Specifications

# Eaton 281276

## Catalog Number: 281276

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 40A, N1-S40-CNA




### General specifications

**Product Name**
Eaton Moeller series NZM molded case circuit breaker magnetic

**Catalog Number**
281276

**EAN**
4015082812768

**Product Length/Depth**
88 mm

**Product Height**
165.5 mm

**Product Width**
90 mm

**Product Weight**
1.046 kg

**Compliances**
RoHS conform

**Certifications**
Specially designed for North America
CSA-C22.2 No. 5-09
CSA (Class No. 1432-01)
IEC 60947-2
UL 489
IEC/EN 60947
CSA certified
UL listed
IEC
UL (Category Control Number DKPU2)
CSA (File No. 22086)
UL/CSA
UL (File No. E31593)
CE marking

Powering Business Worldwide

## Product specifications

### Type

Circuit breaker

### 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.
Motor protection in conjunction with contactor and overload relay
With short-circuit release
Without overload release Ir

### Application

Branch circuits, feeder circuits
Use in unearthed supply systems at 690 V

### Amperage Rating

40 A

### Voltage rating

690 V - 690 V

### 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

## Resources

### Brochures

eaton-digital-nzm-brochure-br013003en-en-us.pdf

eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf

### Catalogs

eaton-digital-nzm-catalog-ca013003en-en-us.pdf

### Characteristic curve

eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve-002.eps

eaton-circuit-breaker-nzm-mccb-characteristic-curve-058.eps

eaton-circuit-breaker-nzm-mccb-characteristic-curve.eps

### Declarations of conformity

DA-DC-03_N1

### Drawings

eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps

eaton-circuit-breaker-nzm-mccb-dimensions-017.eps

eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-006.eps

### eCAD model

ETN.281276.edz

### Installation instructions

eaton-cirucit-breaker-switch-disconnector-nzmb-il01203004z.pdf

### Installation videos

The new digital NZM Range

Introduction of the new digital circuit breaker NZM

### mCAD model

DA-CS-nzm1_3p

DA-CD-nzm1_3p

### Technical data sheets

eaton-nzm-technical-information-sheet

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.

### 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.

### 10.2.3.2 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.

### 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.

### 10.5 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.

### 10.9.2 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.

### Pollution degree

3

### Mounting Method

Fixed

Built-in device fixed built-in technique

### Climatic proofing

Damp heat, cyclic, to IEC 60068-2-30

Damp heat, constant, to IEC 60068-2-78

### Equipment heat dissipation, current-dependent

2.7 W

### Utilization category

A (IEC/EN 60947-2)

### Isolation

300 V AC (between the auxiliary contacts)

500 V AC (between auxiliary contacts and main contacts)

### Ambient operating temperature - max

70 °C

### Ambient operating temperature - min

-25 °C

### Ambient storage temperature - max

70 °C

### Ambient storage temperature - min

40 °C

### Low-voltage HBC fuse - max

200 A gG/gL

### Protection against direct contact

Finger and back-of-hand proof to VDE 0106 part 100

### Rated insulation voltage (Ui)

690 V

### Rated operating power at AC-3, 230 V

11 kW

### Rated operating power at AC-3, 400 V

18.5 kW

### Switch off technique

Magnetic

### Degree of protection

IP20 (basic degree of protection, in the operating controls area)

IP20

### Direction of incoming supply

As required

### Electrical connection type of main circuit

Other

### Lifespan, mechanical

20000 operations

### Overvoltage category

III

### Rated operational current

40 A (690 V AC-1, making and breaking capacity)

125 A (415 V AC-1, making and breaking capacity)

160 A (400 V AC-1, making and breaking capacity)

40 A (660-690 V AC-3, making and breaking capacity)

### Degree of protection (IP), front side

IP66 (with door coupling rotary handle)

IP40 (with insulating surround)

### Degree of protection (terminations)

IP10 (tunnel terminal)

IP00 (terminations, phase isolator and strip terminal)

### Number of poles

Three-pole

### Terminal capacity (copper strip)

Max. 9 segments of 9 mm x 0.8 mm at box terminal

Min. 2 segments of 9 mm x 0.8 mm at box terminal

### Lifespan, electrical

7500 operations at 400 V AC-3

7500 operations at 415 V AC-3

5000 operations at 690 V AC-3

### Functions

Short-circuit protection

### Shock resistance

20 g (half-sinusoidal shock 20 ms)

Rated operational current for specified heat dissipation (In)

40 A

Short-circuit release non-delayed setting - max

560 A

Short-circuit release non-delayed setting - min

320 A

Handle type

Rocker lever

Instantaneous current setting (Ii) - max

560 A

Instantaneous current setting (Ii) - min

320 A

Number of operations per hour - max

120

Overload current setting (Ir) - max

0 A

Overload current setting (Ir) - min

0 A

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz

85 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz

35 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz

35 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 525 V, 50/60 Hz

10 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz

7.5 kA

Standard terminals

Box terminal

Rated operating voltage Ue (UL) - max

480 Y / 277 V

Release system

Thermomagnetic release

Short-circuit total breaktime

< 10 ms

Terminal capacity (aluminum solid conductor/cable)

16 mm² (1x) at tunnel terminal

Terminal capacity (control cable)

14 mm² - 18 mm² (1x)

16 mm² - 18 mm² (2x)

Terminal capacity (copper busbar)

Min. 12 mm x 5 mm direct at switch rear-side connection

M8 at rear-side screw connection

Max. 16 mm x 5 mm direct at switch rear-side connection

Terminal capacity (copper solid conductor/cable)

6 mm² - 9 mm² (2x) direct at switch rear-side connection

16 mm² - 95 mm² (1x) at tunnel terminal

6 mm² - 12 mm² (1x) direct at switch rear-side connection

6 mm² - 12 mm² (1x) at box terminal

Terminal capacity (copper stranded conductor/cable)

4 mm² - 3/0 mm² (1x) at tunnel terminal

25 mm² (2x) at box terminal

4 mm² - 2/0 mm² (1x) direct at switch rear-side connection

25 mm² - 70 mm² (1x) at box terminal

Rated short-circuit breaking capacity Icu (IEC/EN 60947) at 400/415 V, 50/60 Hz

35 kA

Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz

105 kA

Rated short-circuit making capacity Icm at 440 V, 50/60 Hz

74 kA

Rated short-circuit making capacity Icm at 525 V, 50/60 Hz

40 kA

Rated short-circuit making capacity Icm at 690 V, 50/60 Hz

17 kA

Rated short-circuit making capacity Icm at 240 V, 50/60 Hz

187 kA

Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

Rated impulse withstand voltage (Uimp) at main contacts

6000 V

Power loss

2.7 W




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