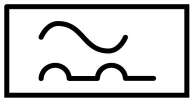
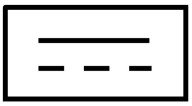
# DATASHEET - NZM2-4-XFIA30

**Earth-fault release 30mA, AC/DC sensitive, 4p**

**Part no.** NZM2-4-XFIA30
**Catalog No.** 292345

Powering Business Worldwide™

## Delivery program

| | | | |
|---|---|---|---|
| Description | | | Core-balance principle with AC/DC sensitivity (in range 0 - 100 kHz)<br>For 4 pole NZM2-4 circuit-breakers and N2-4 switch-disconnectors<br>Internal power supply Us = 50 - 400 V |
| Contact sequence | | |  |
| Contact sequence | | |  |
| **For use with** | | | |
| For use with | | | NZM2-4<br>N2-4 |
| Pole | | | 4 pole |

**Notes**

Observe response threshold dependence on frequency!

See “Frequency response” characteristic curve

Auxiliary contacts (1 N/O, 1N/C integrated) are reset via the reset button.

Not in combination with plug-in units, insulated enclosure or main switch assembly kit for side panel mounting with mounting bracket.

Rated ultimate short-circuit breaking capacity is determined by the fitted NZM2.

If a switch-disconnector N2 is applied by the back-up fuse to be used → Technical data.

## Technical data

### Electrical

| | | | |
|---|---|---|---|
| Standards | | | IEC/EN 60947-2<br>IEC/EN 60947-2 annex B |
| Sensitivity | | | Sensitive to AC/DC (type B) |
| Min. operating voltage | $U_e$ | V | |
| or detection of fault currents type A/AC | | | 0 V independent of mains voltage |
| or detection of fault currents type B | | | 50 V (dependent on mains power) |
| Suitability for the application | | | In three- and single-phase systems |
| Rated operational voltage | $U_e$ | V AC | 50…400 (3~) |
| Rated frequency | f | Hz | 50 |
| Number of poles | | | 4-pole |
| Rated current range | $I_n$ | A | 15…250 |
| Rated fault currents | $I_{\Delta n}$ | A | 0.03 |
| Detection range of the fault current | | | with AC voltage: 0 - 100 kHz<br>with pulsed DC voltage: 50 Hz |
| Rated ultimate short-circuit making capacity and rated ultimate short-circuit breaking capacity | $I_{\Delta m}$ | A | = $I_{CU}$ |
| Mechanical shock resistance (IEC 60068-2-27) | | | 20 (half-sinusoidal shock 20 ms) |
| Lifespan, mechanical (50 % with fault current) | Operations | | ≧ 2 000 |

### Mechanical

| | | | |
|---|---|---|---|
| Standard front dimension | | mm | 96 |
| Mounting | | | Bottom |
| Mounting position | | | Vertical and 90° in all directions |
| Supply | | | |
| | | | Bottom |
| Degree of protection | | | IP20 in the operating component area |
| Ambient temperature | | | -25 - +70 |

| | | |
|---|---|---|
| Terminal capacity | | |
| Flexible without ferrule | $mm^2$ | wie NZM2 Standardanschluss |
| flexible with ferrules | $mm^2$ | With NZM2 standard connection |

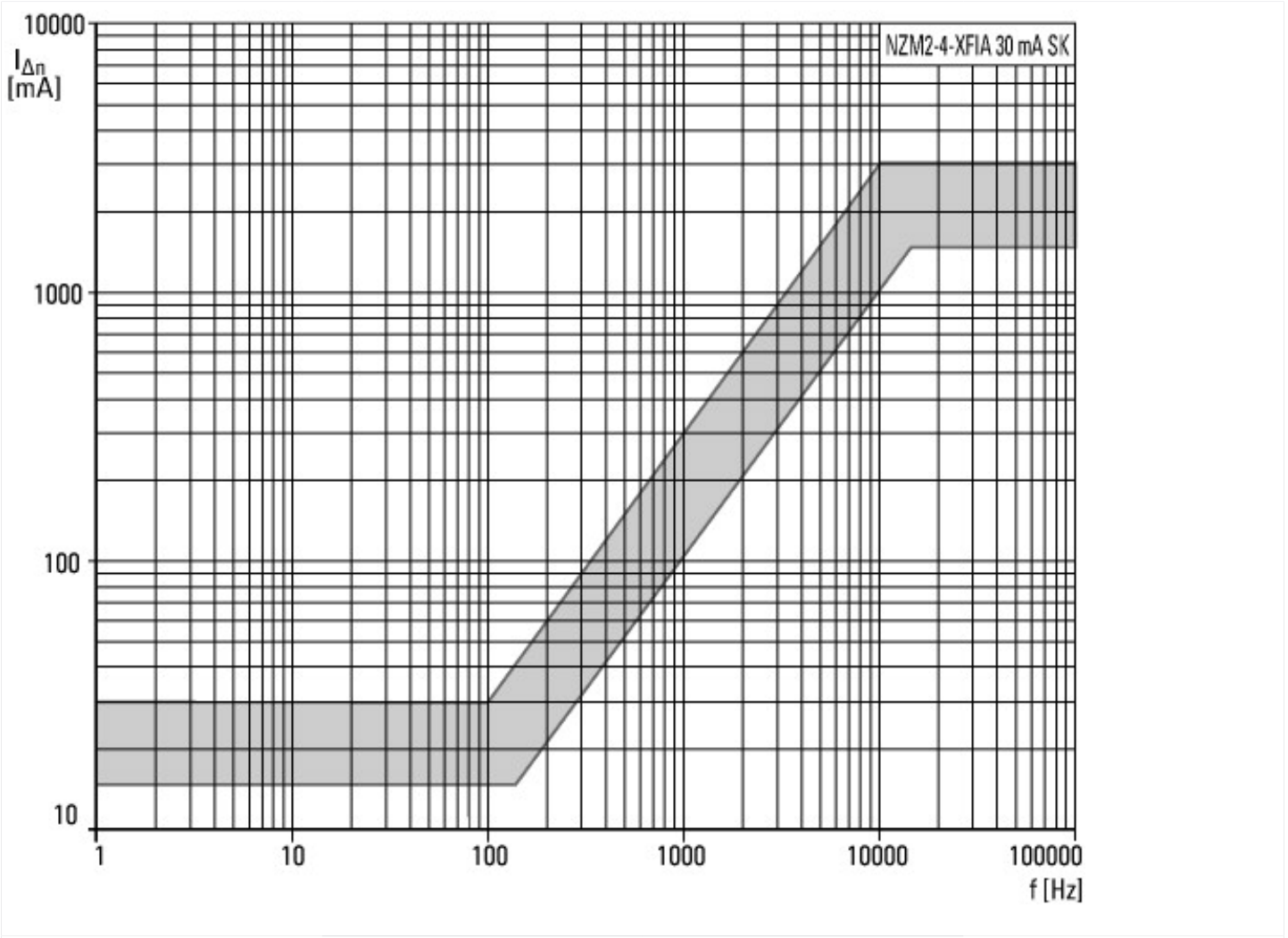
## Design verification as per IEC/EN 61439

| | | |
|---|---|---|
| Technical data for design verification | | |
| Operating ambient temperature min. | °C | -25 |
| Operating ambient temperature max. | °C | 70 |
| 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 7.0

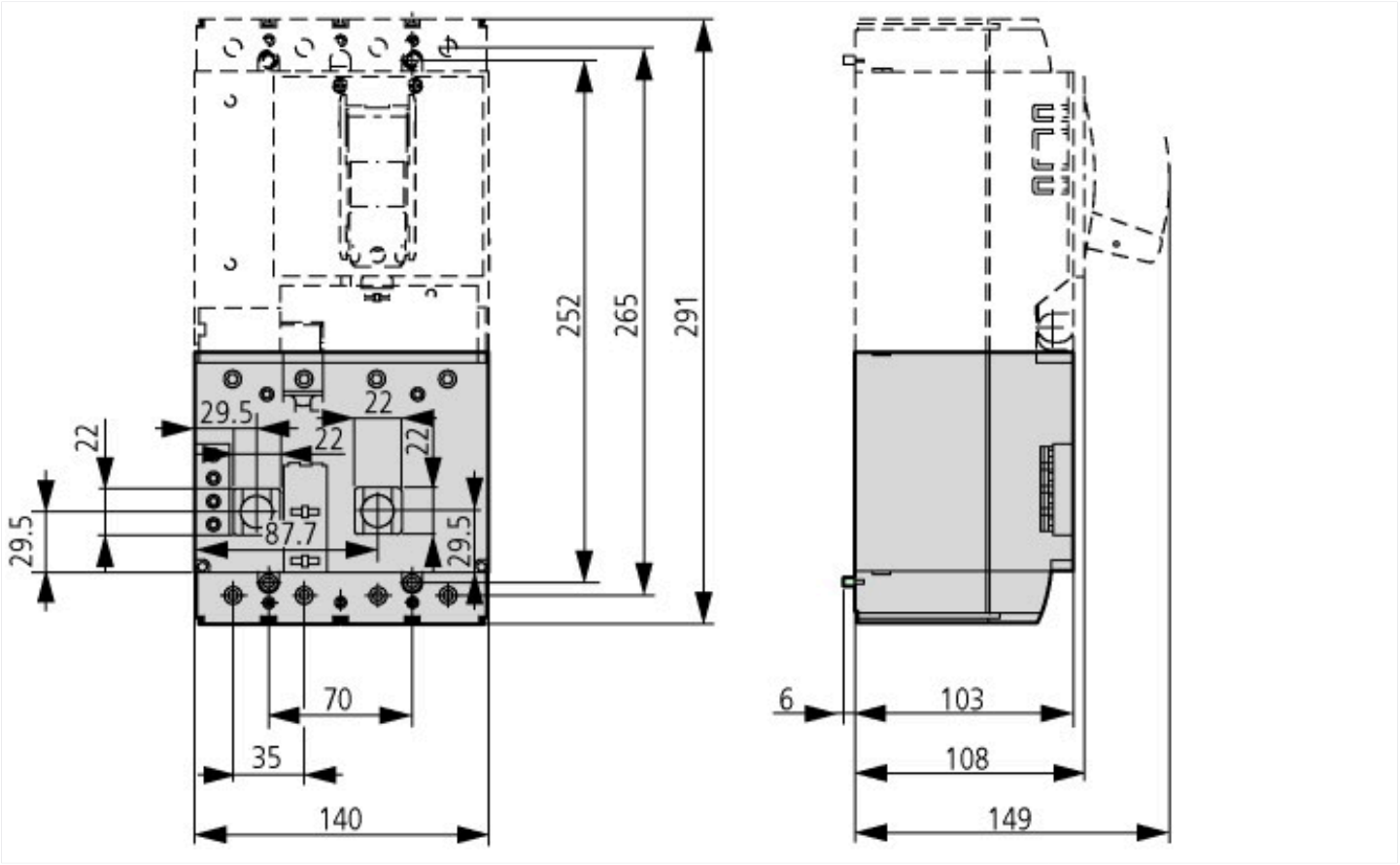
| | | |
|---|---|---|
| Low-voltage industrial components (EG000017) / Residual current release for power circuit breaker (EC001021) | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Fault current switch for circuit breakers (ecl@ss10.0.1-27-37-04-11 [AKF009013]) | | |
| Rated control supply voltage Us at AC 50HZ | V | 50 - 400 |
| Rated control supply voltage Us at AC 60HZ | V | 50 - 400 |
| Rated control supply voltage Us at DC | V | 0 - 0 |
| Rated fault current | A | 0.03 - 0.03 |
| Max. power on-delay time | ms | 30 |
| Delay adjustable | | No |
| Max. rated operation voltage Ue | V | 400 |

## Characteristics




Tripping current frequency response
30 mA
SK part no.

## Dimensions




## Additional product information (links)

| **IL01210008Z (AWA1230-2100) Residual-current protection module** | |
|---|---|
| IL01210008Z (AWA1230-2100) Residual-current protection module | ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01210008Z2017_03.pdf |