

# Specifications



Photo is representative



## Eaton 119368

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 630A, 1000 V, VE630-S1

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series NZM molded case circuit breaker electronic
<b>CATALOG NUMBER</b>	119368
<b>MODEL CODE</b>	NZMH3-VE630-S1
<b>EAN</b>	4015081175048
<b>PRODUCT LENGTH/DEPTH</b>	166 mm
<b>PRODUCT HEIGHT</b>	275 mm
<b>PRODUCT WIDTH</b>	140 mm
<b>PRODUCT WEIGHT</b>	6.34 kg
<b>COMPLIANCES</b>	RoHS conform
<b>CERTIFICATIONS</b>	IEC

## Product specifications

<b>AMPERAGE RATING</b>	630 A
<b>VOLTAGE RATING</b>	1000 V - 1000 V
<b>CIRCUIT BREAKER FRAME TYPE</b>	NZM3
<b>FEATURES</b>	Motor drive optional Protection unit
<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) RADIATION</b>	Meets the product standard's requirements.
<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.

## Resources

<b>BROCHURES</b>	<a href="#">eaton-digital-nzm-brochure-br013003en-en-us.pdf</a>
<b>CATALOGUES</b>	<a href="#">eaton-digital-nzm-catalog-ca013003en-en-us.pdf</a>
<b>CHARACTERISTIC CURVE</b>	<a href="#">eaton-circuit-breaker-nzm-mccb-characteristic-curve-046.eps</a> <a href="#">eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve.eps</a> <a href="#">eaton-circuit-breaker-nzm-mccb-characteristic-curve-057.eps</a> <a href="#">eaton-circuit-breaker-nzm-mccb-characteristic-curve-028.eps</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250293en.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps</a> <a href="#">eaton-circuit-breaker-nzm-mccb-dimensions-020.eps</a> <a href="#">eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-002.eps</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-circuit-breakers-basic-device-nzm2-il01206006z.pdf</a> <a href="#">Introduction of the new digital circuit breaker NZM</a>
<b>INSTALLATION VIDEOS</b>	<a href="#">The new digital NZM Range</a>
<b>MCAD MODEL</b>	<a href="#">DA-CS-nzm3_3p</a> <a href="#">DA-CD-nzm3_3p</a>
<b>PEP ECO-PASSPORT</b>	<a href="#">eaton-molded-case-switches-pep-eato-00202-v0101-en.pdf</a>
<b>TECHNICAL DATA SHEETS</b>	<a href="#">eaton-nzm-technical-information-sheet</a>

<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>	Fixed Built-in device fixed built-in technique
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>	119.07 W
<b>UTILIZATION CATEGORY</b>	A
<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>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>DEGREE OF PROTECTION</b>	IP20
<b>ELECTRICAL</b>	Screw connection

<b>CONNECTION TYPE OF MAIN CIRCUIT</b>	
<b>LIFESPAN, MECHANICAL</b>	15000 operations
<b>OVERVOLTAGE CATEGORY</b>	III
<b>NUMBER OF POLES</b>	Three-pole
<b>TERMINAL CAPACITY (COPPER STRIP)</b>	<p>Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched)</p> <p>10 segments of 50 mm x 1 mm (2x) at rear-side width extension</p> <p>Max. 8 segments of 24 mm x 1 mm (2x) at box terminal</p> <p>Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched)</p> <p>Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm</p> <p>Min. 6 segments of 16 mm x 0.8 mm at box terminal</p>
<b>LIFESPAN, ELECTRICAL</b>	1000 operations at 1000 V AC-1
<b>FUNCTIONS</b>	Systems, cable, selectivity and generator protection
<b>TYPE</b>	Circuit breaker
<b>SPECIAL FEATURES</b>	<ul style="list-style-type: none"> <li>• Lifespan, mechanical: of which max. 50 % trip by shunt/undervoltage release</li> <li>• R.m.s. value measurement and "thermal memory"</li> <li>• Adjustable time delay setting to overcome current peaks <math>t_r</math> at <math>6 \times I_r</math> also infinity (without overload releases)</li> <li>• Adjustable delay time <math>t_{sd}</math>: Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms</li> <li>• <math>i^2t</math> constant function: switchable</li> <li>• NZM4...S1 terminal type: Insulated</li> </ul>

busbar connection  
(NZM4-XKS screw  
connection)

- Rated current =  
rated  
uninterrupted  
current: 630 A
- Terminal capacity  
hint: Up to 240  
mm<sup>2</sup> can be  
connected  
depending on the  
cable  
manufacturer.

**POSITION OF  
CONNECTION FOR MAIN  
CURRENT CIRCUIT** Front side

**RATED OPERATIONAL  
CURRENT FOR SPECIFIED  
HEAT DISSIPATION (IN)** 630 A

**RELEASE SYSTEM** Electronic release

**RATED SHORT-TIME  
WITHSTAND CURRENT (T  
= 0.3 S)** 3.3 kA

**RATED SHORT-TIME  
WITHSTAND CURRENT (T  
= 1 S)** 3.3 kA

**SHORT-CIRCUIT RELEASE  
DELAYED SETTING - MAX** 4410 A

**SHORT-CIRCUIT RELEASE  
DELAYED SETTING - MIN** 472.5 A

**SHORT-CIRCUIT RELEASE  
NON-DELAYED SETTING -  
MAX** 5040 A

**SHORT-CIRCUIT RELEASE  
NON-DELAYED SETTING -  
MIN** 1260 A

**TERMINAL CAPACITY  
(CONTROL CABLE)** 0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (1x)  
0.75 mm<sup>2</sup> - 1.5 mm<sup>2</sup> (2x)

Min. 20 mm x 5 mm direct  
at switch rear-side  
connection  
Max. 30 mm x 10 mm + 30  
mm x 5 mm direct at  
switch rear-side  
connection  
M10 at rear-side screw  
connection  
Max. 10 mm x 50 mm (2x)  
at rear-side width  
extension

**TERMINAL CAPACITY  
(COPPER SOLID)** 10 mm<sup>2</sup> - 16 mm<sup>2</sup> (2x)  
direct at switch rear-side

<b>CONDUCTOR/CABLE)</b>	connection 16 mm <sup>2</sup> (2x) at box terminal 16 mm <sup>2</sup> (1x) direct at switch rear-side connection
<b>TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)</b>	16 mm <sup>2</sup> (1x) at tunnel terminal
<b>TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)</b>	25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at tunnel terminal 35 mm <sup>2</sup> - 240 mm <sup>2</sup> (1x) at box terminal 25 mm <sup>2</sup> - 120 mm <sup>2</sup> (2x) direct at switch rear-side connection 25 mm <sup>2</sup> - 120 mm <sup>2</sup> (1x) direct at switch rear-side connection 25 mm <sup>2</sup> - 120 mm <sup>2</sup> (2x) at box terminal
<b>TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)</b>	25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at tunnel terminal 50 mm <sup>2</sup> - 240 mm <sup>2</sup> (2x) at 2-hole tunnel terminal 50 mm <sup>2</sup> - 240 mm <sup>2</sup> (1x) at 2-hole tunnel terminal
<b>HANDLE TYPE</b>	Rocker lever
<b>SHORT DELAY CURRENT SETTING (ISD) - MAX</b>	4410 A
<b>SHORT DELAY CURRENT SETTING (ISD) - MIN</b>	472 A
<b>INSTANTANEOUS CURRENT SETTING (II) - MAX</b>	5040 A
<b>INSTANTANEOUS CURRENT SETTING (II) - MIN</b>	1260 A
<b>NUMBER OF OPERATIONS PER HOUR - MAX</b>	60
<b>OVERLOAD CURRENT SETTING (IR) - MAX</b>	630 A
<b>OVERLOAD CURRENT SETTING (IR) - MIN</b>	315 A
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 1000 V, 50/60 HZ</b>	10 kA
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ</b>	150 kA
<b>RATED SHORT-CIRCUIT</b>	150 kA

**BREAKING CAPACITY ICS****(IEC/EN 60947) AT****400/415 V, 50/60 HZ****RATED SHORT-CIRCUIT****BREAKING CAPACITY ICS****(IEC/EN 60947) AT 440 V,****50/60 HZ**

130 kA

**RATED SHORT-CIRCUIT****BREAKING CAPACITY ICS****(IEC/EN 60947) AT 525 V,****50/60 HZ**

33 kA

**RATED SHORT-CIRCUIT****BREAKING CAPACITY ICS****(IEC/EN 60947) AT 690 V,****50/60 HZ**

9 kA

**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM****AT 1000 V, 50/60 HZ**

17 kA

**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM****AT 400/415 V, 50/60 HZ**

330 kA

**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM****AT 440 V, 50/60 HZ**

286 kA

**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM****AT 525 V, 50/60 HZ**

143 kA

**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM****AT 690 V, 50/60 HZ**

74 kA

**STANDARD TERMINALS**

Screw terminal

**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM****AT 240 V, 50/60 HZ**

330 kA

**RATED IMPULSE****WITHSTAND VOLTAGE****(UIMP) AT AUXILIARY****CONTACTS**

6000 V

**RATED IMPULSE****WITHSTAND VOLTAGE****(UIMP) AT MAIN****CONTACTS**

8000 V

**RATED SHORT-CIRCUIT****BREAKING CAPACITY ICU****(IEC/EN 60947) AT 525 V,****50/60 HZ**

65 kA

**RATED SHORT-CIRCUIT****BREAKING CAPACITY ICU****(IEC/EN 60947) AT 1000 V****AC**

15 kA

**RATED SHORT-CIRCUIT****BREAKING CAPACITY ICU****(IEC/EN 60947) AT****400/415 V, 50/60 HZ**

150 kA

**RATED SHORT-CIRCUIT  
BREAKING CAPACITY ICU  
(IEC/EN 60947) AT 690 V,  
50/60 HZ**

35 kA

**RATED SHORT-CIRCUIT  
BREAKING CAPACITY ICU  
(IEC/EN 60947) AT 440 V,  
50/60 HZ**

130 kA

**RATED INSULATION  
VOLTAGE (UI)**

1000 V AC

**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**



**Eaton Corporation plc**  
Eaton House  
30 Pembroke Road  
Dublin 4, Ireland  
[Eaton.com](http://Eaton.com)

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