Specifications

# Eaton 281266

## Catalog Number: 281266

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 80A, B1-S80-CNA




### General specifications

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

**Catalog Number**
281266

**EAN**
4015082812669

**Product Length/Depth**
88 mm

**Product Height**
165.5 mm

**Product Width**
90 mm

**Product Weight**
1.046 kg

**Compliances**
RoHS conform

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

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: 80 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 440 V

### Amperage Rating

80 A

### Voltage rating

440 V - 440 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-feerum-the-whole-grain-solution-success-story-en-us.pdf

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

### Catalogs

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

### Characteristic curve

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

eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-038.eps

eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-032.eps

### 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.281266.edz

### Installation instructions

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

### Installation videos

Introduction of the new digital circuit breaker NZM

The new digital NZM Range

### mCAD model

DA-CD-nzm1_3p

DA-CS-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, constant, to IEC 60068-2-78

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

### Equipment heat dissipation, current-dependent

10.79 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

22 kW

Rated operating power at AC-3, 400 V

45 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

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

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

Degree of protection (IP), front side

IP40 (with insulating surround)

IP66 (with door coupling rotary handle)

Degree of protection (terminations)

IP10 (tunnel terminal)

IP00 (terminations, phase isolator and strip terminal)

Number of poles

Three-pole

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

Lifespan, electrical

7500 operations at 415 V AC-3

Functions

Short-circuit protection

Shock resistance

20 g (half-sinusoidal shock 20 ms)

Rated operational current for specified heat dissipation (In)

80 A

Short-circuit release non-delayed setting - max

1120 A

### Short-circuit release non-delayed setting - min

640 A

### Handle type

Rocker lever

### Instantaneous current setting (Ii) - max

1120 A

### Instantaneous current setting (Ii) - min

640 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

30 kA

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

18.5 kA

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

18.5 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

M6 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 - 12 mm² (1x) direct at switch rear-side connection

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

6 mm² - 12 mm² (1x) at box terminal

6 mm² (1x) at tunnel terminal

### Terminal capacity (copper stranded conductor/cable)

4 mm² - 2/0 mm² (1x) at box terminal

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

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

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

18.5 kA

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

53 kA

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

53 kA

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

63 kA

### Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

### Rated impulse withstand voltage (Uimp) at main contacts

6000 V

### Power loss

10.8 W

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