current setting (Isd) - min | 0 A
Number of auxiliary contacts (normally closed contacts) | 0

10.2.3.2 Verification of resistance of insulating materials to normal heat | 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.
Lifespan, mechanical | 20000 operations
Overload current setting (Ir) - max | 50 A
Voltage rating | 440 V - 440 V
Terminal capacity (copper solid conductor/cable) | 6 mm² - 16 mm² (2x) direct at switch rear-side connection
16 mm² (1x) at tunnel terminal
6 mm² - 16 mm² (2x) at box terminal
10 mm² - 16 mm² (1x) direct at switch rear-side connection
10 mm² - 16 mm² (1x) at box terminal
Degree of protection (terminations) | IP00 (terminations, phase isolator and strip terminal)
IP10 (tunnel terminal)
Terminal capacity (aluminum stranded conductor/cable) | 25 mm² - 35 mm² (2x) direct at switch rear-side connection
25 mm² - 95 mm² (1x) at tunnel terminal
25 mm² - 35 mm² (1x) direct at switch rear-side connection
10.9.2 Power-frequency electric strength | Is the panel builder's responsibility.
Short-circuit release non-delayed setting - min | 300 A
Degree of protection | IP20
IP20 (basic degree of protection, in the operating controls area)
Overvoltage category | III
Short delay current setting (Isd) - max | 0 A
Rated impulse withstand voltage (Uimp) at auxiliary contacts | 6000 V
Number of auxiliary contacts (change-over contacts) | 0
Ambient storage temperature - max | 70 °C
Release system | Thermomagnetic release
Optional terminals | Connection on rear. Screw terminal. Tunnel terminal
Pollution degree | 3
10.7 Internal electrical circuits and connections | 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.
Functions | System and cable protection

Short-circuit release non-delayed setting - max | 500 A
Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz | 53 kA
Standard terminals | Box terminal
Type | Circuit breaker
10.2.2 Corrosion resistance | Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation | Meets the product standard's requirements.
10.2.7 Inscriptions | Meets the product standard's requirements.
Rated short-circuit making capacity Icm at 440 V, 50/60 Hz | 53 kA
Number of auxiliary contacts (normally open contacts) | 0
Isolation | 500 V AC (between auxiliary contacts and main contacts)
300 V AC (between the auxiliary contacts)
Number of operations per hour - max | 120
Circuit breaker frame type | NZM1
Direction of incoming supply | As required
Shock resistance | 20 g (half-sinusoidal shock 20 ms)
Terminal capacity (aluminum solid conductor/cable) | 10 mm^2 - 16 mm^2 (1x) direct at switch rear-side connection
10 mm^2 - 16 mm^2 (2x) direct at switch rear-side connection
16 mm^2 (1x) at tunnel terminal