# **DATASHEET - ZBT12-0,16**



Overload relay, ZBT12, Ir= 0.1 - 0.16 A, 1 N/O, 1 N/C, Direct mounting, IP20

Powering Business Worldwide

Part no. ZBT12-0,16 Catalog No. 190959

# **Delivery program**

| Delivery program          |                |   |   |
|---------------------------|----------------|---|---|
| Product range             |                |   | Overload relay ZBT up to 97 A   |
| Product range             |                |   | Accessories   |
| Accessories               |                |   | Overload relays   |
| Frame size                |                |   | ZBT12   |
| Phase-failure sensitivity |                |   | IEC/EN 60947, VDE 0660 Part 102   |
| Description               |                |   | Test/off button<br>Reset pushbutton manual/auto<br>Trip-free release<br>Overload trigger: tripping class 10 A |
| Mounting type             |                |   | Direct mounting   |
| 中                         | l <sub>r</sub> | Α | 0.1 - 0.16  |
| Contact sequence          |                |   | 97 95<br>   |
| Auxiliary contacts        |                |   |   |
| N/O = Normally open       |                |   | 1 N/0   |
| N/C = Normally closed     |                |   | 1 N/C   |
| For use with              |                |   | DILMT7 DILMT9 DILMT12 DILMT17 DILMT25 DILMT32   |

# **Technical data**

| General   |                  |      |  |
|---|------------------|------|--|
| Standards   |                  |      | IEC/EN 60947, GB14048  |
| 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: -5 - +40 °C                                   |
| Open  |                  | °C   | -25 - +55  |
| Enclosed  |                  | °C   | - 25 - 40  |
| Temperature compensation  |                  |      | Continuous   |
| Weight  |                  | kg   | 0.104  |
| 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  |
| Main conducting paths   |                  |      |  |
| Rated impulse withstand voltage                                       | U <sub>imp</sub> | V AC | 6000   |

| Rated impulse withstand voltage       | $U_{\text{imp}}$ | V AC | 6000  |
|---------------------------------------|------------------|------|-------|
| Overvoltage category/pollution degree |                  |      | III/3 |
| Rated insulation voltage              | Ui               | V    | 690   |
| Rated operational voltage             | U <sub>e</sub>   | V AC | 690   |

| Safe isolation to EN 61140                           |                  |                 |   |
|--|------------------|-----------------|---|
| Between auxiliary contacts and main contacts         |                  | V AC            | 440   |
| Between main circuits                                |                  | V AC            | 440   |
| Terminal capacities                                  |                  | mm <sup>2</sup> |   |
| Solid  |                  | mm <sup>2</sup> | 1 x (1 - 6)   |
| Flexible with ferrule                                |                  |                 |   |
|  |                  | mm <sup>2</sup> | 1 x (1 - 6)   |
| Stranded   |                  | mm <sup>2</sup> | 1 x (1 - 6)   |
| Terminal screw                                       |                  |                 | M3.5  |
| Tightening torque                                    |                  | Nm              | 1.2   |
| Stripping length                                     |                  | mm              | 8   |
| Tools  |                  |                 |   |
| Pozidriv screwdriver  Auxiliary and control circuits |                  | Size            | 2   |
| Rated impulse withstand voltage                      | U <sub>imp</sub> | V               | 4000  |
| Overvoltage category/pollution degree                | мир              |                 | 111/3   |
| 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 (0.75 - 2.5)  |
| Terminal screw                                       |                  |                 | M3  |
| Tightening torque                                    |                  | Nm              | 0.8   |
| Stripping length                                     |                  | mm              | 6   |
| Tools Pozidriv screwdriver                           |                  | Size            | 2   |
| Standard screwdriver                                 |                  | mm              | 1 x 6   |
| Rated insulation voltage                             | Ui               | V AC            | 690   |
| Rated operational voltage                            | U <sub>e</sub>   | V AC            | 690   |
| Conventional thermal current                         | I <sub>th</sub>  | A               | 10  |
| Rated operational current                            |                  | A               | 10  |
| AC-15  | I <sub>e</sub>   | A               |   |
| Make contact   |                  |                 |   |
| 120 V  | I <sub>e</sub>   | Α               | 1.5   |
| 220 V 230 V 240 V                                    | I <sub>e</sub>   | A               | 1.4   |
| 380 V 400 V 415 V                                    |                  |                 | 1.9   |
|  | l <sub>e</sub>   | A               |   |
| 500 V  | I <sub>e</sub>   | Α               | 0.5   |
| Break contact  | ı                | ۸               | 15  |
| 220 V 230 V 240 V                                    | l <sub>e</sub>   | A               | 1.5   |
|  | l <sub>e</sub>   | A               | 1.5   |
| 380 V 400 V 415 V                                    | l <sub>e</sub>   | A               | 1.9   |
| 500 V  | I <sub>e</sub>   | Α               | 1.4   |
| DC L/R ≦ 15 ms                                       |                  |                 | Control or and with the Paris I. 1 DO 10 II                                     |
| 24.V   |                  | ٨               | Switch-on and switch-off conditions based on DC-13, time constant as specified. |
| 24 V   | l <sub>e</sub>   | A               | 0.9   |
| 60 V   | l <sub>e</sub>   | A               | 0.75  |
| 110 V  | I <sub>e</sub>   | Α               | 0.55  |

### Notes

220 V

max. fuse

Short-circuit rating without welding

Notes Ambient air temperature: Operating range to IEC/EN 60947, PTB: -5°C to +55°C

Main circuits terminal capacity solid and flexible conductors with ferrules: When using 2 conductors use equal cross-sections.

# Design verification as per IEC/EN 61439

Technical data for design verification

0.27

A gG/gL 6

| Operating ambient temperature min. | °C | -25 |
|------------------------------------|----|-----|
| Operating ambient temperature max. | °C | 55  |

# **Technical data ETIM 7.0**

| Low-voltage industrial components (EG000017) / Thermal overload relay (EC000106)   |                       |   |  |
|--|-----------------------|---|--|
| Electric engineering, automation, process control engineering / Low-voltage switch | h technology / Overlo | oad protection device / Thermal overload relay (ecl@ss10.0.1-27-37-15-01 [AKF075014]) |  |
| Adjustable current range   | А                     | 0.1 - 0.16  |  |
| 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  |                       | Other   |  |
| Reset function input   |                       | No  |  |
| Reset function automatic   |                       | Yes   |  |
| Reset function push-button   |                       | Yes   |  |

# **Approvals**

| Specially designed for North America | No |  |
|--------------------------------------|----|--|
|                                      |    |  |

# **Dimensions**

