

## TERMOPTO TOS 24VDC/48VDC 0,1A

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

D-32758 Detmold

Germany

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TERMOPTO solid-state-relay 5 to 48 V DC 0.1 A output version,

with AC or DC input, available in different versions:

- With screw connection
- In 6.1 mm width
- With various input protection circuits (free-wheel diode, varistor)
- Pluggable cross-connections
- Enclosed design

### General ordering data

Type	TOS 24VDC/48VDC 0,1A
Order No.	<a href="#">8950720000</a>
Version	TERMOPTO, solid-state relais, 1 NO contact (Transistor), Rated control voltage: 24 V DC $\pm 20\%$ , Rated switching voltage: 5...48 V DC, Continuous current: 100 mA, Screw connection
GTIN (EAN)	4032248742097
Qty.	10 pc(s).

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**Technical data**
**Dimensions and weights**

Width	6.1 mm	Width (inches)	0.24 inch
Height	74.4 mm	Height (inches)	2.929 inch
Depth	55 mm	Depth (inches)	2.165 inch
Net weight	20.7 g		

**Temperatures**

Humidity	5–95% rel. humidity, $T_u = 40^\circ\text{C}$ , no condensation	Operating temperature, max.	60 °C
Operating temperature, min.	-20 °C	Storage temperature, max.	80 °C
Storage temperature, min.	-40 °C	Operating temperature	-20 °C...60 °C
Storage temperature	-40 °C...80 °C		

**Probability of failure**

MTTF	2,500 Years
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**Control side**

Rated control voltage	24 V DC $\pm 20\%$	Nominal control current	7 mA DC
Power rating	$\leq 170$ mW	Cut-in / dropout voltage	19.2 V / 6 V DC
Status indicator	Green LED	Protective circuit	Varistor, Reverse polarity protection

**Load side**

Rated switching voltage	5...48 V DC	Continuous current	100 mA
Rated switching current	100 mA	Load category	DC1
Switch-on delay	$< 13$ $\mu\text{s}$	Switch-off delay	$< 42$ $\mu\text{s}$
Voltage drop at max. load	$< 1$ V	Leakage current	$< 10$ $\mu\text{A}$
Min. switching current	100 $\mu\text{A}$	Short-circuit-proof	No
Protective circuit, load side	Free-wheel diode	max. switching frequency (DC control voltage)	3,000 Hz

**Contact data**

Contact type	1 NO contact (Transistor)
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**General data**

Mounting rail	TS 35	Colour	Black
UL 94 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 $kV_{\text{eff}}$ / 1 min.	Impulse withstand voltage	4 kV (1.2/50 $\mu\text{s}$ )
Protection degree	IP20		

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**Technical data****Further details of approvals / standards**

Standards	DIN EN 50178, IEC 62314, UL508	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 3.0	EC001504	ETIM 4.0	EC001504
ETIM 5.0	EC001504	ETIM 6.0	EC001504
eClass 5.1	27-27-09-90	eClass 6.2	27-27-09-90
eClass 7.1	27-27-09-90	eClass 8.1	27-27-09-90
eClass 9.0	27-27-09-90	eClass 9.1	27-37-16-04

**Product information**

Descriptive text technical data	Accessories and dimensioned drawings: refer to the TERMOPTO Accessories page.
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**Approvals**

Approvals



ROHS	Conform
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**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">DE_PA_5600_160301_001.pdf</a>
Brochure/Catalogue	<a href="#">CAT 4.2 ELECTR 18/19 EN</a>
Engineering Data	<a href="#">EPLAN_WSCAD</a>
Engineering Data	<a href="#">STEP</a>
User Documentation	<a href="#">Operating Instructions</a>

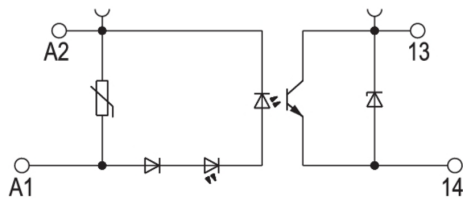
Creation date July 2, 2018 9:49:11 AM CEST

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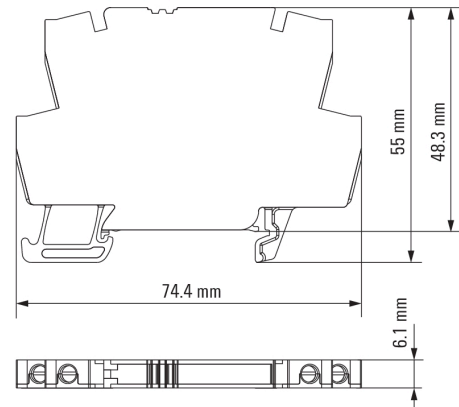
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**Drawings****Wiring diagram**

Schaltsymbol

**Dimensional drawing**

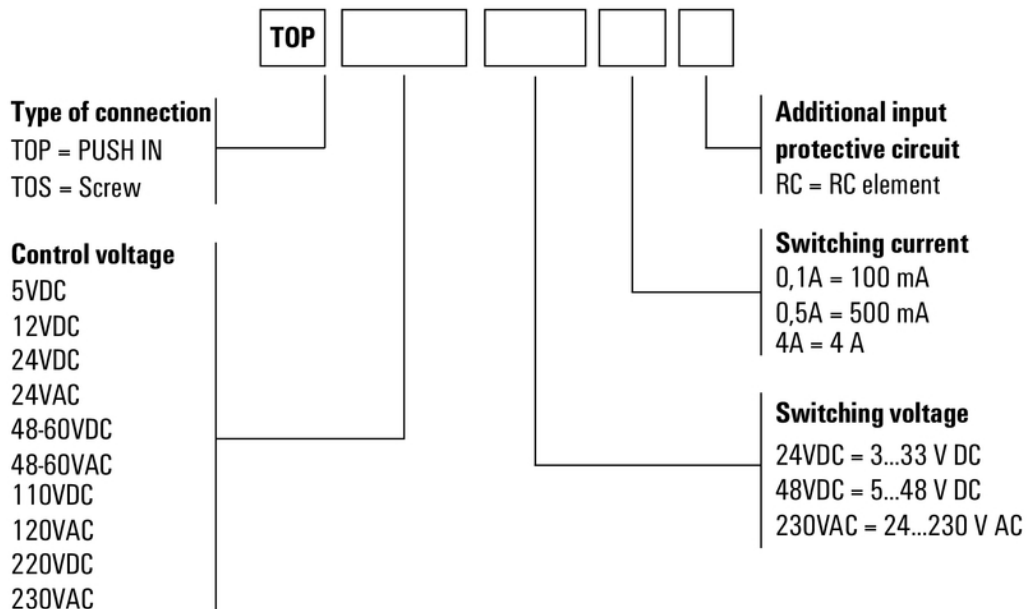
**Data sheet**

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**Drawings**

**Miscellaneous**



Type codes