

## TERMOPTO TOS 24VDC/24VDC 4A

**Weidmüller Interface GmbH & Co. KG**  
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The TERMOPTO solid-state relay module is used in industrial applications where electrical isolation and signal conditioning without switching amplification is sufficient. The compact design in terminal-block format saves space on the terminal rail and offers the option of a pluggable cross-connection.

The option between 10 input voltages and 3 output voltages as well as screw or PUSH IN connection enables 60 versions for various applications.

The integrated protective circuit ensures sufficient protection in applications with ohmic as well as slightly inductive and capacitive loads. For purely inductive, capacitive or comparable loads with high switch-on and switch-off peaks, such as solenoid valves or filament lamps, ensure that the module is dimensioned appropriately or an additional safeguard is used.

### General ordering data

Type	TOS 24VDC/24VDC 4A
Order No.	<a href="#">1275100000</a>
Version	TERMOPTO, solid-state relais, 1 NO contact (MOS-FET), Rated control voltage: 24 V DC $\pm 20\%$ , Rated switching voltage: 3...33 V DC, Continuous current: 4 A, Screw connection
GTIN (EAN)	4050118065053
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	20.8 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	1,188 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	16.8 V / 6 V DC
Status indicator	Green LED	Protective circuit	Varistor, Reverse polarity protection

**Load side**

Rated switching voltage	3...33 V DC	Continuous current	4 A
Rated switching current	4 A	Load category	DC1
Switch-on delay	< 12 ms	Switch-off delay	< 14 ms
Voltage drop at max. load	90 mV	Leakage current	< 10 $\mu\text{A}$
Short-circuit-proof	No	Protective circuit, load side	Varistor
max. switching frequency (DC control voltage)	10 Hz		

**Contact data**

Contact type	1 NO contact (MOS-FET)
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**General data**

Mounting rail	TS 35	UL 94 flammability rating	V-0
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**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 $\mu\text{s}$ )
Protection degree	IP20		

**Further details of approvals / standards**

Standards	DIN EN 50178, IEC 62314, UL508	Certificate no. (cULus)	E223474
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**Technical data****Connection data**

Wire connection method	Screw connection	Stripping length, rated connection	9 mm
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 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.

**Approvals**

Approvals



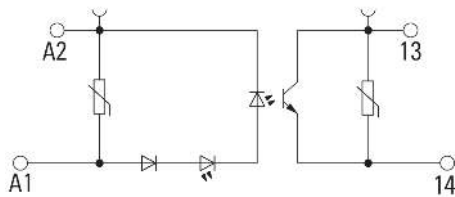
ROHS      Conform

**Downloads**

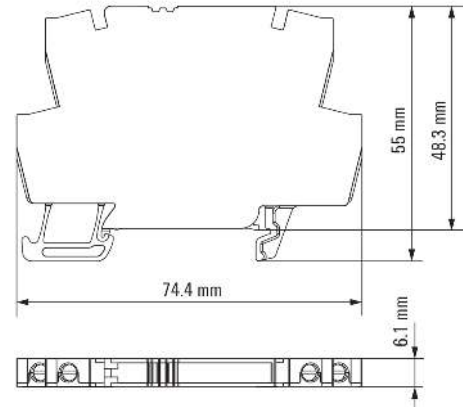
Approval/Certificate/Document of Conformity	<a href="#">DE_PA_5600_160301_001.pdf</a>
Brochure/Catalogue	<a href="#">CAT 4.2 ELECTR 15/16 EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Engineering Data	<a href="#">STEP</a>
User Documentation	<a href="#">Operating Instructions</a>

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**Drawings****Wiring diagram**

Schaltsymbol

**Dimensional drawing**

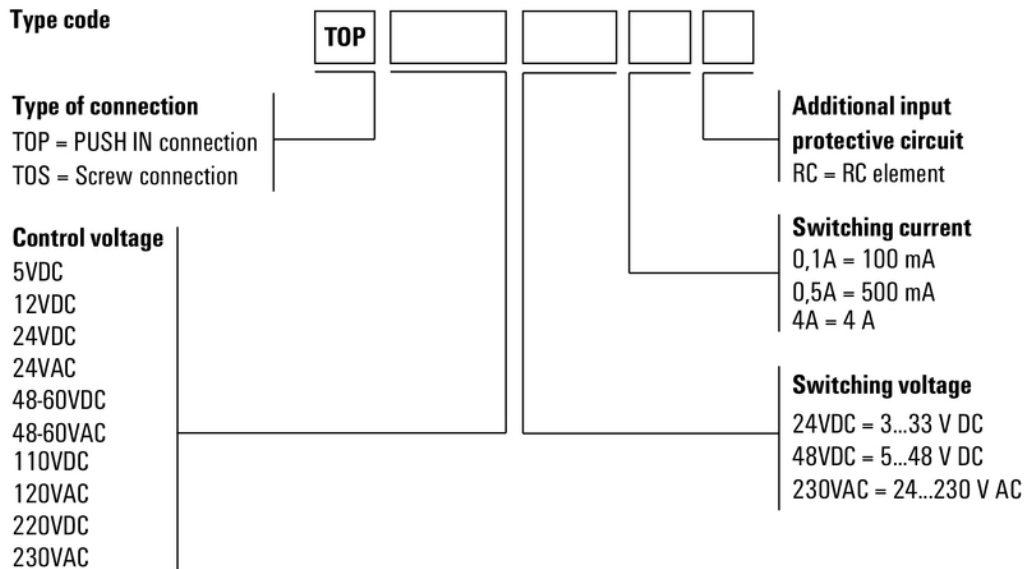
**Data sheet**

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**Drawings**

**Miscellaneous**



Type codes