## Undervoltage release, 24VAC



Part no. NZM1-XUL24AC 259462

General specifications	
Product name	Eaton Moeller series NZM release
Part no.	NZM1-XUL24AC
EAN	4015082594626
Product Length/Depth	37 millimetre
Product height	66 millimetre
Product width	32 millimetre
Product weight	0.044 kilogram
Compliances	UL/CSA
	IEC RoHS conform
Certifications	CSA (Class No. 1437-01) CSA certified CSA-C22.2 No. 5-09 UL489 UL listed CE marking IEC60947 CSA (File No. 22086) UL (File No. E140305) UL (Category Control Number DIHS)
Product Tradename	NZM
Product Type	Accessories
Product Sub Type	Release
Delivery program	
Туре	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 NZMXHIV early-make auxiliary contact or NZMXA shunt release.
Frame	NZM1
Suitable for	Off-load switch
Used with	NZM1(-4), N(S)1(-4)
Technical Data - Electrical	
Voltage type	AC
Rated control voltage (relay contacts)	24 V AC
Rated control supply voltage	24 V 50/60 Hz
Rated control supply voltage (Us) at AC, 50 Hz - min	24 V
Rated control supply voltage (Us) at AC, 50 Hz - max	24 V
Rated control supply voltage (Us) at AC, 60 Hz - min	24 V
Rated control supply voltage (Us) at AC, 60 Hz - max	24 V
Rated control supply voltage (Us) at DC - min	0 V
Rated control supply voltage (Us) at DC - max	0 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	0.8 W (sealing DC) 1.5 VA (sealing AC)
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

Screw connection type   Screw connection		
Technical Data - Mechanical  Number of contacts (change-over contacts)  O  Number of contacts (change-over contacts)  O  Special features  O  Special features  Non-electorial discontacts (change-over contacts)  O  Special features  Non-electorial discontacts (change-over contacts)  O  Non-electorial discontacts (change-over contacts)  O  Non-electorial discontacts (change-over contacts)  Non-electorial disconta	Minimum command time - max	15 ms
Number of contacts (change-owr contacts)  Number of contacts (normally closed contacts)  Number of contacts (normally closed contacts)  O  Number of contacts (normally open contacts)  O  Number of contacts (normally open contacts)  With 3 m connection cable instead of screw termination  Non-dislayed disconnection of V2AD circul-breaker or N switch-disconnector when the control voltage sinks below 35 – 75 or saw with ammagney-stop devices in connection with an amargency-stop button. When the under-voltage prop is switched of incommend to the under-voltage prop is switched on the under-voltage prop is switched of incommend to the under-voltage prop is switched of incommend to the under-voltage prop is switched of incommend to the under-voltage properties and incommend to the properties of the pr	··	Screw connection
Number of contacts (normally closed contacts)  O	Technical Data - Mechanical	
Number of contacts (normally open contacts)  Connection type  Special features  Non-deliqued disconnection ad NZM discash breaker or M switch-disconnector where the control village sinks below 25 - 775; U.S. For size and pattern of the switch-disconnector where the control village sinks below 25 - 775; U.S. For size and pattern of the switch designed price is a control village sinks below 25 - 775; U.S. For size and pattern of the switch designed price is a control village sinks below 25 - 775; U.S. For size and pattern of the switch designed price is a control village sinks below 25 - 775; U.S. For size and pattern of the switched off, accidental contact with the circuit breaker primary contacts is prevented when switched out Macroslage releases cannot be installed simultaneously with NZM.—XHV.—acry-make auxiliary contact or NZM.—XAL.  Technical Data - Mechanical - Terminals  Torninal capacity (solid/like/ide conductor)  O.75 mm² - 2.5 mm² (24) at disunt release with forcule 0.75 mm² - 2.5 mm² (24) at disunt releases. Off delayed 10.75 mm² - 2.5 mm² (24) at disunt releases, off delayed 10.75 mm² - 2.5 mm² (24) at disunt releases with forcule 10.75 mm² - 2.5 mm² (24) at disunt releases with forcule 10.75 mm² - 2.5 mm² (24) at disunt releases with forcule 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.75 mm² - 2.5 mm² (24) for undervoltage releases, off delayed 10.	Number of contacts (change-over contacts)	0
Connection type  With 3 m connection cable instead of screw termination  Non-delayed disconnection of N	Number of contacts (normally closed contacts)	0
Special features    Non-delayed disconnection of NZM circuit-breakor or N switch-disconnector when the control voltage sains below 35 – 78'5 MZ For use with emergency-staps try in its switch-dist and below 35 – 78'5 MZ For use with emergency-staps try in its switch-dist and received in control in the control voltage sains below 35 – 78'5 MZ For use with emergency-staps try in its switch-dist and received in control in the control treaker's primary contracts in prevented when switched on. Undervoltage releases, estimate control with NZM.—XHIV.—only-make auxiliary contact or NZM.—XA.—shurt release.    Terminal capacity (solid/flexible conductor)	Number of contacts (normally open contacts)	0
when the control voltage shall be below 35 - 70% US. For use with emergency-stop devices in connection with an employer-year bip button. When the under-voltage trip is switched off, eccidental contact with the criter threaker's primary contacts is provented when switched on Undervoltage releases cannot be installed smituteneously with 120%—241V—early-make auxiliary contact on N20%—240—alternatives with 120%—240 and 120%—240	Connection type	With 3 m connection cable instead of screw termination
Terminal capacity (solid/flexible conductor)  0.75 mm² - 25 mm² (22) at shunt release with ferrule 0.75 mm² - 25 mm² (12) for undervottage releases, off-delayed with ferrule 18-114 MVG (13) for undervottage releases, off-delayed 0.75 mm² - 25 mm² (23) for undervottage releases, off-delayed with ferrule 18-14 MVG (13) at shunt release with ferrule 18-14 MVG (13) at shunt releases, off-delayed 18-14 MVG (14) at shunt releases 20-15 MVG (14) at shunt releases 20-15 MVG (14) at shunt releases 20-15 MVG (14) at shunt release 20-15 MVG (14) At shu	Special features	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 NZMXHIV early-make auxiliary contact or NZMXA
0.75 mm² - 25 mm² (1x) for undervoltage releases, off-delayed with ferrule   18 - 14 AWG (1x) for undervoltage releases, off-delayed with ferrule   18 - 14 AWG (1x) for undervoltage releases, off-delayed with ferrule   18 - 14 AWG (1x) at shunt release with ferrule   18 - 14 AWG (1x) at shunt release with ferrule   18 - 14 AWG (2x) for undervoltage releases, off-delayed with ferrule   18 - 14 AWG (2x) for undervoltage releases, off-delayed    Design verification as per IEC/EN 61439	Technical Data - Mechanical - Terminals	
10.2.2 Corrosion resistance  10.2.3.1 Verification of thermal stability of enclosures  10.2.3.2 Verification of resistance of insulating materials to normal heat  10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  10.2.4 Resistance to ultra-violet (UV) radiation  10.2.5 Lifting  10.2.5 Lifting  10.2.6 Mechanical impact  10.2.7 Inscriptions  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.5 Protection against electric inclust and connections  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9 Power-frequency electric strength  10.9 Power-frequency electric istrength  10.9 Power-frequency electric istrength  10.9 Internal electric istrength  10.9 Internal electric istrength  10.9 Internal electric istrength  10.9 Internal electric is panel builder's responsibility.  10.9 Internal electric istrength  10.9 Internal electric istren	Terminal capacity (solid/flexible conductor)	0.75 mm² - 2.5 mm² (1x) for undervoltage releases, off-delayed with ferrule 18 - 14 AWG (1x) for undervoltage releases, off-delayed 0.75 mm² - 2.5 mm² (2x) for undervoltage releases, off-delayed with ferrule 18 - 14 AWG (1x) at shunt release 0.75 mm² - 2.5 mm² (1x) at shunt release with ferrule 18 - 14 AWG (2x) at shunt release
10.2.3.1 Verification of thermal stability of enclosures  10.2.3.2 Verification of resistance of insulating materials to normal heat  10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  10.2.4 Resistance to ultra-violet (UV) radiation  10.2.5 Lifting  10.2.5 Lifting  10.2.5 Inscriptions  10.2.7 Inscriptions  10.3.1 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9 Power-frequency electric strength  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  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.  10.6 Incorporation of switching devices and components  Does not apply, since the entire switchgear needs to be evaluated.  10.6 Incorporation of switching devices and components  Is the panel builder's responsibility.  10.9.2 Power-frequency electric attength  Is the panel builder's responsibility.  10.9.4 Testing of enclosures made of insulating material  Is the panel builder's responsibility.  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  The device meets the requirements,	Design verification as per IEC/EN 61439	
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10.2.3. Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  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  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.2.3.1 Verification of thermal stability of enclosures	Meets the product standard's requirements.
10.24 Resistance to ultra-violet (UV) radiation  Meets the product standard's requirements.  10.25 Lifting  Does not apply, since the entire switchgear needs to be evaluated.  10.26 Mechanical impact  Does not apply, since the entire switchgear needs to be evaluated.  10.27 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.  Meets the product standard's requirements.  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.  10.9.2 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  10.10 Temperature rise  The panel builder's responsibility.  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	10.2.3.2 Verification of resistance of insulating materials to normal heat	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.  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Is the panel builder's responsibility.  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  The panel builder's responsibility.  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	10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects	Meets the product standard's requirements.
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10.3 Degree of protection of assemblies  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.  10.9.1 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.  10.10 Temperature rise  The panel builder's responsibility.  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	10.2.6 Mechanical impact	Does not apply, since the entire switchgear needs to be evaluated.
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10.7 Internal electrical circuits and connections  1s the panel builder's responsibility.  10.8 Connections for external conductors  1s the panel builder's responsibility.  10.9.2 Power-frequency electric strength  1s the panel builder's responsibility.  10.9.3 Impulse withstand voltage  1s the panel builder's responsibility.  1c the panel builder is responsibility.  1c panel builder is responsibility.  1s the panel builder is responsibility.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.  1s the panel builder's responsibility. The specifications for the switchgear must be observed.	10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
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10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  10.14 Is the panel builder's responsibility. The specifications for the switchgear must be observed.  10.15 When the panel builder's responsibility. The specifications for the switchgear must be observed.  10.15 He panel builder's responsibility. The specifications for the switchgear must be observed.  10.15 Mechanical function  10.16 Mechanical function  10.17 The device meets the requirements, provided the information in the instruction	10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage  10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  10.11 Short-circuit rating  10.12 Electromagnetic compatibility  10.13 Mechanical function  10.13 Mechanical function  Is the panel builder's responsibility.  The panel builder is responsibile for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.  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	10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material  10.10 Temperature rise  The panel builder is responsibile 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	10.9.2 Power-frequency electric strength	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	10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
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observed.  10.13 Mechanical function  The device meets the requirements, provided the information in the instruction	10.11 Short-circuit rating	. , , , ,
	10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
	10.13 Mechanical function	

## **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 Rated control supply voltage AC 50 Hz V 24 - 24  Rated control supply voltage AC 60 Hz V 24 - 24  Rated control supply voltage DC V 0 - 0  Voltage type for actuating AC Contacts as normally open contact O Contacts as normally closed contact O Contacts as normally closed contact O Contacts as change-over contact O Contacts O Conta					
Rated control supply voltage AC 50 Hz  Rated control supply voltage AC 60 Hz  V 24 - 24  Rated control supply voltage DC  Voltage type for actuating  Type of electric connection  Number of contacts as normally closed contact  Number of contacts as normally closed contact  V 24 - 24  AC  Screw connection  O  O  O  O  O  O  O  O  O  O  O  O  O					
Rated control supply voltage AC 60 Hz  Rated control supply voltage DC  Voltage type for actuating  Type of electric connection  Number of contacts as normally closed contact  Number of contacts as normally closed contact  O  Contacts as normally closed contact  Number of contacts as normally closed contact	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 DC  Voltage type for actuating  AC  Type of electric connection  Number of contacts as normally open contact  Number of contacts as normally closed contact  O  O  O  O  O  O  O  O  O  O  O  O  O					
Voltage type for actuating AC Type of electric connection Screw connection Number of contacts as normally open contact O Number of contacts as normally closed contact O					
Type of electric connection  Number of contacts as normally open contact  O  Number of contacts as normally closed contact  O					
Number of contacts as normally open contact  Number of contacts as normally closed 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