

TERMOPTO TOS 24VDC/48VDC 0,5A

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 16

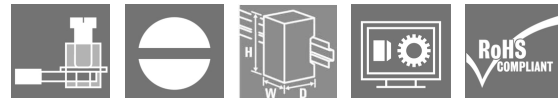
D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



TERMOPTO solid-state relay, 5 to 48 V DC 0.5 A output version,

with AC or DC input, available in different versions:

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

General ordering data

Type	TOS 24VDC/48VDC 0,5A
Order No.	8950920000
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: 500 mA, Screw connection
GTIN (EAN)	4032248742288
Qty.	10 pc(s).

TERMOPTO
TOS 24VDC/48VDC 0,5A

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

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	20.9 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
------	-------------

Control side

Rated control voltage	24 V DC $\pm 20\%$	Nominal control current	7 mA DC
Power rating	≤ 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	500 mA
Rated switching current	500 mA	Load category	DC1
Switch-on delay	< 20 μs	Switch-off delay	≤ 600 μs
Voltage drop at max. load	< 1 V	Leakage current	< 10 μA
Short-circuit-proof	No	Protective circuit, load side	Free-wheel diode
max. switching frequency (DC control voltage)	200 Hz		

Contact data

Contact type	1 NO contact (Transistor)
--------------	---------------------------

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_{eff} / 1 min.	Impulse withstand voltage	4 kV (1.2/50 μs)
Protection degree	IP20		

TERMOPTO
TOS 24VDC/48VDC 0,5A

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

Technical data**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 ²	Clamping range, min.	0.5 mm ²
Clamping range, max.	4 mm ²	Wire connection cross section AWG, min.	AWG 20
Wire connection cross section AWG, max.	AWG 12	Wire cross-section, solid, min.	0.5 mm ²
Wire cross-section, solid, max.	4 mm ²	Wire connection cross-section, finely stranded, min.	0.5 mm ²
Wire connection cross section, finely stranded, max.	2.5 mm ²	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 ²
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	1.5 mm ²	Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.5 mm ²
Conductor cross-section, flexible, AEH (DIN 46228-1), max.	1.5 mm ²	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.
---------------------------------	---

Approvals

Approvals



ROHS	Conform
------	---------

Downloads

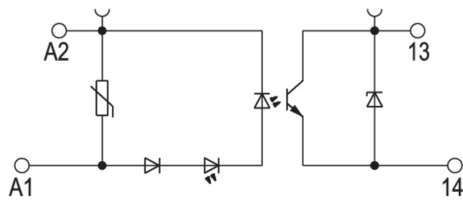
Approval/Certificate/Document of Conformity	DE_PA_5600_160301_001.pdf
Brochure/Catalogue	CAT 4.2 ELECTR 18/19 EN
Engineering Data	EPLAN_WSCAD
Engineering Data	STEP
User Documentation	Operating Instructions

Creation date May 31, 2018 6:21:43 AM CEST

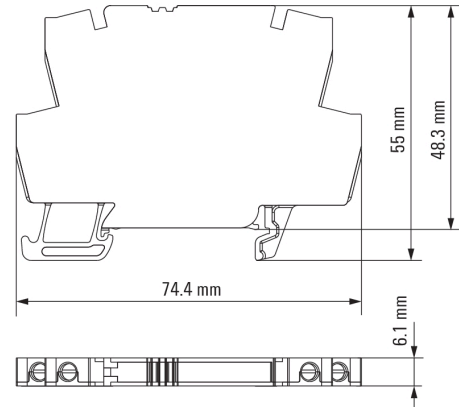
Catalogue status 18.05.2018 / We reserve the right to make technical changes.

**TERMOPTO
TOS 24VDC/48VDC 0,5A**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Drawings**Wiring diagram**

Schaltsymbol

Dimensional drawing

TERMOPTO
TOS 24VDC/48VDC 0,5A

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

Accessories**ZQV 4N****Spring connection with tension clamp Technology**

Tension clamp technology is a universal contact system for all common conductor connection types. Its fantastic level of flexibility makes the tension clamp a profitable alternative connection.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.
ZQV 4N/4 GE	1762620000	Accessories, Cross-connector, 32 A	4032248169771	60 pc(s).
ZQV 4N/4 RT	1794010000	Accessories, Cross-connector, 32 A	4032248233809	60 pc(s).
ZQV 4N/3 SW	1794000000	Accessories, Cross-connector, 32 A	4032248233793	60 pc(s).
ZQV 4N/10 RT	1794040000	Accessories, Cross-connector, 32 A	4032248234004	20 pc(s).
ZQV 4N/4 SW	1794030000	Accessories, Cross-connector, 32 A	4032248233915	60 pc(s).
ZQV 4N/2 GE	1758250000	Accessories, Cross-connector, 32 A	4032248169795	60 pc(s).
ZQV 4N/2 SW	1793970000	Accessories, Cross-connector, 32 A	4032248233762	60 pc(s).
ZQV 4N/3 GE	1762630000	Accessories, Cross-connector, 32 A	4032248169788	60 pc(s).
ZQV 4N/2 RT	1793950000	Accessories, Cross-connector, 32 A	4032248233748	60 pc(s).
ZQV 4N/4 BL	1794020000	Accessories, Cross-connector, 32 A	4032248233816	60 pc(s).
ZQV 4N/10 GE	1758260000	Accessories, Cross-connector, 32 A	4032248169764	20 pc(s).
ZQV 4N/20 BL	1909100000	Accessories, Cross-connector, 32 A	4032248535774	20 pc(s).
ZQV 4N/3 RT	1793980000	Accessories, Cross-connector, 32 A	4032248233779	60 pc(s).
ZQV 4N/20 RT	1909150000	Accessories, Cross-connector, 32 A	4032248535934	20 pc(s).
ZQV 4N/10 SW	1794060000	Accessories, Cross-connector, 32 A	4032248234059	20 pc(s).
ZQV 4N/2 BL	1793960000	Accessories, Cross-connector, 32 A	4032248233755	60 pc(s).
ZQV 4N/3 BL	1793990000	Accessories, Cross-connector, 32 A	4032248233786	60 pc(s).
ZQV 4N/10 BL	1794050000	Accessories, Cross-connector, 32 A	4032248234011	20 pc(s).
ZQV 4N/20 SW	1909120000	Accessories, Cross-connector, 32 A	4032248535804	20 pc(s).

Data sheet

**TERMOPTO
TOS 24VDC/48VDC 0,5A**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Accessories

ZQV 4N/20 GE	1909020000	Accessories, Cross- connector, 32 A	4032248535644 20 pc(s).
-----------------	----------------------------	--	-------------------------

Tools



Tools for removing the sheathing of uncut power cables and outgoing feeders, plus screwdrivers for installing FieldPower components.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.
SDS 0.6X3.5X100	9008330000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm	4032248056286	1 pc(s).

Slotted screwdriver



VDE insulated screwdriver sets, for working on live parts up to 1000 V AC and 1500 V DC, DIN EN 60900. IEC 900. Each piece is "GS" safety tested. Blade made from fully hardened, high-alloy chromium-vanadium-molybdenum steel, gun-metal finish.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.
SDIS SL 0.6X3.5X100	1274660000	Assembly tool, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm	4050118072631	1 pc(s).

Data sheet

**TERMOPTO
TOS 24VDC/48VDC 0,5A**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Accessories

Slotted screwdriver

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip



General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.
SDIS 0.6X3.5X100	9008390000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm	4032248056354	1 pc(s).

Markers

Extensive range of accessories for the FieldPower® boxes. Cable seals, plug-in connectors, locking elements and much more.



General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.
WS 12/6 MC NE WS	1609900000	WS, Terminal marker, 12 x 6 mm, Pitch in mm (P): 6.00 Weidmueller, Allen-Bradley, White	4008190203467	600 pc(s).

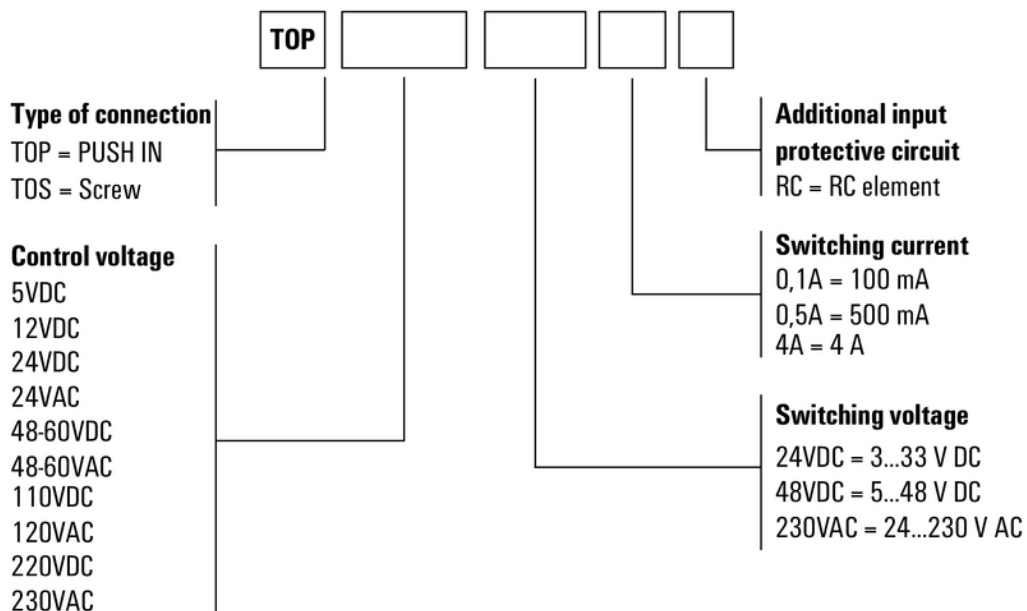
Data sheet

**TERMOPTO
TOS 24VDC/48VDC 0,5A**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

Drawings

Miscellaneous



Type codes