

## Undervoltage release, 60 V DC

Part no. **NZM1-XU60DC**  
**259454**

General specifications		
Product name		Eaton Moeller series NZM release
Part no.		NZM1-XU60DC
EAN		4015082594541
Product Length/Depth		37 millimetre
Product height		66 millimetre
Product width		32 millimetre
Product weight		0.044 kilogram
Compliances		IEC UL/CSA RoHS conform
Certifications		CE marking IEC60947 CSA (File No. 22086) UL listed UL489 CSA-C22.2 No. 5-09 CSA (Class No. 1437-01) CSA certified UL (File No. E140305) UL (Category Control Number DIHS)
Product Tradename		NZM
Product Type		Accessories
Product Sub Type		Release
Delivery program		
Type		Accessory Undervoltage release
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.
Frame		NZM1
Suitable for		Off-load switch
Used with		NZM1(-4), N1(-4)
Technical Data - Electrical		
Voltage type		AC
Rated control voltage (relay contacts)		60 V DC
Rated control supply voltage		60 V DC
Rated control supply voltage (Us) at AC, 50 Hz - min		0 V
Rated control supply voltage (Us) at AC, 50 Hz - max		0 V
Rated control supply voltage (Us) at AC, 60 Hz - min		0 V
Rated control supply voltage (Us) at AC, 60 Hz - max		0 V
Rated control supply voltage (Us) at DC - min		60 V
Rated control supply voltage (Us) at DC - max		60 V
Voltage tolerance - min		0.85
Voltage tolerance - max		1.1
Drop-out voltage of undervoltage release AC/DC - min		0.35 x Us
Drop-out voltage of undervoltage release AC/DC - max		0.7 x Us
Power consumption		1.5 VA (sealing AC) 0.8 W (sealing DC)
Pick-up power consumption at AC (undervoltage release)		1.5 V-A
Pick-up power consumption at DC (undervoltage release)		0.8 W
Reaction time		19 ms
Minimum command time - min		10 ms

Minimum command time - max		15 ms
Electric connection type		Screw connection
<b>Technical Data - Mechanical</b>		
Number of contacts (change-over contacts)		0
Number of contacts (normally closed contacts)		0
Number of contacts (normally open contacts)		0
Connection type		With terminal block on the left-hand switch side
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.
<b>Technical Data - Mechanical - Terminals</b>		
Terminal capacity (solid/flexible conductor)		0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x) 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 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (2x) at shunt release with ferrule 18 - 14 AWG (1x) at shunt release 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (2x) for undervoltage releases, off-delayed with ferrule 18 - 14 AWG (2x) for undervoltage releases, off-delayed 18 - 14 AWG (2x) at shunt release 18 - 14 AWG (1x) for undervoltage releases, off-delayed
<b>Design verification as per IEC/EN 61439</b>		
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 against electric shock		Does not apply, since the 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.
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.

## Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Under voltage coil (EC001022)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Undervoltage trip (ecl@ss13-27-37-04-17 [AKF015018])		
Rated control supply voltage AC 50 Hz	V	0 - 0
Rated control supply voltage AC 60 Hz	V	0 - 0
Rated control supply voltage DC	V	60 - 60
Voltage type for actuating		AC
Type of electric connection		Screw connection
Number of contacts as normally open contact		0
Number of contacts as normally closed contact		0
Number of contacts as change-over contact		0
Delayed		No

Suitable for power circuit breaker			No
Suitable for off-load switch			Yes
Suitable for motor safety switch			No
Suitable for overload relay			No