

# Specifications



Photo is representative

## Eaton 259549

Eaton Moeller series NZM Undervoltage release, 48 V DC, +2early N/O, for NZM1

### General specifications

PRODUCT NAME	Eaton Moeller series NZM Undervoltage release
CATALOG NUMBER	259549
MODEL CODE	NZM1-XUHIV48DC
EAN	4015082595494
PRODUCT LENGTH/DEPTH	37 mm
PRODUCT HEIGHT	66 mm
PRODUCT WIDTH	32 mm
PRODUCT WEIGHT	0.056 kg
COMPLIANCES	IEC UL/CSA RoHS conform
CERTIFICATIONS	CSA-C22.2 No. 5-09 CSA (Class No. 1437-01) UL489 CSA (File No. 22086) UL (File No. E140305) UL (Category Control Number DIHS) UL listed CSA certified IEC60947 CE marking
GLOBAL CATALOG	259549

## Product specifications

<b>USED WITH</b>	NZM1(-4), N1(-4)
<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.
<b>10.3 DEGREE OF PROTECTION OF</b>	Does not apply, since the entire switchgear needs to

## 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>CATALOGS</b>	<a href="#">eaton-digital-nzm-catalog-ca013003en-en-us.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-circuit-breaker-release-nzm-mccb-dimensions.eps</a> <a href="#">eaton-circuit-breaker-undervoltage-nzm-mccb-3d-drawing-004.eps</a>
<b>ECAD MODEL</b>	<a href="#">DA-CE-ETN.NZM1-XUHIV48DC</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>TECHNICAL DATA SHEETS</b>	<a href="#">eaton-nzm-technical-information-sheet</a>

<b>ASSEMBLIES</b>	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>ELECTRIC CONNECTION TYPE</b>	Screw connection
<b>FITTED WITH:</b>	Two early-make auxiliary contacts
<b>FRAME</b>	NZM1
<b>MINIMUM COMMAND TIME - MAX</b>	15 ms
<b>MINIMUM COMMAND TIME - MIN</b>	10 ms
<b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>	2
<b>REACTION TIME</b>	19 ms
<b>PICK-UP POWER CONSUMPTION AT AC (UNDervOLTAGE RELEASE)</b>	1.5 VA
<b>PICK-UP POWER CONSUMPTION AT DC (UNDervOLTAGE RELEASE)</b>	0.8 W
<b>VOLTAGE TOLERANCE - MAX</b>	1.1
<b>VOLTAGE TOLERANCE - MIN</b>	.85
<b>RATED CONTROL SUPPLY</b>	48 V DC

<b>VOLTAGE</b>	
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	0 V
<b>SUITABLE FOR</b>	Off-load switch
<b>CONNECTION TYPE</b>	With terminal block on the left-hand switch side
<b>VOLTAGE TYPE</b>	AC
<b>DROP-OUT VOLTAGE OF UNDERVOLTAGE RELEASE AC/DC - MAX</b>	0.7 x Us
<b>DROP-OUT VOLTAGE OF UNDERVOLTAGE RELEASE AC/DC - MIN</b>	0.35 x Us
<b>TERMINAL CAPACITY (SOLID/FLEXIBLE CONDUCTOR)</b>	0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x) at shunt release with ferrule 18 - 14 AWG (2x) at shunt release 18 - 14 AWG (2x) for undervoltage releases, off-delayed 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x) for undervoltage releases, off-delayed with ferrule 18 - 14 AWG (1x) for undervoltage releases, off-delayed 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (2x) at shunt release with ferrule 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (2x) for undervoltage releases, off-delayed with ferrule 18 - 14 AWG (1x) at shunt release
<b>TYPE</b>	Accessory Undervoltage release Undervoltage release with early-make auxiliary contact
<b>SPECIAL FEATURES</b>	Undervoltage release with 2 early-make auxiliary contacts, e.g., for early-make connection of undervoltage release in

	<p>main switch applications, as well as for interlock and load shedding circuits. For use with emergency-stop devices in connection with an emergency-stop button. When the undervoltage trip is switched off, accidental contact with the circuit breaker's primary contacts is prevented when switched on. Early make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms</p> <p>Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.</p>
<b>POWER CONSUMPTION</b>	<p>0.8 W (sealing DC)</p> <p>1.5 VA (sealing AC)</p>
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	48 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	48 V
<b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b>	0
<b>NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)</b>	0
<b>UNDELAYED SHORT-CIRCUIT RELEASE - MIN</b>	0 A
<b>UNDELAYED SHORT-CIRCUIT RELEASE - MAX</b>	0 A
<b>RATED CONTROL VOLTAGE (RELAY CONTACTS)</b>	48 V DC

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



**Eaton Corporation plc**  
Eaton House  
30 Pembroke Road  
Dublin 4, Ireland  
Eaton.com

© 2025 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

