## **DATASHEET - ZE-1,6**



Overload relay, Ir= 1 - 1.6 A, 1 N/O, 1 N/C, Direct mounting



Part no. ZE-1,6 Catalog No. 014432 Alternate Catalog XTOM1P6AC1 No. EL-Nummer 4130479 (Norway)

## **Delivery program**

| Product range             |                |   | ZE overload relays for mini contactor relays  |
|---------------------------|----------------|---|---|
| Phase-failure sensitivity |                |   | IEC/EN 60947, VDE 0660 Part 102   |
| Description               |                |   | Test/off button<br>Reset pushbutton manual/auto<br>Trip-free release                          |
| Mounting type             |                |   | Direct mounting   |
| Setting range             |                |   |   |
| Overload releases         | l <sub>r</sub> | А | 1 - 1.6   |
| Contact sequence          |                |   | 97 95<br>$ \begin{array}{c} 97 95 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 4 \\ 6 \\ 98 \\ 96 \end{array}$ |
| Auxiliary contacts        |                |   |   |
| N/O = Normally open       |                |   | 1 N/O   |
| N/C = Normally closed     |                |   | 1 N/C   |
| For use with              |                |   | DILEM<br>DIULEM/21/MV   |
| Short-circuit protection  |                |   |   |
| Type "1" coordination     | gG/gL          | A | 20  |
| Type "2" coordination     | gG/gL          | A | 6   |
| Nataa                     |                |   |   |

### Notes

Overload trigger: tripping class 10 A

Short circuit protection: observe the maximum permissible fuse of the contactor with direct device mounting.

Suitable for protection of Ex e-motors



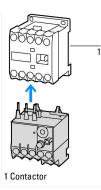
II(2)G [Ex d] [Ex e] [Ex px]

PTB 10 ATEX 3014

Observe manual MN03407003Z-DE/EN.

### Notes

When fitted directly to the contactor a clearance of at least 5 mm is required between the overload relays.



## Technical data General

| General   |                  |                 |  |
|---|------------------|-----------------|--|
| Standards   |                  |                 | IEC/EN 60947, VDE 0660, UL, CSA  |
| Climatic proofing   |                  |                 | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature   |                  |                 |  |
|   |                  |                 | Operating range to IEC/EN 60947<br>PTB: -5 °C - +55 °C                         |
| Open  |                  | °C              | -25 - +50  |
| Enclosed  |                  | °C              | - 25 - 40  |
| Temperature compensation  |                  |                 | Continuous   |
| Weight  |                  | kg              | 0.075  |
| Mechanical shock resistance   |                  | g               | 10<br>Sinusoidal<br>Shock duration 10 ms                                       |
| Degree of Protection  |                  |                 | IP20   |
| Protection against direct contact when actuated from front (EN 50274) |                  |                 | Finger and back-of-hand proof  |
| Altitude  |                  | m               | Max. 2000  |
| Main conducting paths   |                  |                 |  |
| Rated impulse withstand voltage                                       | U <sub>imp</sub> | V AC            | 6000   |
| Overvoltage category/pollution degree                                 |                  |                 | III/3  |
| Rated insulation voltage  | Ui               | V               | 690  |
| Rated operational voltage   | Ue               | V AC            | 690  |
| Safe isolation to EN 61140  |                  |                 |  |
| Between auxiliary contacts and main contacts                          |                  | V AC            | 300  |
| Between main circuits   |                  | V AC            | 300  |
| Temperatur compensation residual error > 40 °C                        |                  |                 | ≦ 0.25 %/K   |
| Current heat loss (3 conductors)                                      |                  |                 |  |
| Lower value of the setting range                                      |                  | W               | 2.5  |
| Maximum setting   |                  | W               | 5.1  |
| Terminal capacities   |                  | mm <sup>2</sup> |  |
| Solid   |                  | mm <sup>2</sup> | 1 x (0.75 - 2.5)   |
| Flexible with ferrule   |                  | mm <sup>2</sup> | 1 x (0.5 - 1.5)  |
| Solid or stranded   |                  | AWG             | 18 - 14  |
| Terminal screw  |                  |                 | M3.5   |
| Tightening torque   |                  | Nm              | 1.2  |
| Stripping length  |                  | mm              | 8  |
| Tools   |                  |                 |  |
| Pozidriv screwdriver  |                  | Size            | 2  |
| Standard screwdriver  |                  | mm              | 0.8 x 5.5  |
| Auxiliary and control circuits  |                  |                 |  |
| Rated impulse withstand voltage                                       | U <sub>imp</sub> | V               | 4000   |
| Overvoltage category/pollution degree                                 |                  |                 | 111/3  |
| Terminal capacities   |                  | mm <sup>2</sup> |  |
| Solid   |                  | mm <sup>2</sup> | 1 x (0.75 - 2.5)<br>2 x (0.75 - 2.5)   |
| Flexible with ferrule   |                  | mm <sup>2</sup> | 1 × (0.5 - 1.5)  |

|                                      |                 |         | 2 x (0.5 - 1.5)   |
|--------------------------------------|-----------------|---------|---|
| Solid or stranded                    |                 | AWG     | 2 x (18 - 12)   |
| Terminal screw                       |                 |         | M3.5  |
| Tightening torque                    |                 | Nm      | 1.2   |
| Stripping length                     |                 | mm      | 8   |
| Tools                                |                 |         |   |
| Pozidriv screwdriver                 |                 | Size    | 2   |
| Standard screwdriver                 |                 | mm      | 0.8 × 5.5   |
| Rated insulation voltage             | Ui              | V AC    | 500   |
| Rated operational voltage            | U <sub>e</sub>  | V AC    | 500   |
| Safe isolation to EN 61140           |                 |         |   |
| between the auxiliary contacts       |                 | V AC    | 250   |
| Conventional thermal current         | I <sub>th</sub> | А       | 6   |
| Rated operational current            | Ι <sub>e</sub>  | А       |   |
| AC-15                                |                 |         |   |
| Make contact                         |                 |         |   |
| 120 V                                | Ι <sub>e</sub>  | А       | 1.5   |
| 220 V 230 V 240 V                    | Ι <sub>e</sub>  | А       | 1.5   |
| 380 V 400 V 415 V                    | Ι <sub>e</sub>  | А       | 0.7   |
| 500 V                                | I <sub>e</sub>  | А       | 0.5   |
| Break contact                        |                 |         |   |
| 120 V                                | Ι <sub>e</sub>  | A       | 1.5   |
| 220 V 230 V 240 V                    | I <sub>e</sub>  | A       | 1.5   |
| 380 V 400 V 415 V                    | Ι <sub>e</sub>  | A       | 0.7   |
| 500 V                                | I <sub>e</sub>  | A       | 0.5   |
| DC L/R ≦ 15 ms                       |                 |         |   |
|                                      |                 |         | Switch-on and switch-off conditions based on DC-13, time constant as specified. |
| 24 V                                 | ۱ <sub>e</sub>  | A       | 0.9   |
| 60 V                                 | I <sub>e</sub>  | A       | 0.75  |
| 110 V                                | l <sub>e</sub>  | A       | 0.4   |
| 220 V                                | l <sub>e</sub>  | A       | 0.2   |
| Short-circuit rating without welding |                 |         |   |
| max. fuse                            |                 | A gG/gL | 4   |
| Notes                                |                 | 5-,5-   |   |

Notes Ambient air temperature: Operating range to IEC/EN 60947, PTB: -5°C to +50°C Main circuits terminal capacity solid and flexible conductors with ferrules: When using 2 conductors use equal cross-sections.

#### Rating data for approved types Auxiliary contacts Pilot Duty D300 AC operated DC operated R300 General Use AC 240 V/1 5 Δ

| AL                           | v    | 240 V/1,5 A<br>600 V/0,6 A |
|------------------------------|------|----------------------------|
| Short Circuit Current Rating | SCCR |                            |
| Basic Rating                 |      |                            |
| Notes                        |      | CB for max. 480 V          |
| SCCR                         | kA   | 5                          |
| max. Fuse                    | А    | 6                          |
| max. CB                      | А    | 15                         |

# Design verification as per IEC/EN 61439

| Technical data for design verification                   |                  |   |     |
|--|------------------|---|-----|
| Rated operational current for specified heat dissipation | In               | Α | 1.6 |
| Heat dissipation per pole, current-dependent             | P <sub>vid</sub> | W | 1.7 |

| Static heat dissipation, non-current-dependent     Pains     W     0       Heat dissipation capacity     Pains     W     0       Operating ambient temperature min.     C     25       Operating ambient temperature max.     FC     30       IECE ND 8438 design wrift attom     FC     30       102.5 trends of materials and parts     FC     40       102.2.1 Verification of thermal stability of encissures     FC     Meets the product standard's requirements.       102.2.2 Verification of resistance of insulating materials to normal heat     FC     Meets the product standard's requirements.       102.2.3 Verification of resistance of insulating materials to normal heat     FC     Meets the product standard's requirements.       102.4 Resistance to ultra-violet (UV) relation     FC     Meets the product standard's requirements.       102.5 Lifting     FC     Meets the product standard's requirements.       102.5 Machanical impact     FC     Meets the product standard's requirements.       102.5 Protection of ASSEMBLIES     FC     Dees not apply, since the entire switchgear needs to be evaluated.       103.6 Decretoris for descenal conductors     FC     Dees not apply, since the entire switchgear needs to be evaluated.   | Equipment heat dissipation, current-dependent            | P <sub>vid</sub> | W  | 5.1  |
|--|--|------------------|----|--|
| Heat dissipation capacity     Pairs     W     0       Operating ambient temperature man.     *C     -25       Operating ambient temperature max.     *C     50       ID2.2 Strength of materials and parts     *C     50       ID2.2 Strength of materials and parts     *C     50       ID2.2 Strength of resistance     *C     50       ID2.2 Strength of resistance of insulating materials to normal heat     *Meets the product standard's requirements.       ID2.2 Strength of resistance of insulating materials to abnormal heat     *Meets the product standard's requirements.       ID2.2 Are stance of insulating materials to abnormal heat     *Meets the product standard's requirements.       ID2.2 Strength     *Meets the product standard's requirements.       ID2.2 Thiscriptions     *Meets the product standard's requir  |  |                  | W  | 0  |
| Operating ambient temperature min.     -C     -25       Operating ambient temperature max.     -C     50       IECEN 81489 design verification     -C     50       IECEN 81489 design verification     -C     50       IECEN 81489 design verification of materials and parts     -C     -C       IO2.21 Verification of resistance of insulating materials to normal heat     -C     -C       IO2.32 Verification of resistance of insulating materials to normal heat     -C     -C       IO2.32 Verification of resistance of insulating materials to normal heat     -C     -C       IO2.32 Verification of resistance of insulating materials to normal heat     -C     Meets the product standard's requirements.       IO2.32 Verification of resistance of insulating materials to normal heat     -C     Meets the product standard's requirements.       IO2.32 Verification of resistance of insulating materials to normal heat     -C     Meets the product standard's requirements.       IO2.32 Verification of ASSEMBLIES     Does not apply, since the entire switchgear needs to be evaluated.     -C       IO2.42 Inscriptions     -C     Does not apply, since the entire switchgear needs to be evaluated.       IO3 Degree of protection of ASSEMBLIES     Does not apply, since the entire switchgear needs   |  |                  |    |  |
| Instrume   C   5     IECEN 61439 design verification   C   5     IB2 Strength of materials and parts   C   Meets the product standard's requirements.     ID2.2 Corrssion resistance   C   Meets the product standard's requirements.     ID2.3.1 Verification of thermal stability of enclosures   C   Meets the product standard's requirements.     ID2.3.2 Verification of resistance of insulating materials to normal heat   C   Meets the product standard's requirements.     ID2.3.2 Verification of resistance of insulating materials to abnormal heat   C   Meets the product standard's requirements.     ID2.3 Verification of resistance of insulating materials to abnormal heat   C   Meets the product standard's requirements.     ID2.4 Resistance to ultra-violet (UV) reliation   C   C   Meets the product standard's requirements.     ID2.5 Lifting   Dees not apply, since the entire switchgear needs to be evaluated.   Dees not apply, since the entire switchgear needs to be evaluated.     ID2.4 Resistance to ultra-violet (UV) reliation   C   Meets the product standard's requirements.     ID3.5 Protection against electric shock   C   Meets the product standard's requirements.     ID3.6 Incorporation of switching devices and components   C   Meets the product standard's requirements.  |  | ' diss           |    |  |
| ECEN 81439 design verification   Image: Comparison of the status and parts     102.2 Corresion resistance   Meets the product standard's requirements.     102.3.1 Verification of thermal stability of enclosures   Meets the product standard's requirements.     102.3.2 Verification of resistance of insulating materials to abnormal heat   Meets the product standard's requirements.     102.3.2 Verification of resistance of insulating materials to abnormal heat   Meets the product standard's requirements.     102.3 Ly Resistance to ultra-violet (UV) radiation   Meets the product standard's requirements.     102.4 Resistance to ultra-violet (UV) radiation   Meets the product standard's requirements.     102.5 Lifting   Dees not apply, since the entire switchgear needs to be evaluated.     102.5 Lifting   Dees not apply, since the entire switchgear needs to be evaluated.     102.5 Lifting   Dees not apply, since the entire switchgear needs to be evaluated.     102.6 Nechting alignapt   Meets the product standard's requirements.     103.0 Degree of protection against electric shock   Dees not apply, since the entire switchgear needs to be evaluated.     104.1 Clearences and creepage distances   Image: mage: mag |  |                  |    |  |
| 10.2 Strength of materials and parts   Meets the product standard's requirements.     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 and fire due to internal electric effects   Meets the product standard's requirements.     10.2.3.1 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   Does not apply, since the entire switchgear needs to be evaluated.     10.2.7 Inscriptions   Does not apply, since the entire switchgear needs to be evaluated.     10.2.7 Inscriptions   Does not apply, since the entire switchgear needs to be evaluated.     10.2.6 Meets met product standard's requirements.   Does not apply, since the entire switchgear needs to be evaluated.     10.2.7 Inscriptions   Does not apply, since the entire switchgear needs to be evaluated.     10.4.1 Clearances and creepage distances   Does not apply, since the entire switchgear needs to be evaluated.     10.5.2 Fortection against electric shock   Does not apply, since the entire switchgear needs to be evaluated.     10.8 Incorporation of switching devices and components   Is the panel builder's responsibility.     1                               |  |                  | °υ | 50   |
| 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 and fire due to internal electric effects   Meets the product standard's requirements.     10.2.3.2 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.     10.3 Degree of protection of ASSEMBLIES   Does not apply, since the entire switchgear needs to be evaluated.     10.5 Protection against electric shock   Meets the product standard's requirements.     10.6 Incorporation of switching devices and components   Does not apply, since the entire switchgear needs to be evaluated.     10.8 Connections for external conductors   Is the panel builder's responsibility.     10.8 Connection of switching devices and components   Is the panel builder's responsibility.     10.8 Connections for external conductors   Is the panel builder's responsibility.     10.8 Connectiong of enclosures made of insulating materia                               |  |                  |    |  |
| 102.3.1 Verification of thermal stability of enclosures   Meets the product standard's requirements.     102.3.2 Verification of resistance of insulating materials to abnormal heat   Meets the product standard's requirements.     102.3.3 Verification of resistance of insulating materials to abnormal heat   Meets the product standard's requirements.     102.3.4 Verification of resistance of insulating materials to abnormal heat   Meets the product standard's requirements.     102.4 Resistance to ultra-violet (UV) radiation   Meets the product standard's requirements.     102.5 Lifting   Does not apply, since the entire switchgear needs to be evaluated.     102.7 Inscriptions   Meets the product standard's requirements.     103.0 Egree of protection of ASSEMBLIES   Does not apply, since the entire switchgear needs to be evaluated.     104. Clearances and creepage distances   Meets the product standard's requirements.     105. Protection against electric shock   Does not apply, since the entire switchgear needs to be evaluated.     107. Intarnal electrical circuits and components   Is the panel builder's responsibility.     108.2 Power-frequency electric strength   Is the panel builder's responsibility.     109.3 Insulation properties   Is the panel builder's responsibility.     109.4 Testing of enclosures made of insulating material   Is the panel builder's responsibilify.     109.1 Temperatu  |  |                  |    |  |
| 10.2.3.2 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects   Meets the product standard's requirements.     10.2.3 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.     10.2.7 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.     10.7 Internal electrical circuits and connections   Meets the product standard's requirements.     10.9 Insulation properties   Does not apply, since the entire switchgear needs to be evaluated.     10.9 Internal electric is trength   Is the panel builder's responsibility.     10.8 Incorporation of switching devices and components   Is the panel builder's responsibility.     10.9 Insulation properties   Is the panel builder's responsibility.     10.9 Internal electric is trength   Is the panel builder's responsibility.   |  |                  |    |  |
| 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.     10.2.7 Inscriptions   Meets the product standard's requirements.     10.3.7 Inscriptions   Meets the product standard's requirements.     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.     10.7 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   Is the panel builder's responsibility.     10.9.1 Power-frequency electric strength   Is the panel builder's responsibility.     10.10 Temperature rise   Is the panel builder's responsibility.     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 devi   | ,  |                  |    |  |
| and fire due to internal electric effects   Meets the product standard's requirements.     10.2.4 Resistance to ultra-violet (UV) radiation   Does not apply, since the entire switchgear needs to be evaluated.     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   Does not apply, since the entire switchgear needs to be evaluated.     10.3.0 Egree 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.     10.7 Internal electrical circuits and components   Does not apply, since the entire switchgear needs to be evaluated.     10.9 Insulation properties   Does not apply, since the entire switchgear needs to be evaluated.     10.9.1 Nuslation properties   Is the panel builder's responsibility.     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.     10.9.1 Temperature rise   Is the panel builder's responsibility.     10.10 Temperature rise   Is the panel builder's responsibility. <td>-</td> <td></td> <td></td> <td>Meets the product standard's requirements.</td>       | -  |                  |    | Meets the product standard's requirements.   |
| 10.2.5 LiftingDoes not apply, since the entire switchgear needs to be evaluated.10.2.6 Mechanical impactDoes not apply, since the entire switchgear needs to be evaluated.10.2.7 InscriptionsMeets the product standard's requirements.10.3.0 Begree of protection of ASSEMBLIESDoes not apply, since the entire switchgear needs to be evaluated.10.4 Clearances and creepage distancesMeets the product standard's requirements.10.5 Protection against electric shockDoes not apply, since the entire switchgear needs to be evaluated.10.6 Incorporation of switching devices and componentsDoes not apply, since the entire switchgear needs to be evaluated.10.7 Internal electrical circuits and connectionsIs the panel builder's responsibility.10.8 Connections for external conductorsIs the panel builder's responsibility.10.9 Insulation propertiesIs the panel builder's responsibility.10.9.2 Power-frequency electric strengthIs the panel builder's responsibility.10.9.1 Result of enclosures made of insulating materialIs the panel builder's responsibility.10.10 Temperature riseIs the panel builder's responsibility.10.11 Short-circuit ratingIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.12 Electromagnetic compatibilityIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.13 Mechanical functionIs the panel builder's responsibility. The specifications for the switchgear must be observed.                 |  |                  |    | Meets the product standard's requirements.   |
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| 10.5 Protection against electric shockDoes not apply, since the entire switchgear needs to be evaluated.10.6 Incorporation of switching devices and componentsDoes not apply, since the entire switchgear needs to be evaluated.10.7 Internal electrical circuits and connectionsIs the panel builder's responsibility.10.8 Connections for external conductorsIs the panel builder's responsibility.10.9.1 Insulation propertiesIs the panel builder's responsibility.10.9.2 Power-frequency electric strengthIs the panel builder's responsibility.10.9.4 Testing of enclosures made of insulating materialIs the panel builder's responsibility.10.10 Temperature riseIs the panel builder's responsibility.10.11 Short-circuit ratingIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.12 Electromagnetic compatibilityIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.13 Mechanical functionThe device meets the requirements, provided the information in the instruction  | 10.3 Degree of protection of ASSEMBLIES                  |                  |    | Does not apply, since the entire switchgear needs to be evaluated.   |
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| 10.7 Internal electrical circuits and connectionsIs the panel builder's responsibility.10.8 Connections for external conductorsIs the panel builder's responsibility.10.9 Insulation propertiesIs the panel builder's responsibility.10.9.2 Power-frequency electric strengthIs the panel builder's responsibility.10.9.3 Impulse withstand voltageIs the panel builder's responsibility.10.9.4 Testing of enclosures made of insulating materialIs the panel builder's responsibility.10.10 Temperature riseIs the panel builder's responsibility.10.11 Short-circuit ratingIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.12 Electromagnetic compatibilityIs the panel builder's responsibility. The specifications for the switchgear must be observed.10.13 Mechanical functionThe device meets the requirements, provide the information in the instruction   | 10.5 Protection against electric shock                   |                  |    | Does not apply, since the entire switchgear needs to be evaluated.   |
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| 10.9 Insulation propertiesImage: Provide the panel builder's responsibility.10.9.2 Power-frequency electric strengthIs the panel builder's responsibility.10.9.3 Impulse withstand voltageIs the panel builder's responsibility.10.9.4 Testing of enclosures made of insulating materialIs the panel builder's responsibility.10.10 Temperature riseIs the panel builder's responsibile for the temperature rise calculation. Eaton will<br>provide heat dissipation data for the devices.10.11 Short-circuit ratingIs the panel builder's responsibility. The specifications for the switchgear must be<br>observed.10.12 Electromagnetic compatibilityIs the panel builder's responsibility. The specifications for the switchgear must be<br>observed.10.13 Mechanical functionThe device meets the requirements, provided the information in the instruction   | 10.7 Internal electrical circuits and connections        |                  |    | 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 responsibile 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, provide the information in the instruction  | 10.9 Insulation properties                               |                  |    |  |
| 10.9.4 Testing of enclosures made of insulating material   Is the panel builder's responsibility.     10.10 Temperature rise   Is 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   | 10.9.2 Power-frequency electric strength                 |                  |    | 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, provide the information in the instruction   | 10.9.3 Impulse withstand voltage                         |                  |    | Is the panel builder's responsibility.   |
| 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, provide the information in the instruction   | 10.9.4 Testing of enclosures made of insulating material |                  |    | Is the panel builder's responsibility.   |
| 10.12 Electromagnetic compatibility   observed.     10.13 Mechanical function   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  | 10.10 Temperature rise                                   |                  |    | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.13 Mechanical function observed.  | 10.11 Short-circuit rating                               |                  |    |  |
|  | 10.12 Electromagnetic compatibility                      |                  |    |  |
|  | 10.13 Mechanical function                                |                  |    |  |

# **Technical data ETIM 8.0**

| Low-voltage industrial components (EG000017) / Thermal overload relay (EC000106)   |   |                   |  |  |
|--|---|-------------------|--|--|
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Overload protection device / Thermal overload relay (ecl@ss10.0.1-27-37-15-01 [AKF075014]) |   |                   |  |  |
| Adjustable current range   | А | 1 - 1.6           |  |  |
| Max. rated operation voltage Ue  | V | 690               |  |  |
| Mounting method  |   | Direct attachment |  |  |
| Type of electrical connection of main circuit  |   | Screw connection  |  |  |
| Number of auxiliary contacts as normally closed contact  |   | 1                 |  |  |
| Number of auxiliary contacts as normally open contact  |   | 1                 |  |  |
| Number of auxiliary contacts as change-over contact  |   | 0                 |  |  |
| Release class  |   | CLASS 10 A        |  |  |
| Reset function input   |   | No                |  |  |
| Reset function automatic   |   | Yes               |  |  |
| Reset function push-button   |   | Yes               |  |  |

## **Approvals**

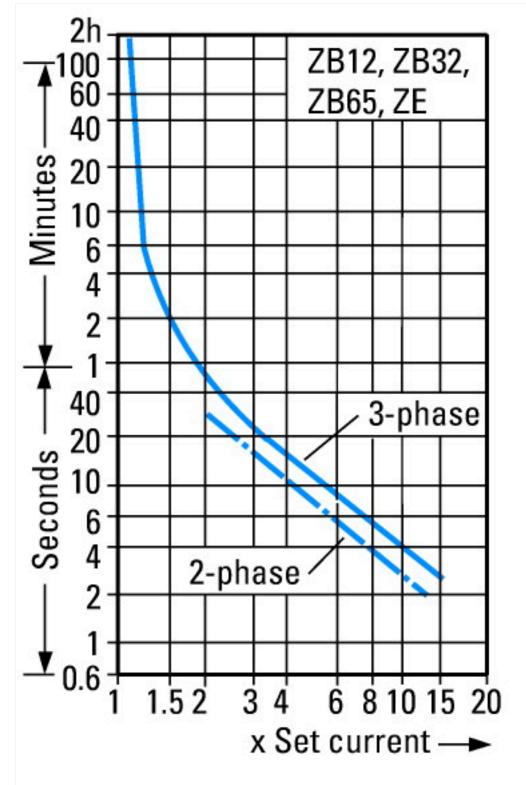
| , approvato                 |  |
|-----------------------------|--|
| Product Standards           | UL 508; CSA-C22.2 No. 14; IEC/EN 60947-4-1; IEC/EN 60947-5-1; CE marking |
| UL File No.                 | E29184   |
| UL Category Control No.     | NKCR   |
| CSA File No.                | 12528  |
| CSA Class No.               | 3211-03  |
| North America Certification | UL listed, CSA certified   |

| Specially designed for North America |  |
|--------------------------------------|--|
| Suitable for                         |  |
| Max. Voltage Rating                  |  |
| Degree of Protection                 |  |

## **Characteristics**

Branch circuits 600 V AC

IEC: IP20, UL/CSA Type: -



These tripping characteristics are mean values of the spreads at 20 °C ambient air temperature in a cold state.

Tripping time depends on response current.

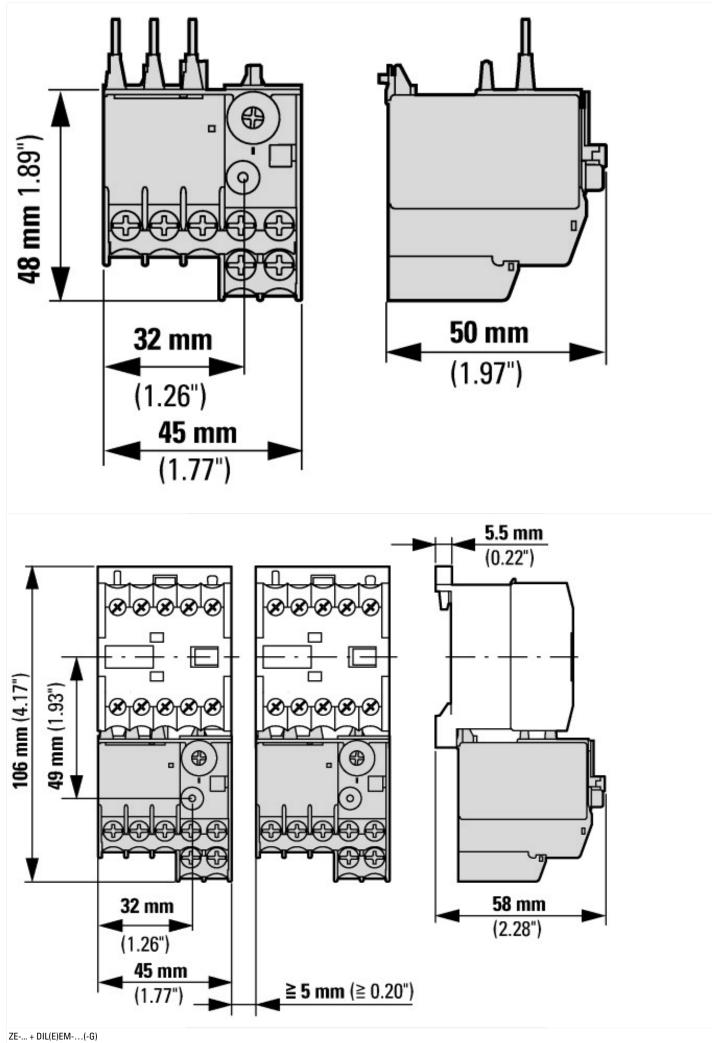
When the devices are at operational temperature the tripping time of the overload relay falls to approx. 25 % of the read off value.

1: Minimum level, 3-phase

2: Maximum level, 3-phase

3: Minimum marker, 2-phase

4: Highest marker, 2-phase



01/13/2023

# Additional product information (links)

## IL03407007Z (AWA2300-0883) Overload relay

IL03407007Z (AWA2300-0883) Overload relay https://es-assets.eaton.com/DOCUMENTATION/AWA\_INSTRUCTIONS/IL03407007Z.pdf

### MN03407003Z (AWB2300-1425) Overload relay ZE, overload monitoring for EEx e-motors

MN03407003Z (AWB2300-1425) Overload relay ZE, overload monitoring for EEx e-motors -Deutsch / English

MN03407003Z (AWB2300-1425) Overload relay https://es-assets.eaton.com/DOCUMENTATION/AWB\_MANUALS/MN03407003Z\_DE\_EN.pdf