

**TOS 24VDC/230VAC 0,1A**
**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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


Similar to illustration

- 1 NO contact (Triac (zero-cross switch))
- 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 relays, 1 NO contact (Triac (zero-cross switch)), Rated control voltage: 24 V DC $\pm 20\%$ , Rated switching voltage: 24...230 V AC, Continuous current: 100 mA, Screw connection |
| Order No.  | <a href="#">8951120000</a>                                                                                                                                                                               |
| Type       | TOS 24VDC/230VAC 0,1A                                                                                                                                                                                    |
| GTIN (EAN) | 4032248741892                                                                                                                                                                                            |
| Qty.       | 10 pc(s).                                                                                                                                                                                                |

Creation date March 29, 2021 11:55:51 PM CEST

## TOS 24VDC/230VAC 0,1A

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Dimensions and weights

|                |           |                 |            |
|----------------|-----------|-----------------|------------|
| Depth          | 55 mm     | Depth (inches)  | 2.165 inch |
| Height         | 74.4 mm   | Height (inches) | 2.929 inch |
| Net weight     | 20.5 g    | Width           | 6.1 mm     |
| Width (inches) | 0.24 inch |                 |            |

## Temperatures

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

## Probability of failure

|      |             |
|------|-------------|
| MTTF | 2,500 Years |
|------|-------------|

## Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

## Control side

|                         |                                          |                                |                 |
|-------------------------|------------------------------------------|--------------------------------|-----------------|
| Nominal control current | 3.6 mA DC                                | Power rating                   | ≤ 80 mW         |
| Protective circuit      | Varistor, Reverse polarity<br>protection | Pull-in/drop-out voltage, typ. | 19.2 V / 6 V DC |
| Rated control voltage   | 24 V DC ± 20 %                           | Status indicator               | Green LED       |

## Load side

|                                                  |                      |                           |               |
|--------------------------------------------------|----------------------|---------------------------|---------------|
| Continuous current                               | 0.1 A (AC1)          | Leakage current           | < 1 mA        |
| Load category                                    | AC1                  | Min. switching current    | 2 mA          |
| Protective circuit, load side                    | Varistor, RC element | Rated switching voltage   | 24...230 V AC |
| Short-circuit-proof                              | No                   | Switch-off delay          | < 12 ms       |
| Switch-on delay                                  | < 10 ms              | Voltage drop at max. load | < 1.8 V       |
| max. switching frequency (DC control<br>voltage) | 10 Hz                |                           |               |

## Contact data

|              |                                              |
|--------------|----------------------------------------------|
| Contact type | 1 NO contact (Triac (zero-<br>cross switch)) |
|--------------|----------------------------------------------|

## General data

|                                    |                          |         |
|------------------------------------|--------------------------|---------|
| Rail                               | TS 35                    |         |
| Colour                             | black                    |         |
| UL94 flammability rating component | Component                | Housing |
|                                    | UL94 flammability rating | V-0     |

## TOS 24VDC/230VAC 0,1A

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Insulation coordination

|                                                               |                  |                                                  |                                |
|---------------------------------------------------------------|------------------|--------------------------------------------------|--------------------------------|
| 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 µs) | Pollution severity                               | 2                              |
| Protection degree                                             | IP20             | Rated voltage                                    | 300 V                          |
| Surge voltage category                                        | III              |                                                  |                                |

## Further details of approvals / standards

|           |                                |                         |         |
|-----------|--------------------------------|-------------------------|---------|
| Standards | DIN EN 50178, IEC 62314, UL508 | Certificate no. (cULus) | E223474 |
|-----------|--------------------------------|-------------------------|---------|

## 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    |
| 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 |

## Approvals

Approvals



|                       |         |
|-----------------------|---------|
| ROHS                  | Conform |
| UL File Number Search | E223474 |

## Downloads

|                                             |                                                                         |
|---------------------------------------------|-------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">EU Konformitätserklärung / EU Declaration of Conformity</a> |
| Engineering Data                            | <a href="#">STEP</a>                                                    |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                                            |
| User Documentation                          | <a href="#">Beipackzettel / Package Insert – multilingual</a>           |

Creation date March 29, 2021 11:55:51 PM CEST

Catalogue status 12.03.2021 / We reserve the right to make technical changes.

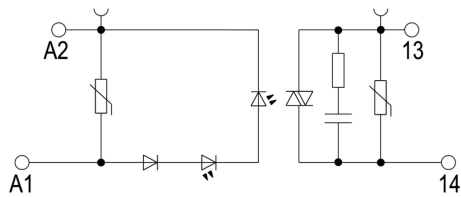
**TOS 24VDC/230VAC 0,1A**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany

www.weidmueller.com

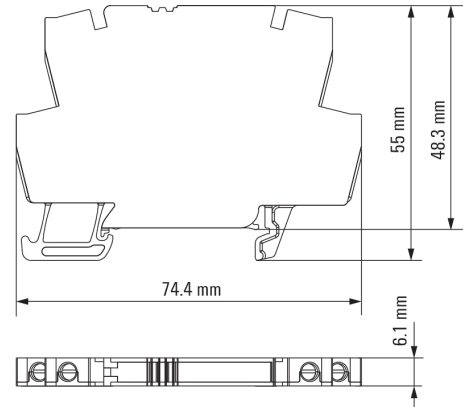
## Drawings

## Wiring diagram

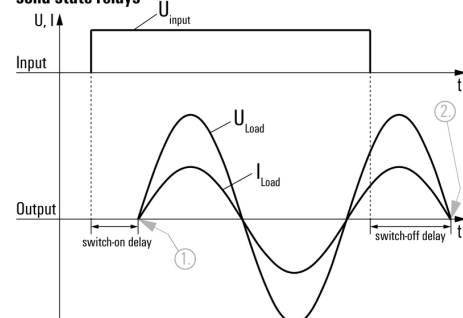


Schaltsymbol

## Dimensional drawing



## Signal characteristics of zero cross switching solid-state relays



Shown at an example with resistive load.

1. Switches on at first zero cross of mains voltage while control input gets signal.
2. Switches off at next zero cross of mains current after control input signal was switched off.

Switching DC voltages is not possible with zero cross switching solid-state relays.

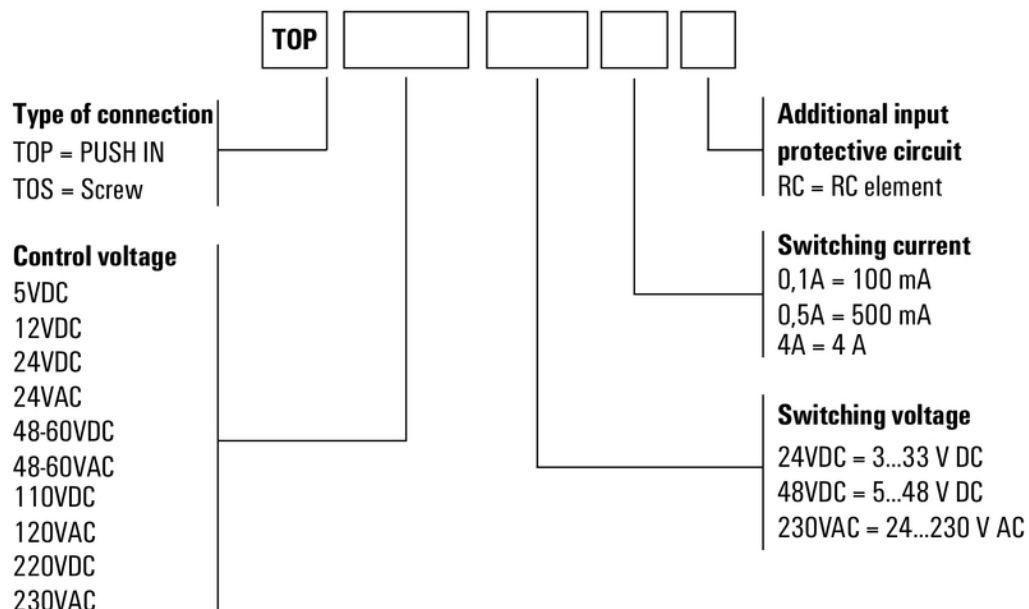
## TOS 24VDC/230VAC 0,1A

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany

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

## Drawings

## Miscellaneous



Type codes