

# Eaton 154940

Catalog Number: 154940

Eaton Moeller series NZM - Molded Case Circuit Breaker. Switch-disconnector N 2, IEC, 4p, in=250A, screw, fixed mounted design



Photo is representative

General specifications

Product Name	Catalog Number
Eaton Moeller series NZM switch-disconnector	154940
	Model Code
	N2-4-250-S1-DC
EAN	Product Length/Depth
4015081516780	149 mm
Product Height	Product Width
184 mm	140 mm
Product Weight	Compliances
3.5 kg	RoHS conform
Certifications	
IEC	

## Type

DC switch-disconnector

## Special features

IEC/EN 60947-3

CCC China Compulsory

Certificate

Main switch characteristics

including positive drive to

IEC/EN 60204 and VDE

0113.

Isolating characteristics to

IEC/EN 60947-3 and VDE

0660.

N switch-disconnectors can  
be combined with NZM...-

XU, NZM...-XA shunt

releases and auxiliary

contacts as well as with

NZM...-XR... remote

operator.

For DC switching, all 4

contacts must be connected

in series. Refer to the

information on jumper kit

accessories.

Supplied as standard: Screw

connection

box terminal optional.

When working with

ungrounded systems (e.g.,

IT), the installation must

ensure that a double ground

fault will be impossible.

Switch can not be combined

with plug-in/withdrawable

units and/or connection on

rear.

N4-4-...-S15-DC feeder unit

and outgoer from the bottom

only.

Lifespan, mechanical: of

which max. 50 % trip by

shunt/undervoltage release

Rated current = rated

## 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](#)

## Certification reports

[DA-DC-03\\_N2](#)

## Drawings

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

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

[eaton-circuit-breaker-cable-nzm-mccb-3d-drawing-002.eps](#)

[eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing-003.eps](#)

[eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing-002.eps](#)

[eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing.eps](#)

[eaton-circuit-breaker-nzm-switch-disconnector-3d-drawing-002.eps](#)

[eaton-circuit-breaker-nzm-switch-disconnector-3d-drawing.eps](#)

[eaton-circuit-breaker-nzm-switch-disconnector-3d-drawing-003.eps](#)

## Installation instructions

[eaton-circuit-breaker-n2-4-s1-15-dc-il01207001z.pdf](#)

## Installation videos

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

[The new digital NZM Range](#)

## mCAD model

[DA-CD-nzm2\\_4p](#)

[DA-CS-nzm2\\_4p](#)

## Technical data sheets

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

uninterrupted current: 250 A

Values for rated

uninterrupted current at 65

°C include jumpers.

## Application

Open areas

Utility buildings

## Amperage Rating

250 A

## Voltage rating

1000 V - 1000 V

## Circuit breaker frame type

N2

## Features

Version as main switch

Motor drive optional

Remote operation with shunt releases / remote operator

Version as emergency stop installation

Version as maintenance-/service switch

### 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

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

Ground mounting

Distribution board installation

Intermediate mounting

Built-in device fixed built-in technique

Fixed

Equipment heat dissipation, current-dependent

66 W

Utilization category

DC-22 A

Rated short-time withstand current (I<sub>cw</sub>)

3.6 kA

Degree of protection

Other

Electrical connection type of main circuit

Screw connection

Ambient operating temperature - max

70 °C

Ambient operating temperature - min

-25 °C

Ambient storage temperature - max

70 °C

Ambient storage temperature - min

40 °C

Current rating (I<sub>u</sub>) at 40°C with terminal jumpers

250 A

Current rating (I<sub>u</sub>) at 65°C with terminal jumpers

200 A

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

Rated insulation voltage (U<sub>i</sub>)

1250 V

Rated operating power at AC-23, 400 V

0 kW

Rated operating power at AC-3, 400 V

0 kW

#### Switch positions

I, +, 0

#### Lifespan, mechanical

20000 operations

#### Overvoltage category

III

#### Rated operational current

250 A (DC 22-A)

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

IP20

#### Number of poles

Four-pole

#### Terminal capacity (copper strip)

Min. 2 segments of 9 mm x 0.8 mm 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

Max. 8 segments of 15.5 mm x 0.8 mm (2x) at box terminal

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

#### Handle color

Black

#### Functions

Interlockable

Disconnectors/main switches

Photovoltaic applications

Voltage release optional

#### Number of switches

1

#### Rated conditional short-circuit current (I<sub>q</sub>)

0 kA

#### Rated conditional short-circuit current with back-up fuse

15 kA at 1000 V

#### Rated operating voltage (U<sub>e</sub>) at AC - max

0 V

#### Rated operational current for specified heat dissipation (I<sub>n</sub>)

250 A

#### Rated permanent current at AC-21, 400 V

0 A

Rated permanent current at AC-23, 400 V

0 A

Rated short-time withstand current ( $t = 1 \text{ s}$ )

3.6 kA

Switching power at 400 V

0 kW

Handle type

Rocker lever

Number of operations per hour - max

120

Standard terminals

Screw terminal

Short-circuit protective device fuses - max

200 A gR

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)

4 mm<sup>2</sup> - 16 mm<sup>2</sup> (1x) at box terminal

16 mm<sup>2</sup> (1x) at tunnel terminal

4 mm<sup>2</sup> - 16 mm<sup>2</sup> (2x) direct at switch rear-side connection

4 mm<sup>2</sup> - 16 mm<sup>2</sup> (2x) at box terminal

10 mm<sup>2</sup> - 16 mm<sup>2</sup> (1x) direct at switch rear-side connection

Terminal capacity (aluminum solid conductor/cable)

16 mm<sup>2</sup> (1x) at tunnel terminal

Terminal capacity (copper stranded conductor/cable)

25 mm<sup>2</sup> - 70 mm<sup>2</sup> (2x) at box terminal

25 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at box terminal

25 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at tunnel terminal

25 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) direct at switch rear-side connection

25 mm<sup>2</sup> - 70 mm<sup>2</sup> (2x) direct at switch rear-side connection

Terminal capacity (aluminum stranded conductor/cable)

25 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at tunnel terminal



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Dublin 4, Ireland  
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