

Eaton 265871

Catalog Number: 265871

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 160A, H2-4-A160



General specifications

Product Name	Catalog Number
Eaton Moeller series NZM molded case circuit breaker thermo-magnetic	265871
	Model Code
	NZMH2-4-A160
EAN	Product Length/Depth
4015082658717	149 mm
Product Height	Product Width
184 mm	140 mm
Product Weight	Compliances
3 kg	RoHS conform
Certifications	
IEC	
IEC/EN 60947	

Product specifications

Rated operational current for specified heat dissipation (In)
160 A

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

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

5 kA

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

Mounting Method

Fixed

DIN rail (top hat rail) mounting optional

Built-in device fixed built-in technique

Amperage Rating

160 A

10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

Terminal capacity (copper strip)

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

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

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

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

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

Handle type

Rocker lever

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

Ambient storage temperature - min

40 °C

Protection against direct contact

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

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-characteristic-power-defense-mccb-characteristic-curve-037.eps](#)

[eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve-005.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-050.eps](#)

Drawings

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-017.eps](#)

[eaton-circuit-breaker-nzm-mccb-dimensions-035.eps](#)

eCAD model

[ETN.NZMH2-4-A160](#)

Installation instructions

[il01206006z2015_11.pdf](#)

Installation videos

[The new digital NZM Range](#)

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

mCAD model

[DA-CS-nzm2_4p](#)

[DA-CD-nzm2_4p](#)

Technical data sheets

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

Terminal capacity (copper busbar)

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

M8 at rear-side screw connection

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

10.8 Connections for external conductors

Is the panel builder's responsibility.

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

Ambient operating temperature - max

70 °C

Position of connection for main current circuit

Front side

Current rating of neutral conductor

200% of phase conductor

Rated insulation voltage (U_i)

1000 V AC

Climatic proofing

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

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

Terminal capacity (copper stranded conductor/cable)

25 mm² - 185 mm² (1x) at box terminal

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

Features

Motor drive optional

Protection unit

Lifespan, electrical

5000 operations at 690 V AC-3
7500 operations at 690 V AC-1
6500 operations at 400 V AC-3
6500 operations at 415 V AC-3
10000 operations at 400 V AC-1
10000 operations at 415 V AC-1

Electrical connection type of main circuit

Screw connection

Short-circuit total breaktime

< 10 ms

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

8000 V

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

150 kA

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

Utilization category

A (IEC/EN 60947-2)

Number of poles

Four-pole

Ambient operating temperature - min

-25 °C

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

Overload current setting (I_r)

125 A - 160 A

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

Terminal capacity (control cable)

0.75 mm² - 1.5 mm² (2x)

0.75 mm² - 2.5 mm² (1x)

Equipment heat dissipation, current-dependent

38.4 W

Instantaneous current setting (I_i) - min

6 A

10.13 Mechanical function

The device meets the requirements, provided the information in

the instruction leaflet (IL) is observed.

10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

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

150 kA

Application

Use in unearthed supply systems at 690 V

10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

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

330 kA

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

130 kA

Degree of protection (IP), front side

IP40 (with insulating surround)

IP66 (with door coupling rotary handle)

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

105 kA

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

40 kA

Instantaneous current setting (I_i) - max

10 A

Overload current setting (I_r) - min

125 A

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

0 A

Number of auxiliary contacts (normally closed contacts)

0

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.

Lifespan, mechanical

20000 operations

Overload current setting (I_r) - max

160 A

Voltage rating

690 V - 690 V

Terminal capacity (copper solid conductor/cable)

6 mm² - 16 mm² (2x) at box terminal

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

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

16 mm² (1x) at tunnel terminal

10 mm² - 16 mm² (1x) at box terminal

Degree of protection (terminations)

IP00 (terminations, phase isolator and strip terminal)

IP10 (tunnel terminal)

Terminal capacity (aluminum stranded conductor/cable)

25 mm² - 50 mm² (2x) direct at switch rear-side connection

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

25 mm² - 50 mm² (1x) direct at switch rear-side connection

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

Short-circuit release non-delayed setting - min

960 A

Degree of protection

IP20

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

Overvoltage category

III

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

1.9 kA

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

0 A

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

6000 V

Number of auxiliary contacts (change-over contacts)

0

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

1.9 kA

Ambient storage temperature - max

70 °C

Release system

Thermomagnetic release

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

37.5 kA

Optional terminals

Box terminal. Connection on rear. Tunnel terminal

Pollution degree

3

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

Functions

System and cable protection

Short-circuit release non-delayed setting - max

1600 A

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

330 kA

Standard terminals

Screw terminal

Type

Circuit breaker

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.7 Inscriptions

Meets the product standard's requirements.

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

286 kA

Number of auxiliary contacts (normally open contacts)

0

Isolation

500 V AC (between auxiliary contacts and main contacts)

300 V AC (between the auxiliary contacts)

Number of operations per hour - max

120

Circuit breaker frame type

NZM2

Direction of incoming supply

As required

Shock resistance

20 g (half-sinusoidal shock 20 ms)

Terminal capacity (aluminum solid conductor/cable)

16 mm² (1x) at tunnel terminal

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

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



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