

# Specifications



Photo is representative

## Eaton 284402

Eaton Moeller series NZM Undervoltage release, 24VAC +2early N/O, for NZM1, 20L

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series NZM Undervoltage release
<b>CATALOG NUMBER</b>	284402
<b>MODEL CODE</b>	NZM1-XUHIV20LK24AC
<b>EAN</b>	4015082844028
<b>PRODUCT LENGTH/DEPTH</b>	37 mm
<b>PRODUCT HEIGHT</b>	66 mm
<b>PRODUCT WIDTH</b>	32 mm
<b>PRODUCT WEIGHT</b>	0.129 kg
<b>COMPLIANCES</b>	IEC UL/CSA RoHS conform
<b>CERTIFICATIONS</b>	UL listed UL (File No. E140305) CSA certified UL489 CSA (File No. 22086) UL (Category Control Number DIHS) CE marking IEC60947 CSA (Class No. 1437-01) CSA-C22.2 No. 5-09
<b>GLOBAL CATALOG</b>	284402



Powering Business Worldwide

## Product specifications

<b>USED WITH</b>	NZM1(-4), N(S)1(-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-feerum-the-whole-grain-solution-success-story-en-us.pdf</a> <a href="#">eaton-digital-nzm-brochure-br013003en-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-contact-nzm-mccb-3d-drawing-003.eps</a>
<b>ECAD MODEL</b>	<a href="#">ETN.NZM1-XUHIV20LK24AC</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-circuit-breaker-nzm1-xa-xahiv-xhiv-xu-xuhiv-il01203002z.pdf</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 separate 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>	24 V 50/60 Hz

<b>VOLTAGE</b>	
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	24 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	24 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	24 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	24 V
<b>SUITABLE FOR</b>	Off-load switch
<b>CONNECTION TYPE</b>	Coil terminals with 3 m of loose connection cables Auxiliary contact terminals wired to terminal block
<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> (2x) 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> (1x) for undervoltage releases, off-delayed with ferrule 18 - 14 AWG (2x) for undervoltage releases, off-delayed 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 (1x) at shunt release
<b>TYPE</b>	<ul style="list-style-type: none"> <li>• Accessory</li> <li>• Undervoltage release with early-make auxiliary contact</li> </ul>

## SPECIAL FEATURES

- Undervoltage release with 2 early-make auxiliary contacts, e.g., for early-make connection of undervoltage release in 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
- Cannot be used in conjunction with NZM...-XR... remote operator.
- Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.

<b>POWER CONSUMPTION</b>	0.8 W (sealing DC) 1.5 VA (sealing AC)
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<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V
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<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
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<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>	24 V AC

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**PROJECT NAME:**

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**PROJECT NUMBER:**

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**PREPARED BY:**

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**DATE:**

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