

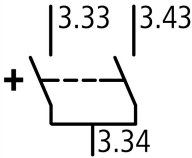


**Undervoltage release for NZM2/3, configurable relays, 2NO, 24DC, Push-in terminals**

**Part no. NZM2/3-XU2A24DC**  
**Catalog No. 189725**

Similar to illustration

### Delivery program

|                    |  |   |
|--------------------|--|---|
| Product range      |  | Accessories   |
| Accessories        |  | Undervoltage release  |
| Accessories        |  | Undervoltage release with two relays  |
| Standard/Approval  |  | UL/CSA, IEC   |
| Construction size  |  | NZM2/3  |
| Description        |  | <p>Instantaneous shut-off of the NZM circuit breaker when the control voltage drops below 35 - 70% <math>U_s</math>.</p> <p>For use with emergency-stop devices in connection with an emergency-stop button.</p> <p>For signaling commands or different states of the circuit-breaker.</p> <p>Two relays per unit.</p> <p>The activation criteria can be configured in the trip unit.</p> <p>Configuration via communication or circuit breaker display or front USB port and Eaton Power Xpert Protection Manager.</p> <p>When the under-voltage trip is switched off, accidental contact with the circuit breaker's primary contacts is prevented when switched on.</p> <p>Only for use in combination with circuit-breakers with electronic trips.</p> <p>Under-voltage trip relay modules cannot be installed simultaneously with make-before-break auxiliary contact NZM...-XHIV, under-voltage trip NZM...-XU... or shunt trip NZM...-XA.</p> <p>Relay contacts for control wiring.</p> <p>Relays can be used for controlling remote operator with <math>U_s=208-204</math> V AC.</p> <p>Control wiring on push-in clamps.</p> <p>Cannot be used with the PXR10 NZM-AX electronic trip.</p> |
| Connection type    |  | with push in terminal   |
| Auxiliary contacts |  | without auxiliary contact   |
| For use with       |  | PXR20(25) NZM2(-4)-...X...<br>PXR20(25) NZM3(-4)-...X...  |
| Number of relays   |  | 2   |
| Contact sequence   |  |   |

### Technical data

#### Undervoltage release

|                       |         |         |            |
|-----------------------|---------|---------|------------|
| Rated control voltage | $U_s$   | V       |            |
| DC                    | $U_s$   | V DC    | 24 - 24    |
| Operating range       |         |         |            |
| Drop-out voltage      |         | $x U_s$ | 0.35 - 0.7 |
| Pick-up voltage       | $x U_c$ |         | 0.85 - 1.1 |
| Power consumption     |         |         |            |
| AC                    |         |         |            |
| Pick-up AC            |         | VA      | 1.5        |
| Sealing AC            |         | VA      | 1.5        |
| DC                    |         | $x U_s$ |            |
| 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           |
| <b>Terminal capacity</b>   |  |                 |                   |
| Solid  |  | mm <sup>2</sup> | 1 x (0.2 – 1.5)   |
| Stranded   |  | mm <sup>2</sup> | 1 x (0.25 – 1.5)  |
|  |  | AWG             | 1 x (24 - 16)     |
| with insulated end sleeve in accordance with DIN46224 / 4                |  | mm <sup>2</sup> | 1 x (0,25 - 1,5)  |
| with uninsulated end sleeve in accordance with DIN46228 / 1              |  | mm <sup>2</sup> | 1 x (0,25 - 0,75) |

### Relay contacts

|   |                  |                   |                   |
|---|------------------|-------------------|-------------------|
| Rated control voltage                                       | U <sub>s</sub>   | V                 |                   |
| AC  | U <sub>s</sub>   | V AC              | 24 - 240          |
| DC  | U <sub>s</sub>   | V DC              | 24 - 24           |
| <b>Contacts</b>   |                  |                   |                   |
| Rated impulse withstand voltage                             | U <sub>imp</sub> | V AC              | 4000              |
| Rated insulation voltage                                    | U <sub>i</sub>   | V                 | 250               |
| Overvoltage category/pollution degree                       |                  |                   | II/2              |
| <b>Switching capacity</b>                                   |                  |                   |                   |
| Rated operational current                                   |                  | kA <sub>rms</sub> |                   |
| <b>AC-1</b>   |                  |                   |                   |
| 24 V  | I <sub>e</sub>   | A                 | 1                 |
| 110 V   | I <sub>e</sub>   | A                 | 1                 |
| 230 V   | I <sub>e</sub>   | A                 | 1                 |
| <b>DC-1</b>   |                  |                   |                   |
| 24 V  | I <sub>e</sub>   | A                 | 1                 |
| Min. switching capacity (reference value)                   |                  |                   | 0.1 mA / 0.1 VDC  |
| <b>Connection</b>   |                  |                   |                   |
| Stripping length  |                  | mm                | 8                 |
| <b>Terminal capacity</b>                                    |                  |                   |                   |
| Solid   |                  | mm <sup>2</sup>   | 1 x (0.2 – 1.5)   |
| Stranded  |                  | mm <sup>2</sup>   | 1 x (0.25 – 1.5)  |
|   |                  | AWG               | 1 x (24 - 16)     |
| with insulated end sleeve in accordance with DIN46224 / 4   |                  | mm <sup>2</sup>   | 1 x (0,25 - 1,5)  |
| with uninsulated end sleeve in accordance with DIN46228 / 1 |                  | mm <sup>2</sup>   | 1 x (0,25 - 0,75) |

### 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.                             |

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|--|--|--|
| 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 7.0

|  |   |                         |
|--|---|-------------------------|
| 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   |   | DC                      |
| Type of electric connection  |   | Spring clamp connection |
| Number of contacts as normally open contact  |   | 2                       |
| Number of contacts as normally closed contact  |   | 0                       |
| Number of contacts as change-over contact  |   | 0                       |
| Delayed  |   | No                      |
| Suitable for power circuit breaker   |   | Yes                     |
| Suitable for off-load switch   |   | Yes                     |
| Suitable for motor safety switch   |   | Yes                     |
| 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                        |