

Eaton 265910

Catalog Number: 265910

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 800A, 500A in 4th pole, N4-4-AE800/500



General specifications

Product Name	Catalog Number
Eaton Moeller series NZM molded case circuit breaker electronic	265910
	EAN
	4015082659103
Product Length/Depth	Product Height
401 mm	207 mm
Product Width	Product Weight
280 mm	27 kg
Compliances	Certifications
RoHS conform	IEC
	IEC/EN 60947

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})

Rated current = rated uninterrupted current: 800 A

Reduced neutral conductor protection

Set value in neutral conductor is synchronous with set value I_r of main pole.

R.m.s. value measurement and "thermal memory"

Application

Use in unearthed supply systems at 525 V

Amperage Rating

800 A

Voltage rating

690 V - 690 V

Circuit breaker frame type

NZM4

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

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-nzm-mccb-characteristic-curve-047.eps](#)

Declarations of conformity

[DA-DC-03_N4](#)

Drawings

[eaton-circuit-breaker-nzm-mccb-dimensions-023.eps](#)

eCAD model

[ETN.265910.edz](#)

Installation instructions

[eaton-circuit-breaker-basic-unit-nzmn4-il01210010z.pdf](#)

Installation videos

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

[The new digital NZM Range](#)

mCAD model

[DA-CD-nzm4_4p](#)

[DA-CS-nzm4_4p](#)

Technical data sheets

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

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

Built-in device fixed built-in technique

Fixed

Climatic proofing

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

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

Equipment heat dissipation, current-dependent

106 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

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

IP20

Direction of incoming supply

As required

Electrical connection type of main circuit

Screw connection

Current rating of neutral conductor

500 A

60% of phase conductor

Lifespan, mechanical

10000 operations

Overvoltage category

III

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

Four-pole

Terminal capacity (copper strip)

Min. 5 segments of 25 mm x 1 mm at rear-side connection

(punched)

10 segments of 50 mm x 1 mm (2x) at 1-hole module plate

Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection

(punched)

Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor

terminal

Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal

10 segments of 80 mm x 1 mm (2x) at rear-side width extension

Lifespan, electrical

1000 operations at 690 V AC-3

3000 operations at 400 V AC-1

2000 operations at 415 V AC-3

2000 operations at 690 V AC-1

3000 operations at 415 V AC-1

2000 operations at 400 V AC-3

Functions

System and cable protection

Shock resistance

15 g (half-sinusoidal shock 11 ms)

Position of connection for main current circuit

Front side

Rated operational current for specified heat dissipation (In)

800 A

Release system

Electronic release

Short-circuit total breaktime

< 25 ms (< 415 V); < 35 ms (> 415 V)

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

12 kA

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

12 kA

Short-circuit release non-delayed setting - max

12000 A

Short-circuit release non-delayed setting - min

1600 A

Terminal capacity (control cable)

0.75 mm² - 1.5 mm² (2x)

0.75 mm² - 2.5 mm² (1x)

Terminal capacity (copper busbar)

Min. 60 mm x 10 mm at rear-side width extension

Min. 25 mm x 5 mm at rear-side 1-hole module plate

M10 at rear-side screw connection

Max. 50 mm x 10 mm (2x) direct at switch rear-side connection

Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate

Min. 25 mm x 5 mm direct at switch rear-side connection

50 mm x 10 mm (2x) at rear-side 2-hole module plate

Max. 80 mm x 10 mm (2x) at rear-side width extension

Terminal capacity (copper solid conductor/cable)

120 mm² - 300 mm² (1x) at rear-side 1-hole module plate

50 mm² - 240 mm² (4x) at 4-hole tunnel terminal

95 mm² - 240 mm² (6x) at rear-side width extension

95 mm² - 300 mm² (2x) at rear-side 1-hole module plate

300 mm² (4x) at rear-side width extension

95 mm² - 185 mm² (2x) at rear-side 2-hole module plate

35 mm² - 185 mm² (4x) at rear-side 2-hole module plate

Terminal capacity (aluminum solid conductor/cable)

70 mm² - 240 mm² (6x) at rear-side width extension

240 mm² (2x) at rear-side width extension

185 mm² - 240 mm² (1x) at rear-side 1-hole module plate

70 mm² - 185 mm² (2x) at rear-side 1-hole module plate

50 mm² (4x) at rear-side 2-hole module plate

Terminal capacity (copper stranded conductor/cable)

50 mm² - 185 mm² (4x) direct at switch rear-side connection

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

Terminal capacity (aluminum stranded conductor/cable)

50 mm² - 240 mm² (4x) at 4-hole tunnel terminal

Handle type

Rocker lever

Short delay current setting (I_{sd}) - max

0 A

Short delay current setting (I_{sd}) - min

0 A

Instantaneous current setting (I_i) - max

9600 A

Instantaneous current setting (I_i) - min

1600 A

Number of operations per hour - max

60

Overload current setting (I_r) - max

800 A

Overload current setting (I_r) - min

400 A

Overload current setting (I_r)

250 A - 500 A

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

37 kA

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

37 kA

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

26 kA

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

19 kA

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

15 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

Standard terminals

Screw terminal

Optional terminals

Connection on rear. Strip terminal. Tunnel terminal

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

105 kA

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

6000 V

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

8000 V

Rated insulation voltage (U_i)

1000 V AC



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