



**Undervoltage release, 24 V DC**

**Part no.** NZM2/3-XU24DC  
**Catalog No.** 259509

**EL-Nummer (Norway)** 4358769

Similar to illustration

**Delivery program**

|                       |                |   |  |
|-----------------------|----------------|---|--|
| Product range         |                |   | Accessories  |
| Accessories           |                |   | Undervoltage release   |
| Accessories           |                |   | Undervoltage releases  |
| Standard/Approval     |                |   | UL/CSA, IEC  |
| Construction size     |                |   | NZM2/3   |
| Description           |                |   | Non-delayed disconnection of NZM circuit-breaker or N switch-disconnector when the control voltage sinks below 35 – 70% U <sub>s</sub> .<br>For use with emergency-stop devices in connection with an emergency-stop button.<br>When the under-voltage trip is switched off, accidental contact with the circuit breaker's primary contacts is prevented when switched on.<br>Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release. |
| Connection type       |                |   | With bolt connection   |
| Auxiliary contacts    |                |   | without auxiliary contact  |
| Rated control voltage | U <sub>s</sub> | V | 24 V DC  |
| For use with          |                |   | NZM2(-4), N(S)2(-4)<br>NZM3(-4), N(S)3(-4)   |

**Technical data**

**Undervoltage release**

|  |                  |                  |            |
|--|------------------|------------------|------------|
| Rated control voltage  | U <sub>s</sub>   | V                |            |
| DC   | U <sub>s</sub>   | V DC             | 24 - 24    |
| Rated control voltage  | U <sub>s</sub>   | V                | 24 V DC    |
| Operating range  |                  |                  |            |
| Drop-out voltage   |                  | x U <sub>s</sub> | 0.35 - 0.7 |
| Pick-up voltage  | x U <sub>c</sub> |                  | 0.85 - 1.1 |
| Power consumption  |                  |                  |            |
| AC   |                  |                  |            |
| Pick-up AC   |                  | VA               | 1.5        |
| Sealing AC   |                  | VA               | 1.5        |
| DC   |                  | x U <sub>s</sub> |            |
| Pick-up DC   |                  | W                | 0.8        |
| Sealing DC   |                  | W                | 0.8        |
| Maximum opening delay (response time until opening of the main contacts) |                  | ms               | 19         |
| Minimum command time   |                  | ms               | 10 - 15    |

**Terminal capacities**

|   |  |                 |                                      |
|---|--|-----------------|--------------------------------------|
| Solid or flexible conductor, with ferrule |  | mm <sup>2</sup> | 1 x (0,75 - 2,5)<br>2 x (0,75 - 2,5) |
|   |  | AWG             | 1 x (18 ... 14)<br>2 x (18 ... 14)   |

**Design verification as per IEC/EN 61439**

|                                      |  |  |  |
|--------------------------------------|--|--|--|
| IEC/EN 61439 design verification     |  |  |  |
| 10.2 Strength of materials and parts |  |  |  |
| 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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties   |  |  |
| 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 8.0

|  |   |                  |
|--|---|------------------|
| 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@ss10.0.1-27-37-04-17 [AKF015013]) |   |                  |
| Rated control supply voltage Us at AC 50HZ   | V | 0 - 0            |
| Rated control supply voltage Us at AC 60HZ   | V | 0 - 0            |
| Rated control supply voltage Us at DC  | V | 24 - 24          |
| 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               |

## Approvals

|                             |  |   |
|-----------------------------|--|---|
| Product Standards           |  | UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking |
| UL File No.                 |  | E140305   |
| UL Category Control No.     |  | DIHS  |
| CSA File No.                |  | 022086  |
| CSA Class No.               |  | 1437-01   |
| North America Certification |  | UL listed, CSA certified                        |