

**TOS 12VDC/48VDC 0,5A****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

Similar to illustration

- 1 NO contact (Transistor)
- Ensures wear- and maintenance-free potential separation in compact terminal block format
- Suitable accessories from the cross-connection to the marker
- Integrated protective circuit for inputs and outputs

**General ordering data**

|            |                                                                                                                                                            |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version    | TERMOPTO, Solid-state relay, Rated control voltage: 12 V DC $\pm 20\%$ , Rated switching voltage: 5...48 V DC, Continuous current: 0.5 A, Screw connection |
| Order No.  | <a href="#">8950910000</a>                                                                                                                                 |
| Type       | TOS 12VDC/48VDC 0,5A                                                                                                                                       |
| GTIN (EAN) | 4032248741755                                                                                                                                              |
| Qty.       | 10 pc(s).                                                                                                                                                  |

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## Technical data

## Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Depth      | 55 mm   | Depth (inches)  | 2.165 inch |
| Height     | 74.4 mm | Height (inches) | 2.929 inch |
| Width      | 6.1 mm  | Width (inches)  | 0.24 inch  |
| Net weight | 20.9 g  |                 |            |

## Temperatures

|                     |                                                                         |                       |                |
|---------------------|-------------------------------------------------------------------------|-----------------------|----------------|
| Storage temperature | -40 °C...80 °C                                                          | Operating temperature | -20 °C...60 °C |
| Humidity            | 5-95% relative humidity, T <sub>u</sub><br>= 40°C, without condensation |                       |                |

## Probability of failure

|      |         |
|------|---------|
| MTTF | 2,500 a |
|------|---------|

## Control side

|                       |                                       |                         |           |
|-----------------------|---------------------------------------|-------------------------|-----------|
| Rated control voltage | 12 V DC $\pm 20\%$                    | Nominal control current | 7.8 mA DC |
| Power rating          | <95 mW                                | Status indicator        | Green LED |
| Protective circuit    | Varistor, Reverse polarity protection | Input frequency         | 200 Hz    |

## Load side

|                                               |                     |                           |                           |
|-----------------------------------------------|---------------------|---------------------------|---------------------------|
| Rated switching voltage                       | 5...48 V DC         | Continuous current        | 0.5 A (DC1)               |
| Rated switching current                       | 500 mA              | Load category             | DC1                       |
| Max. switching voltage, DC                    | 48 V                | Switch-on delay           | <20 $\mu$ s               |
| Switch-off delay                              | <200 $\mu$ s        | Voltage drop at max. load | <1 V                      |
| Leakage current                               | <10 $\mu$ A         | Short-circuit-proof       | No                        |
| Protective circuit, load side                 | Free-wheeling diode | Contact type              | 1 NO contact (Transistor) |
| max. switching frequency (DC control voltage) | 200 Hz              |                           |                           |

## General data

|                                    |                          |         |
|------------------------------------|--------------------------|---------|
| Rail                               | TS 35                    |         |
| Test button available              | No                       |         |
| Colour                             | black                    |         |
| UL94 flammability rating component | Component                | Housing |
|                                    | UL94 flammability rating | V-0     |

## Insulation coordination

|                                                  |                                |                                                               |                       |
|--------------------------------------------------|--------------------------------|---------------------------------------------------------------|-----------------------|
| Rated voltage                                    | 300 V                          | Pollution severity                                            | 2                     |
| Surge voltage category                           | III                            | Clearance and creepage distances for control side - load side | > 3 mm                |
| Dielectric strength for control side - load side | 1.2 kV <sub>eff</sub> / 1 min. | Impulse withstand voltage                                     | 4 kV (1.2/50 $\mu$ s) |
| Protection degree                                | IP20                           |                                                               |                       |

## Further details of approvals / standards

|                         |         |
|-------------------------|---------|
| Certificate no. (cULus) | E223474 |
|-------------------------|---------|

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## Connection data

|                                                                                         |                     |                                                                                         |                     |
|-----------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------|---------------------|
| Wire connection method                                                                  | Screw connection    | Stripping length, rated connection                                                      | 9 mm                |
| Tightening torque, min.                                                                 | 0.4 Nm              | Tightening torque, max.                                                                 | 0.6 Nm              |
| Clamping range, rated connection                                                        | 2.5 mm <sup>2</sup> | Clamping range, min.                                                                    | 0.5 mm <sup>2</sup> |
| Clamping range, max.                                                                    | 4 mm <sup>2</sup>   | Wire connection cross section AWG, min.                                                 | AWG 20              |
| Wire connection cross section AWG, max.                                                 | AWG 12              | Wire cross-section, solid, min.                                                         | 0.5 mm <sup>2</sup> |
| Wire cross-section, solid, max.                                                         | 4 mm <sup>2</sup>   | Wire connection cross section, finely stranded, min.                                    | 0.5 mm <sup>2</sup> |
| Wire connection cross section, finely stranded, max.                                    | 2.5 mm <sup>2</sup> | Wire cross-section, finely stranded, min. (AWG)                                         | AWG 20              |
| Wire cross-section, finely stranded, max. (AWG)                                         | AWG 12              | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.5 mm <sup>2</sup> |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 1.5 mm <sup>2</sup> | Conductor cross-section, flexible, AEH (DIN 46228-1), min.                              | 0.5 mm <sup>2</sup> |
| Conductor cross-section, flexible, AEH (DIN 46228-1), max.                              | 1.5 mm <sup>2</sup> | Blade size                                                                              | 0.6 x 3.5 mm        |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC001504    | ETIM 7.0    | EC001504    |
| ETIM 8.0    | EC001504    | ETIM 9.0    | EC001504    |
| ETIM 10.0   | EC001504    | ECLASS 9.0  | 27-37-16-04 |
| ECLASS 9.1  | 27-37-16-04 | ECLASS 10.0 | 27-37-16-04 |
| ECLASS 11.0 | 27-37-16-04 | ECLASS 12.0 | 27-37-16-04 |
| ECLASS 13.0 | 27-37-16-04 | ECLASS 14.0 | 27-37-16-04 |
| ECLASS 15.0 | 27-37-16-04 |             |             |

## Environmental Product Compliance

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| RoHS Compliance Status               | Compliant with exemption             |
| RoHS Exemption (if applicable/known) | 7a, 7cl                              |
| REACH SVHC                           | Lead 7439-92-1                       |
| SCIP                                 | 9e2cbc49-76d9-4611-b8ec-5b4f549a0aa9 |

## Approvals

Approvals



|                         |                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID         | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/</a> <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/</a> |
| ROHS                    | Conform                                                                                                                                                                                                                                                                                                                                                 |
| UL File Number Search   | UL Website                                                                                                                                                                                                                                                                                                                                              |
| Certificate no. (cULus) | E223474                                                                                                                                                                                                                                                                                                                                                 |

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## Technical data

### Downloads

Approval/Certificate/Document of Conformity

[EU Konformitätserklärung / EU Declaration of Conformity](#)

Engineering Data

[CAD data – STEP](#)

User Documentation

[Beipackzettel / Package Insert – multilingual](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

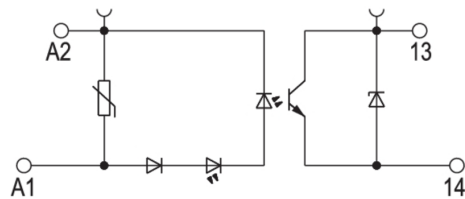
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## Drawings

### Wiring diagram



Schaltsymbol

### Dimensional drawing



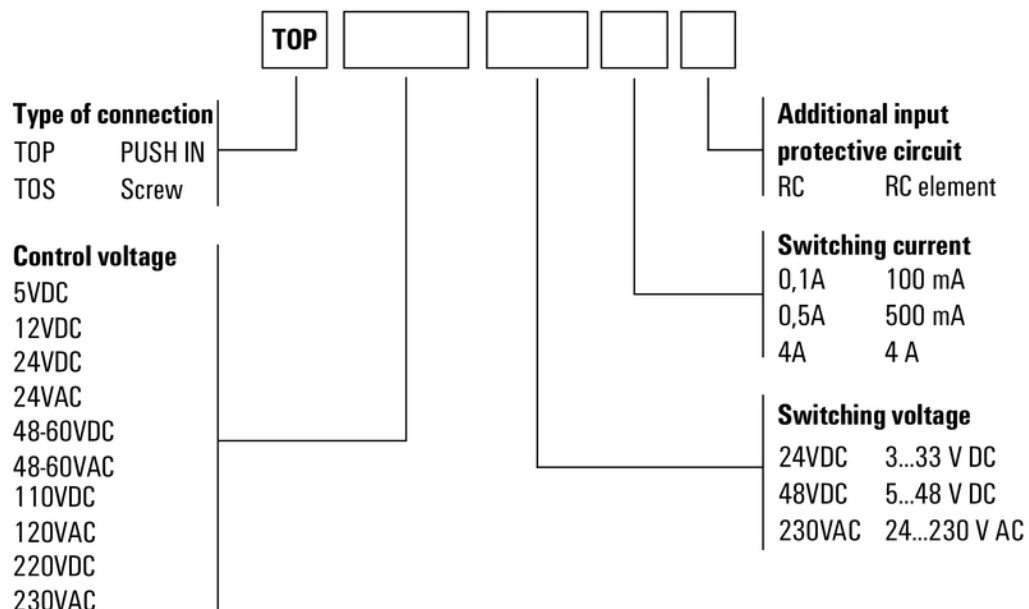
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## Drawings

## Miscellaneous



Type codes