

Specifications



Photo is representative

Eaton 259452

Eaton Moeller series NZM Undervoltage release, 24 V DC, for NZM1

General specifications

PRODUCT NAME	Eaton Moeller series NZM Undervoltage release
CATALOG NUMBER	259452
MODEL CODE	NZM1-XU24DC
EAN	4015082594527
PRODUCT LENGTH/DEPTH	37 mm
PRODUCT HEIGHT	66 mm
PRODUCT WIDTH	32 mm
PRODUCT WEIGHT	0.073 kg
COMPLIANCES	UL/CSA IEC RoHS conform
CERTIFICATIONS	IEC60947 CSA-C22.2 No. 5-09 CSA (File No. 22086) CE marking CSA (Class No. 1437-01) UL listed UL (File No. E140305) UL (Category Control Number DIHS) CSA certified UL489



Powering Business Worldwide

Delivery programme

FRAME	NZM1
SPECIAL FEATURES	• Non-delayed disconnection of NZM circuit-breaker or N switch-disconnector when the control voltage sinks below 35 – 70% US. • For use with emergency-stop devices in connection with an emergency-stop button. • When the under-voltage trip is switched off, accidental contact with the circuit breaker's primary contacts is prevented when switched on. • Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.
SUITABLE FOR	Off-load switch
TYPE	• Accessory • Undervoltage release
USED WITH	NZM1(-4), N(S)1(-4)

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

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

**DROP-OUT VOLTAGE OF
UNDervOLTAGE RELEASE** 0.7 x Us
AC/DC - MAX

**DROP-OUT VOLTAGE OF
UNDervOLTAGE RELEASE** 0.35 x Us
AC/DC - MIN

**ELECTRIC CONNECTION
TYPE** Screw connection

**MINIMUM COMMAND
TIME - MAX** 15 ms

**MINIMUM COMMAND
TIME - MIN** 10 ms

**PICK-UP POWER
CONSUMPTION AT AC
(UNDervOLTAGE
RELEASE)** 1.5 VA

**PICK-UP POWER
CONSUMPTION AT DC
(UNDervOLTAGE
RELEASE)** 0.8 W

POWER CONSUMPTION 0.8 W (DC)
1.5 VA (AC)

**RATED CONTROL SUPPLY
VOLTAGE** 24 V DC

**RATED CONTROL SUPPLY
VOLTAGE (US) AT DC -
MAX** 24 V

**RATED CONTROL SUPPLY
VOLTAGE (US) AT DC -
MIN** 24 V

**RATED CONTROL
VOLTAGE (RELAY
CONTACTS)** 24 V DC

REACTION TIME 19 ms

**VOLTAGE TOLERANCE -
MAX** 1.1

**VOLTAGE TOLERANCE -
MIN** 0.85

VOLTAGE TYPE DC

Technical data - mechanical

CONNECTION TYPE With terminal block on the
left-hand switch side

**NUMBER OF CONTACTS
(CHANGE-OVER
CONTACTS)** 0

**NUMBER OF CONTACTS
(NORMALLY CLOSED
CONTACTS)** 0

**NUMBER OF CONTACTS
(NORMALLY OPEN
CONTACTS)** 0

SPECIAL FEATURES

- Non-delayed disconnection of NZM circuit-breaker or N switch-disconnector when the control voltage sinks below 35 – 70% US.
- For use with emergency-stop devices in connection with an emergency-stop button.
- When the under-voltage trip is switched off, accidental contact with the circuit breaker's primary contacts is prevented when switched on.
- Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.

Technical data - mechanical - terminals

TERMINAL CAPACITY (SOLID/FLEXIBLE CONDUCTOR)

0.75 mm² - 2.5 mm² (2x) at
shunt release with ferrule
0.75 mm² - 2.5 mm² (1x) at
shunt release with ferrule
0.75 mm² - 2.5 mm² (2x)
for undervoltage releases,
off-delayed with ferrule
18 - 14 AWG (2x) for
undervoltage releases, off-
delayed
18 - 14 AWG (1x) for
undervoltage releases, off-
delayed
0.75 mm² - 2.5 mm² (1x)
for undervoltage releases,
off-delayed with ferrule
18 - 14 AWG (1x) at shunt
release
18 - 14 AWG (2x) at shunt
release

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](#)

DRAWINGS

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

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

ECAD MODEL

[ETN.259452.edz](#)

INSTALLATION INSTRUCTIONS

[eaton-circuit-breaker-
nzm1-xa-xahiv-xhiv-xu-
xuhiv-il01203002z.pdf](#)

INSTALLATION VIDEOS

[The new digital NZM
Range](#)

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

[eaton-int-tripping-acc-
mcad-drawings-nzm1-
xhiv.dwg](#)

MCAD MODEL

[eaton-int-tripping-acc-
mcad-3d-models-nzm1-
xhiv.stp](#)

[eaton-accessories-mcad-
drawings-nzm1-xu.dwg](#)

TECHNICAL DATA SHEETS

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

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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