

Eaton 192106

Catalog Number: 192106

Eaton Moeller series NZM - Molded Case Circuit Breaker. NZM2 PXR25 circuit breaker - integrated energy measurement class 1, 100A, 3p, Screw terminal, N, 2, M



General specifications

Product Name	Catalog Number
Eaton Moeller series NZM molded case circuit breaker electronic	192106
	EAN
	4015081926572
Product Length/Depth	Product Height
190 mm	160 mm
Product Width	Product Weight
115 mm	2.4 kg
Compliances	Certifications
RoHS conform	IEC/EN 60947
	IEC

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 I_{cn})

Motor protection - overload- and short-circuit protective device LI Motor

Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory"

USB interface for configuration and test function with Power Xpert

Protection Manager software

Interface module in equipment supplied.

Optionally communication-capable with interface module and internal Modbus RTU module or CAM

Rated current = rated uninterrupted current: 100 A

Application

Use in unearthed supply systems at 690 V

Amperage Rating

100 A

Voltage rating

690 V - 690 V

Circuit breaker frame type

NZM2

10.10 Temperature rise

The panel builder is responsible for the temperature rise

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-060.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-059.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-042.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](#)

Installation instructions

[eaton-circuit-breakers-nzmb-nzmn-basic-unit-bg2-instruction-leaflet-il012099zu.pdf](#)

Installation videos

[Introduction of the new digital circuit breaker NZM](#)

[The new digital NZM Range](#)

mCAD model

[DA-CD-nzm2_3p](#)

[DA-CS-nzm2_3p](#)

Technical data sheets

[eaton-nzm-technical-information-sheet](#)

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

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.

Fitted with:

Thermal protection

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

8.25 W

Utilization category

A (IEC/EN 60947-2)

Isolation

500 V AC (between auxiliary contacts and main contacts)

300 V AC (between the auxiliary 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

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

30 kW

Rated operating power at AC-3, 400 V

55 kW

Switch off technique

Electronic

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. 8 segments of 24 mm x 1 mm (2x) at box terminal

Max. 10 segments of 24 mm x 0.8 mm at rear-side connection
(punched)

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

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

Min. 2 segments of 16 mm x 0.8 mm at rear-side connection
(punched)

Lifespan, electrical

10000 operations at 400 V AC-1

10000 operations at 415 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

Phase failure sensitive

Motor protection

Shock resistance

20 g (half-sinusoidal shock 20 ms)

Rated operational current for specified heat dissipation (I_n)

100 A

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

1800 A

Short-circuit release non-delayed setting - min

200 A

Handle type

Rocker lever

Instantaneous current setting (I_i) - max

18 A

Instantaneous current setting (I_i) - min

2 A

Number of operations per hour - max

120

Overload current setting (I_r) - max

100 A

Overload current setting (I_r) - min

40 A

Rated short-circuit breaking capacity I_{cs} (IEC/EN 60947) at 230 V, 50/60 Hz

85 kA

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

35 kA

Rated short-circuit breaking capacity I_{cs} (IEC/EN 60947) at 440 V, 50/60 Hz

35 kA

Rated short-circuit breaking capacity I_{cs} (IEC/EN 60947) at 525 V, 50/60 Hz

25 kA

Rated short-circuit breaking capacity I_{cs} (IEC/EN 60947) at 690 V, 50/60 Hz

5 kA

Standard terminals

Screw terminal

Optional terminals

Box terminal. Connection on rear. Tunnel terminal

Release system

Electronic release

Short-circuit total breaktime

< 10 ms

Terminal capacity (aluminum solid conductor/cable)

16 mm² (1x) at tunnel terminal

Terminal capacity (aluminum stranded conductor/cable)

25 mm² - 185 mm² (1x) at tunnel terminal

Terminal capacity (control cable)

0.75 mm² - 2.5 mm² (1x)

0.75 mm² - 1.5 mm² (2x)

Terminal capacity (copper busbar)

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

Max. 24 mm x 8 mm direct at switch rear-side connection

M8 at rear-side screw connection

Terminal capacity (copper solid conductor/cable)

6 mm² - 16 mm² (2x) direct at switch rear-side connection

10 mm² - 16 mm² (1x) at box terminal

16 mm² (1x) at tunnel terminal

10 mm² - 16 mm² (1x) direct at switch rear-side connection

6 mm² - 16 mm² (2x) at box terminal

Terminal capacity (copper stranded conductor/cable)

25 mm² - 185 mm² (1x) at 1-hole tunnel terminal

25 mm² - 185 mm² (1x) at box terminal

25 mm² - 70 mm² (2x) at box terminal

25 mm² - 70 mm² (2x) direct at switch rear-side connection

25 mm² - 185 mm² (1x) direct at switch rear-side connection

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

35 kA

Rated short-circuit making capacity I_{cm} at 400/415 V, 50/60 Hz

105 kA

Rated short-circuit making capacity I_{cm} at 440 V, 50/60 Hz

74 kA

Rated short-circuit making capacity I_{cm} at 525 V, 50/60 Hz

53 kA

Rated short-circuit making capacity I_{cm} at 690 V, 50/60 Hz

40 kA

Rated short-circuit making capacity I_{cm} at 240 V, 50/60 Hz

187 kA

Rated impulse withstand voltage (U_{imp}) at auxiliary contacts

6000 V

Rated impulse withstand voltage (U_{imp}) at main contacts

8000 V



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