

## Shunt release, 12VAC/DC

Part no. **NZM1-XA12AC/DC**  
 Catalog No. **259706**

Similar to illustration

## Delivery program

|                       |                |   |                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------|----------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product range         |                |   | Accessories                                                                                                                                                                                                                                                                                                                                          |
| Accessories           |                |   | Shunt release                                                                                                                                                                                                                                                                                                                                        |
| Accessories           |                |   | Shunt releases                                                                                                                                                                                                                                                                                                                                       |
| Standard/Approval     |                |   | UL/CSA, IEC                                                                                                                                                                                                                                                                                                                                          |
| Construction size     |                |   | NZM1                                                                                                                                                                                                                                                                                                                                                 |
| Description           |                |   | Switches are tripped by a voltage pulse or by the application of uninterrupted voltage.<br>If the shunt trip is live, contact with the circuit breaker's primary contacts is prevented when switched on.<br>Shunt releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release. |
| Connection type       |                |   | with terminal block on the left-hand switch side                                                                                                                                                                                                                                                                                                     |
| Auxiliary contacts    |                |   | without auxiliary contact                                                                                                                                                                                                                                                                                                                            |
| Rated control voltage | U <sub>s</sub> | V | 12 V AC/DC                                                                                                                                                                                                                                                                                                                                           |
| For use with          |                |   | NZM1(-4), N(S)1(-4)                                                                                                                                                                                                                                                                                                                                  |

## Technical data

## Shunt release

|                                                                          |                  |                 |                                      |
|--------------------------------------------------------------------------|------------------|-----------------|--------------------------------------|
| Rated control voltage                                                    | U <sub>s</sub>   | V               |                                      |
| AC                                                                       | U <sub>s</sub>   | V AC            | 12 - 12                              |
| DC                                                                       | U <sub>s</sub>   | V DC            | 12 - 12                              |
| Frequency                                                                |                  | Hz              | 50/60/200/400, DC                    |
| Operating range                                                          |                  |                 |                                      |
| AC                                                                       | x U <sub>s</sub> |                 | 0.7 - 1.1                            |
| DC                                                                       | x U <sub>s</sub> |                 | 0.7 - 1.1                            |
| Power consumption                                                        |                  |                 |                                      |
| Pick-up AC/DC                                                            |                  | VA/W            | 2.5                                  |
| Power consumption Pick-up = Sealing                                      |                  | VA/W            | 2.5                                  |
| Maximum opening delay (response time until opening of the main contacts) |                  | ms              | 20                                   |
| Maximum duty factor                                                      |                  | ms              | ∞                                    |
| Minimum command time                                                     |                  | ms              | 10 ... 15                            |
| Terminal capacities                                                      |                  | mm <sup>2</sup> |                                      |
| 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) / Shunt release (for power circuit breaker) (EC001023)                                                                                         |   |  |                  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Full load current trip (ecl@ss10.0.1-27-37-04-18 [AKF016013]) |   |  |                  |
| Rated control supply voltage Us at AC 50HZ                                                                                                                                                  | V |  | 12 - 12          |
| Rated control supply voltage Us at AC 60HZ                                                                                                                                                  | V |  | 12 - 12          |
| Rated control supply voltage Us at DC                                                                                                                                                       | V |  | 12 - 12          |
| Voltage type for actuating                                                                                                                                                                  |   |  | AC/DC            |
| Initial value of the undelayed short-circuit release - setting range                                                                                                                        | A |  | 0                |
| End value adjustment range undelayed short-circuit release                                                                                                                                  | A |  | 0                |
| 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                |
| Suitable for power circuit breaker                                                                                                                                                          |   |  | No               |
| Suitable for off-load switch                                                                                                                                                                |   |  | Yes              |
| Suitable for motor safety switch                                                                                                                                                            |   |  | No               |
| Suitable for overload relay                                                                                                                                                                 |   |  | No               |