

Specifications



Photo is representative

Eaton 119890

Eaton Moeller series NZM - Molded Case Circuit Breaker. Switch-disconnector 4p 800A 1000VDC

General specifications

PRODUCT NAME	Eaton Moeller series NZM switch-disconnector
CATALOG NUMBER	119890
MODEL CODE	N4-4-800-S1-DC
EAN	4015081177387
PRODUCT LENGTH/DEPTH	401 mm
PRODUCT HEIGHT	207 mm
PRODUCT WIDTH	280 mm
PRODUCT WEIGHT	22.723 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC IEC 60947-3 CCC

Additional information

FUNCTIONS

Interlockable
Voltage release optional
Disconnectors/main
switches
Photovoltaic applications

Delivery programme

AMPERAGE RATING 800 A

APPLICATION

- Open areas
- Utility buildings

CIRCUIT BREAKER FRAME TYPE N4

FEATURES

Motor drive optional
Version as main switch
Version as emergency stop installation
Remote operation with shunt releases / remote operator
Version as maintenance-/service switch

NUMBER OF POLES Four-pole

SPECIAL FEATURES

- Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113.
- 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
uninterrupted
current: 800 A

TYPE

DC switch-disconnector

Design verification to IEC/EN 61439

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	Does not apply, since the

Design verification to IEC/EN 61439 - technical data

AMBIENT OPERATING TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	40 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	95 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	800 A

AGAINST ELECTRIC SHOCK	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.

Technical data - electrical	
AMPERAGE RATING	800 A
CURRENT RATING (IU) AT 40°C WITH TERMINAL JUMPERS	800 A
CURRENT RATING (IU) AT 65°C WITH TERMINAL JUMPERS	800 A
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
HANDLE TYPE	Rocker lever
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
RATED INSULATION VOLTAGE (UI)	1250 V
RATED OPERATIONAL CURRENT	1400 CSA (DC-21B) 800 A (DC 22-A)
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	34 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 0.1 S)	34 kA
UTILIZATION CATEGORY	DC-22 A
VOLTAGE RATING	1000 V - 1000 V

Technical data - mechanical	
DEGREE OF PROTECTION	IP20
DEGREE OF PROTECTION (IP), FRONT SIDE	IP20
HANDLE COLOR	Black
LIFESPAN, MECHANICAL	10000 operations
MOUNTING METHOD	Built-in device fixed built-in technique Fixed Distribution board installation Ground mounting Intermediate mounting
NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF SWITCHES	1
SPECIAL FEATURES	• Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. • For DC switching, all 4 contacts must

be connected in series. Refer to the information on jumper kit accessories.

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- 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 uninterrupted current: 800 A

SWITCH POSITIONS

I, +, 0

Technical data - mechanical - terminals

STANDARD TERMINALS

Screw terminal

TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)

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

TERMINAL CAPACITY (COPPER BUSBAR)

Min. 25 mm x 5 mm direct
at switch rear-side
connection
Min. 60 mm x 10 mm at
rear-side width extension
Max. 50 mm x 10 mm (2x)
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
50 mm x 10 mm (2x) at
rear-side 2-hole module
plate
Max. 80 mm x 10 mm (2x)
direct at switch rear-side
connection
Max. 10 mm x 80 mm (2x)
at rear-side width
extension
Min. 25 mm x 5 mm at
rear-side 1-hole module
plate

TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)

300 mm² (4x) at rear-side
width extension
35 mm² - 185 mm² (4x) at
rear-side 2-hole module
plate
95 mm² - 300 mm² (2x) at
rear-side 1-hole module
plate
95 mm² - 240 mm² (6x) at
rear-side width extension
95 mm² - 185 mm² (2x) at
rear-side 2-hole module
plate
50 mm² - 240 mm² (4x) at
4-hole tunnel terminal
120 mm² - 300 mm² (1x) at
rear-side 1-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
50 mm² - 240 mm² (1x) at
2-hole tunnel terminal
50 mm² - 240 mm² (2x) at

Resources

BROCHURES

[eaton-feerum-the-whole-
grain-solution-success-
story-en-us.pdf](#)

[eaton-digital-nzm-
brochure-br013003en-en-
us.pdf](#)

CATALOGUES

[eaton-digital-nzm-catalog-
ca013003en-en-us.pdf](#)

DECLARATIONS OF CONFORMITY

[eaton-switch-
disconnecter-declaration-
of-conformity-
eu250131en.pdf](#)

DRAWINGS

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

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

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

[eaton-circuit-breaker-
cable-nzm-mccb-3d-
drawing-004.eps](#)

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

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

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drawing-003.eps](#)

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terminals-nzm-switch-
disconnecter-3d-drawing-
002.eps](#)

ECAD MODEL

[DA-CE-ETN.N4-4-800-S1-
DC](#)

INSTALLATION VIDEOS

[The new digital NZM
Range](#)

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

MCAD MODEL

[DA-CS-nzm4_4p](#)

	2-hole tunnel terminal
TERMINAL CAPACITY (COPPER STRIP)	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 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)
	Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)
	10 segments of 80 mm x 1 mm (2x) at rear-side width extension

	eaton-molded-case-switches-mcad-drawings-nzm4-4p.dwg
PEP ECO-PASSPORT	eaton-switch-disconnectors-pep-eato-00191-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE: