# Shunt release, 208-240VAC/DC

**Part no.** NZM1-XAL208-250AC/DC  
**Catalog No.** 259744  
**EL-Nummer (Norway)** 4358726

## Delivery program

<table>
<thead>
<tr>
<th>Product range</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessories</td>
<td>Shunt release</td>
</tr>
<tr>
<td>Accessories</td>
<td>Shunt releases</td>
</tr>
</tbody>
</table>

**Standard/Approval**  U/L/CSA, IEC  
**Construction size** NZM1  
**Description**  Switches are tripped by a voltage pulse or by the application of uninterrupted voltage. If the shunt trip is live, contact with the circuit breaker’s primary contacts is prevented when switched on. Shunt releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release.

**Connection type**  with 3 m connection cable instead of screw termination  
**Auxiliary contacts**  without auxiliary contact  
**Rated control voltage**\( U_s \) V AC/DC 208 - 250 V AC/DC  
**For use with** NZM1(-4), N(S)1(-4)

## Technical data

### Shunt release

| Rated control voltage | \( U_s \) V  
|-----------------------|------------------|  
| AC                    | \( U_s \) V AC 208 - 250  
| DC                    | \( U_s \) V DC 208 - 250  

**Frequency** Hz  
**Operating range**  
- AC \( x U_s \) 0.7 - 1.1  
- DC \( x U_s \) 0.7 - 1.1  

**Power consumption**\( \text{VA/W} \)  
- Pick-up AC/DC 2.5  
- Power consumption Pick-up = Sealing 2.5  
- Maximum opening delay (response time until opening of the main contacts) ms \( \infty \)  
- Maximum duty factor ms \( \infty \)  
- Minimum command time ms 10 ... 15  

**Terminal capacities** mm\(^2\)  
- Solid or flexible conductor, with ferrule  
  - \( 1 x (0.75 - 2.5) \) \( 2 x (0.75 - 2.5) \) \( 1 x (18 ... 14) \) \( 2 x (18 ... 14) \) \( \text{AWG} \)

## Design verification as per IEC/EN 61439

IEC/EN 61439 design verification  

<table>
<thead>
<tr>
<th>10.2 Strength of materials and parts</th>
</tr>
</thead>
</table>
| 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.  

10/10/2020  
Eaton 259744 ED2020 V73.0 EN  
1 / 3
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 7.0**

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 | 208 - 250 |
| Rated control supply voltage Us at AC 60HZ | V | 208 - 250 |
| Rated control supply voltage Us at DC | V | 208 - 250 |
| 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 | Yes |
| 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
Dimensions

① NZM1-XA(HIV)
NZM1-XU(HIV)(20)
NZM1-XHIV

② NZM1-XA(HIV)(L)
NZM1-XU(V)(HIV)(L)(20)
NZM1-XHIV(L)

③ NZM1-XHIVR

Additional product information (links)

IL01203002Z (AWA1230-1914) Shunt release, Undervoltage release, Early-make auxiliary contact  