Specifications

# Eaton 103040

## Catalog Number: 103040

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 5A, N2-S5-CNA




### General specifications

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

**Catalog Number**
103040

**EAN**
4015081028795

**Product Length/Depth**
149 mm

**Product Height**
195 mm

**Product Width**
105 mm

**Product Weight**
2.345 kg

**Compliances**
RoHS conform

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

Powering Business Worldwide

## Product specifications

### Type

Circuit breaker

### Special features

Rated current = rated uninterrupted current: 5 A
This circuit-breaker is only allowed to be used for UL/CSA applications.
Motor protection in conjunction with contactor and overload relay
With short-circuit release
Without overload release Ir

### Application

Branch circuits, feeder circuits

### Amperage Rating

5 A

### Voltage rating

690 V - 690 V

### Features

Protection unit
Motor drive optional

### 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. 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

## 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-004.eps

eaton-circuit-breaker-nzm-mccb-characteristic-curve-052.eps

eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-036.eps

### Declarations of conformity

DA-DC-03_N2

### Drawings

eaton-circuit-breaker-nzm-mccb-dimensions-019.eps

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

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

### Installation videos

Introduction of the new digital circuit breaker NZM

The new digital NZM Range

### mCAD model

DA-CS-nzm2_3p

DA-CD-nzm2_3p

### Technical data sheets

eaton-nzm-technical-information-sheet

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

DIN rail (top hat rail) mounting optional

Built-in device fixed built-in technique

Fixed

### Climatic proofing

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

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

### Equipment heat dissipation, current-dependent

0.35 W

### 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

### Number of auxiliary contacts (change-over contacts)

0

### Number of auxiliary contacts (normally closed contacts)

0

### Number of auxiliary contacts (normally open contacts)

0

### Protection against direct contact

Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110

### Degree of protection

IP20

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

### Direction of incoming supply

As required

### Electrical connection type of main circuit

Screw connection

### Lifespan, mechanical

20000 operations

### Overvoltage category

III

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

IP40 (with insulating surround)

IP66 (with door coupling rotary handle)

### Degree of protection (terminations)

IP00 (terminations, phase isolator and strip terminal)

IP10 (tunnel terminal)

### Number of poles

Three-pole

### Terminal capacity (copper strip)

Max. 10 segments of 16 mm x 0.8 mm at box terminal

Max. 10 segments of 16 mm x 0.8 mm at rear-side connection (punched)

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)

### Lifespan, electrical

10000 operations at 400 V AC-1

6500 operations at 400 V AC-3

6500 operations at 415 V AC-3

5000 operations at 690 V AC-3

7500 operations at 690 V AC-1

### Functions

Short-circuit protection

### Shock resistance

20 g (half-sinusoidal shock 20 ms)

### Position of connection for main current circuit

Front side

### Rated operational current for specified heat dissipation (In)

5 A

### Release system

Thermomagnetic release

### Short-circuit total breaktime

< 10 ms

### Rated short-time withstand current (t = 0.3 s)

1.9 kA

### Rated short-time withstand current (t = 1 s)

1.9 kA

Short-circuit release non-delayed setting - max

55 A

Short-circuit release non-delayed setting - min

30 A

Terminal capacity (control cable)

14 mm² - 18 mm² (1x)

16 mm² - 18 mm² (2x)

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

Terminal capacity (copper solid conductor/cable)

6 mm² (1x) at tunnel terminal

6 mm² - 11 mm² (1x) direct at switch rear-side connection

6 mm² - 12 mm² (1x) at box terminal

Terminal capacity (aluminum solid conductor/cable)

16 mm² (1x) at tunnel terminal

Terminal capacity (copper stranded conductor/cable)

4 mm² - 350 mm² (1x) at tunnel terminal

4 mm² - 350 mm² (1x) at box terminal

4 mm² - 3/0 mm² (1x) direct at switch rear-side connection

Handle type

Rocker lever

Short delay current setting (Isd) - max

0 A

Short delay current setting (Isd) - min

0 A

Instantaneous current setting (Ii) - max

11 A

Instantaneous current setting (Ii) - min

6 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 400/415 V, 50/60 Hz

50 kA

Standard terminals

Screw terminal

Rated operating voltage Ue (UL) - max

600Y/347 V, 480 V

Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

Rated impulse withstand voltage (Uimp) at main contacts

8000 V

Rated insulation voltage (Ui)

1000 V AC

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