

# Specifications



Photo is representative

## Eaton 119891

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

### General specifications

PRODUCT NAME	Eaton Moeller series NZM switch-disconnector
CATALOG NUMBER	119891
MODEL CODE	N4-4-1000-S1-DC
EAN	4015081177394
PRODUCT LENGTH/DEPTH	401 mm
PRODUCT HEIGHT	207 mm
PRODUCT WIDTH	280 mm
PRODUCT WEIGHT	22.656 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC



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## Product specifications

<b>AMPERAGE RATING</b>	1000 A
<b>VOLTAGE RATING</b>	1000 V - 1000 V
<b>CIRCUIT BREAKER FRAME TYPE</b>	N4
<b>FEATURES</b>	Remote operation with shunt releases / remote operator Version as maintenance-/service switch Version as main switch Motor drive optional Version as emergency stop installation
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV)</b>	Meets the product standard's requirements.

## Resources

<b>BROCHURES</b>	<a href="#">eaton-digital-nzm-brochure-br013003en-en-us.pdf</a> <a href="#">eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf</a>
<b>CATALOGUES</b>	<a href="#">eaton-digital-nzm-catalog-ca013003en-en-us.pdf</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">eaton-switch-disconnector-declaration-of-conformity-eu250131en.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-circuit-breaker-nzm-switch-disconnector-dimensions.eps</a> <a href="#">eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing-003.eps</a> <a href="#">eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing.eps</a> <a href="#">eaton-circuit-breaker-nzm-switch-disconnector-3d-drawing.eps</a> <a href="#">eaton-circuit-breaker-cable-nzm-mccb-3d-drawing-004.eps</a> <a href="#">eaton-circuit-breaker-terminals-nzm-switch-disconnector-3d-drawing-002.eps</a>
<b>ECAD MODEL</b>	<a href="#">DA-CE-ETN.N4-4-1000-S1-DC</a>
<b>INSTALLATION VIDEOS</b>	<a href="#">The new digital NZM Range</a> <a href="#">Introduction of the new digital circuit breaker NZM</a>
<b>MCAD MODEL</b>	<a href="#">DA-CS-nzm4 4p</a> <a href="#">DA-CD-nzm4 4p</a>
<b>PEP ECO-PASSPORT</b>	<a href="#">eaton-switch-disconnectors-pep-eato-00191-v0101-en.pdf</a>
<b>TECHNICAL DATA SHEETS</b>	<a href="#">eaton-nzm-technical-information-sheet</a>

<b>RADIATION</b>	
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>POLLUTION DEGREE</b>	3
<b>MOUNTING METHOD</b>	Intermediate mounting Fixed Distribution board installation Ground mounting Built-in device fixed built-in technique
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>	148 W
<b>UTILIZATION CATEGORY</b>	DC-22 A
<b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>	34 kA
<b>DEGREE OF PROTECTION</b>	IP20

<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	70 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	70 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>CURRENT RATING (IU) AT 40°C WITH TERMINAL JUMPERS</b>	1000 A
<b>CURRENT RATING (IU) AT 65°C WITH TERMINAL JUMPERS</b>	1000 A
<b>NUMBER OF AUXILIARY CONTACTS (CHANGE- OVER CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	0
<b>RATED INSULATION VOLTAGE (UI)</b>	1250 V
<b>RATED OPERATING POWER AT AC-23, 400 V</b>	0 kW
<b>RATED OPERATING POWER AT AC-3, 400 V</b>	0 kW
<b>SWITCH POSITIONS</b>	I, +, 0
<b>LIFESPAN, MECHANICAL</b>	10000 operations
<b>OVERVOLTAGE CATEGORY</b>	III
<b>RATED OPERATIONAL CURRENT</b>	1400 CSA (DC-21B) 1000 A (DC 22-A)
<b>DEGREE OF PROTECTION (IP), FRONT SIDE</b>	IP20
<b>NUMBER OF POLES</b>	Four-pole
<b>TERMINAL CAPACITY (COPPER STRIP)</b>	10 segments of 80 mm x 1 mm (2x) at rear-side width extension Max. 10 segments of 50 mm x 1 mm (2x) at rear- side connection (punched)  Max. 10 segments of 32

	<p>mm x 1 mm (2x) at flat conductor terminal</p> <p>Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal</p> <p>Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)</p> <p>10 segments of 50 mm x 1 mm (2x) at 1-hole module plate</p>
<b>HANDLE COLOR</b>	Black
<b>FUNCTIONS</b>	<p>Photovoltaic applications</p> <p>Voltage release optional</p> <p>Disconnectors/main switches</p> <p>Interlockable</p>
<b>TYPE</b>	<p>DC switch-disconnector</p> <p>Switch-disconnector</p>
<b>SPECIAL FEATURES</b>	<p>IEC/EN 60947-3 CCC China Compulsory Certificate</p> <p>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.</p>

	50 % trip by shunt/undervoltage release Rated current = rated uninterrupted current: 1000 A Values for rated uninterrupted current at 65 °C include jumpers.
<b>APPLICATION</b>	Open areas Utility buildings
<b>NUMBER OF SWITCHES</b>	1
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)</b>	0 kA
<b>RATED OPERATING VOLTAGE (UE) AT AC - MAX</b>	0 V
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	1000 A
<b>RATED PERMANENT CURRENT AT AC-21, 400 V</b>	0 A
<b>RATED PERMANENT CURRENT AT AC-23, 400 V</b>	0 A
<b>RATED SHORT-TIME WITHSTAND CURRENT (T = 0.1 S)</b>	34 kA
<b>SWITCHING POWER AT 400 V</b>	0 kW
<b>HANDLE TYPE</b>	Rocker lever
<b>NUMBER OF OPERATIONS PER HOUR - MAX</b>	60
<b>STANDARD TERMINALS</b>	Screw terminal
<b>TERMINAL CAPACITY (COPPER BUSBAR)</b>	<p>Max. 80 mm x 10 mm (2x) direct at switch rear-side connection</p> <p>50 mm x 10 mm (2x) at rear-side 2-hole module plate</p> <p>Min. 25 mm x 5 mm direct at switch rear-side connection</p> <p>Max. 10 mm x 80 mm (2x) at rear-side width extension</p> <p>Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate</p> <p>M10 at rear-side screw connection</p>

	Min. 60 mm x 10 mm at rear-side width extension Min. 25 mm x 5 mm at rear-side 1-hole module plate Max. 50 mm x 10 mm (2x) direct at switch rear-side connection
<b>TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)</b>	35 mm <sup>2</sup> - 185 mm <sup>2</sup> (4x) at rear-side 2-hole module plate 95 mm <sup>2</sup> - 300 mm <sup>2</sup> (2x) at rear-side 1-hole module plate 120 mm <sup>2</sup> - 300 mm <sup>2</sup> (1x) at rear-side 1-hole module plate 300 mm <sup>2</sup> (4x) at rear-side width extension 50 mm <sup>2</sup> - 240 mm <sup>2</sup> (4x) at 4-hole tunnel terminal 95 mm <sup>2</sup> - 185 mm <sup>2</sup> (2x) at rear-side 2-hole module plate 95 mm <sup>2</sup> - 240 mm <sup>2</sup> (6x) at rear-side width extension
<b>TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)</b>	120 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) direct at switch rear-side connection 50 mm <sup>2</sup> - 185 mm <sup>2</sup> (4x) direct at switch rear-side connection
<b>TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)</b>	25 mm <sup>2</sup> - 240 mm <sup>2</sup> (4x) at 4-hole tunnel terminal

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE: