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MCCB NZM2 3pole 40A 100kA therm/mag UL / CSA

Cat Number: NZMH2-A40-NA

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 40A, H2-A40-NA

Technical Specifications:
Product Length/Depth | 149 mm
Product Height | 195 mm
Product Width | 105 mm
Product Weight | 2.401 kg
Compliances | RoHS conform
Certifications | UL listed
CSA (File No. 22086)
UL (Category Control Number DIVQ)
UL/CSA
UL 489
CE marking
Specially designed for North America
IEC 60947-2
IEC/EN 60947
CSA-C22.2 No. 5-09

IEC
CSA (Class No. 1432-01)
UL (File No. E31593)
CSA certified
Rated operational current for specified heat dissipation (In) | 40 A
10.11 Short-circuit rating | Is the panel builder's responsibility. The specifications for the switchgear must be observed.
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz | 5 kA
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 | Fixed
DIN rail (top hat rail) mounting optional
Built-in device fixed built-in technique
Amperage Rating | 40 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
Min. 2 segements of 16 mm x 0.8 mm at rear-side connection (punched)
Max. 10 segments of 16 mm x 0.8 mm at rear-side connection (punched)
Max. 10 segments of 16 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) | Min. 16 mm x 5 mm direct at switch rear-side connection
M8 at rear-side screw connection
Max. 20 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: 40 A
Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values

are contained on the rating plate.
Adjustable overload releases Ir
Ambient operating temperature - max | 70 °C
Position of connection for main current circuit | Front side
Rated insulation voltage (Ui) | 1000 V AC
Climatic proofing | Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30
Terminal capacity (copper stranded conductor/cable) | 4 mm² - 3/0 mm² (1x) direct at switch rear-side connection
4 mm² - 350 mm² (1x) at box terminal
4 mm² - 350 mm² (1x) at tunnel terminal
Features | Protection unit
Motor drive optional
Low-voltage HBC fuse - max | 355 A gG/gL
Lifespan, electrical | 5000 operations at 690 V AC-3
6500 operations at 400 V AC-3
6500 operations at 415 V AC-3
7500 operations at 690 V AC-1
10000 operations at 400 V AC-1
Electrical connection type of main circuit | Screw connection
Short-circuit total breaktime | < 10 ms
Rated impulse withstand voltage (Uimp) at main contacts | 8000 V
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz | 150 kA
10.9.3 Impulse withstand voltage | Is the panel builder's responsibility.
Utilization category | A (IEC/EN 60947-2)
Number of poles | Three-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.
10.5 Protection against electric shock | Does not apply, since the entire switchgear needs to be evaluated.
Terminal capacity (control cable) | 14 mm² - 18 mm² (1x)
16 mm² - 18 mm² (2x)
Equipment heat dissipation, current-dependent | 13.44 W
Instantaneous current setting (Ii) - min | 320 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 operational current | 40 A (660-690 V AC-3, making and breaking capacity)
40 A (690 V AC-1, making and breaking capacity)
300 A (380/400 V AC-1, making and breaking capacity)
300 A (415 V AC-1, making and breaking capacity)
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz | 150 kA
Application | Branch circuits, feeder circuits
Use in unearthed supply systems at 690 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 | 330 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz | 130 kA
Degree of protection (IP), front side | IP66 (with door coupling rotary handle)
IP40 (with insulating surround)
Rated short-circuit making capacity Icm at 525 V, 50/60 Hz | 105 kA
Rated short-circuit making capacity Icm at 690 V, 50/60 Hz | 40 kA
Instantaneous current setting (Ii) - max | 400 A
Overload current setting (Ir) - min | 32 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 | 40 A
Voltage rating | 690 V - 690 V
Terminal capacity (copper solid conductor/cable) | 6 mm^2 - 11 mm^2 (1x) direct at switch rear-side connection
16 mm^2 (1x) at tunnel terminal
6 mm^2 - 12 mm^2 (1x) at box terminal
Degree of protection (terminations) | IP00 (terminations, phase isolator and strip terminal)

IP10 (tunnel terminal)
Rated operating voltage Ue (UL) - max | 600Y/347 V, 480 V
10.9.2 Power-frequency electric strength | Is the panel builder's responsibility.
Short-circuit release non-delayed setting - min | 320 A
Degree of protection | IP20 (basic degree of protection, in the operating controls area)
IP20
Overvoltage category | III
Rated short-time withstand current (t = 1 s) | 1.9 kA
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
Rated short-time withstand current (t = 0.3 s) | 1.9 kA
Ambient storage temperature - max | 70 °C
Release system | Thermomagnetic release
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 525 V, 50/60 Hz | 37.5 kA
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
Current limiting circuit breaker
Short-circuit release non-delayed setting - max | 400 A
Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz | 330 kA
Standard terminals | Screw 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 | 286 kA
Number of auxiliary contacts (normally open contacts) | 0
Isolation | 300 V AC (between the auxiliary contacts)
500 V AC (between auxiliary contacts and main contacts)
Number of operations per hour - max | 120
Circuit breaker frame type | NZM2
Direction of incoming supply | As required

Shock resistance | 20 g (half-sinusoidal shock 20 ms)
Terminal capacity (aluminum solid conductor/cable) | 16 mm² (1x) at tunnel terminal