

**TOPH 24VDC 5-48VDC10A****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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Maintenance-free and wear-free solid-state relay with integrated electrical isolation, 6,4 mm width with extensive accessories, ideal for switching higher currents and DC voltages.

- 1 NO contact
- Contact material: AgNi
- Integrated status LED for simple function checks
- Integrated error LED for simple error checks
- Signaling contact for the PLC

**General ordering data**

Version	TERMSERIES-compact, Solid-state relay, Rated control voltage: 24 V DC $\pm 20\%$ , Rated switching voltage: 5...48 V DC, Continuous current: 10 A, PUSH IN
Order No.	<a href="#">2773440000</a>
Type	TOPH 24VDC 5-48VDC10A
GTIN (EAN)	4064675037217
Qty.	1 items

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## Technical data

## Approvals

Approvals



UL File Number Search [UL Website](#)  
 Certificate no. (cULus) E141197

## Dimensions and weights

Depth	81.4 mm	Depth (inches)	3.2047 inch
Height	89.4 mm	Height (inches)	3.5197 inch
Width	6.4 mm	Width (inches)	0.252 inch
Net weight	5.3 g		

## Temperatures

Storage temperature	-40 °C...85 °C	Ambient temperature	-40 °C...70 °C
Operating temperature		Humidity	5-85% relative humidity, Tu = 40°C, without condensation

## Probability of failure

MTTF 276 a

## Environmental Product Compliance

RoHS Compliance Status Compliant with exemption  
 RoHS Exemption (if applicable/known) 6c  
 REACH SVHC Lead 7439-92-1

## Rated data UL

Type of conductor flexible copper conductor,  
 rigid copper conductor

## Control side

Rated control voltage	24 V DC $\pm 20\%$	Rated control voltage (control input)	24 V DC $\pm 20\%$
Rated current DC	8.1 mA @ 24 V DC	Power rating	193 mW
Status indicator	Green LED, Red LED	Protective circuit	Reverse polarity protection

## Load side

Rated switching voltage	5...48 V DC	Continuous current	10 A @ 60 °C; 9 A @ 70 °C; 2 A @ DC 13
Max. switching frequency at rated load	50 Hz	Switch-on delay	Typ. 3.5 ms
Switch-off delay	0.75 ms	Short-circuit-proof	Yes (limited for 4 h / current limitation external <200 A)
Load side status indicator	LED red, short-circuit / overload at the output	Protective circuit, load side	Suppressor diode, Short- circuit
Contact type	1 NO contacts (POWER MOS-FET)		

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## Technical data

### General data

Operating altitude	≤ 2000 m, above sea level	
Version	10 A	
Mounting rail	TS 35	
Test button available	No	
Mechanical switch position indicator	No	
Colour	black	
UL94 flammability rating component	Component	Housing
	UL94 flammability rating	V-0
	Component	Relay status indicator
	UL94 flammability rating	V-2
	Component	Pusher
	UL94 flammability rating	V-0

### Insulation coordination

Pollution severity	2	Surge voltage category	III
Clearance and creepage distances for control side - load side	≥ 8 mm	Dielectric strength for control side - load side	4 kVeff / 1 Min.
Dielectric strength to mounting rail	4 kVeff / 1 Min.	Impulse withstand voltage	6 kV (1.2/50 µs)
Protection degree	IP20		

### Further details of approvals / standards

Certificate no. (cULus)	E141197
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### Connection data

Stripping length	9 mm	Wire connection method	PUSH IN
Stripping length, rated connection	9 mm	Clamping range, rated connection	1.5 mm <sup>2</sup>
Clamping range, min.	0.14 mm <sup>2</sup>	Clamping range, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 14
Wire cross-section, solid, min.	0.5 mm <sup>2</sup>	Wire cross-section, solid, max.	1.5 mm <sup>2</sup>
Wire cross-section, solid, min. (AWG)	AWG 26	Wire cross-section, solid, max. (AWG)	AWG 14
Wire connection cross section, finely stranded, min.	0.35 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 26	Wire cross-section, finely stranded, max. (AWG)	AWG 14
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		

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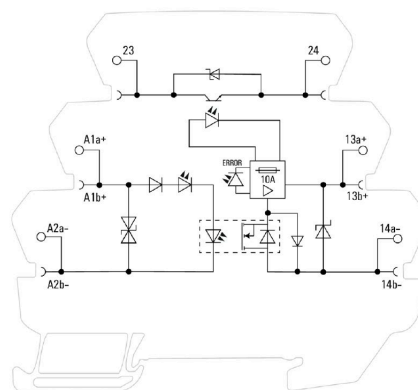
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## Drawings

### Similar to illustration



### Wiring diagram



### Graph

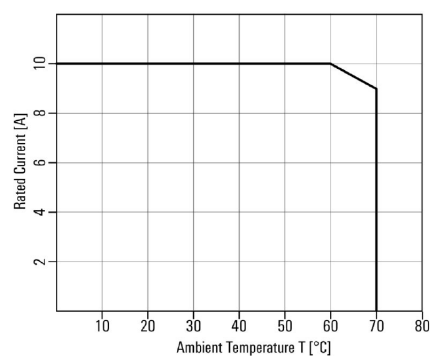
**FUNCTION DIAGRAM**

	STATE							
	OFF	ON	OFF	ON (Overload)	OFF	ON (Overload)	OFF	ON
Control LED								
Time LED								
Control cable								
Error Diode								
Load Status								
Load current								
Temperature								
Rated current								
Rated voltage								

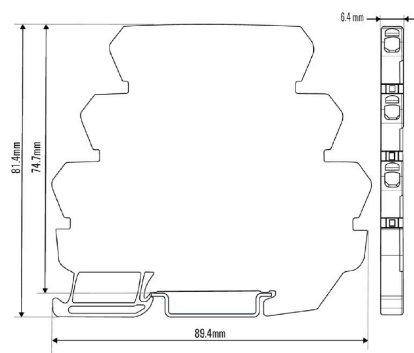
\*High Load current or high Ambient Temperature can trigger the time LED

### Graph

**Derating-curve**

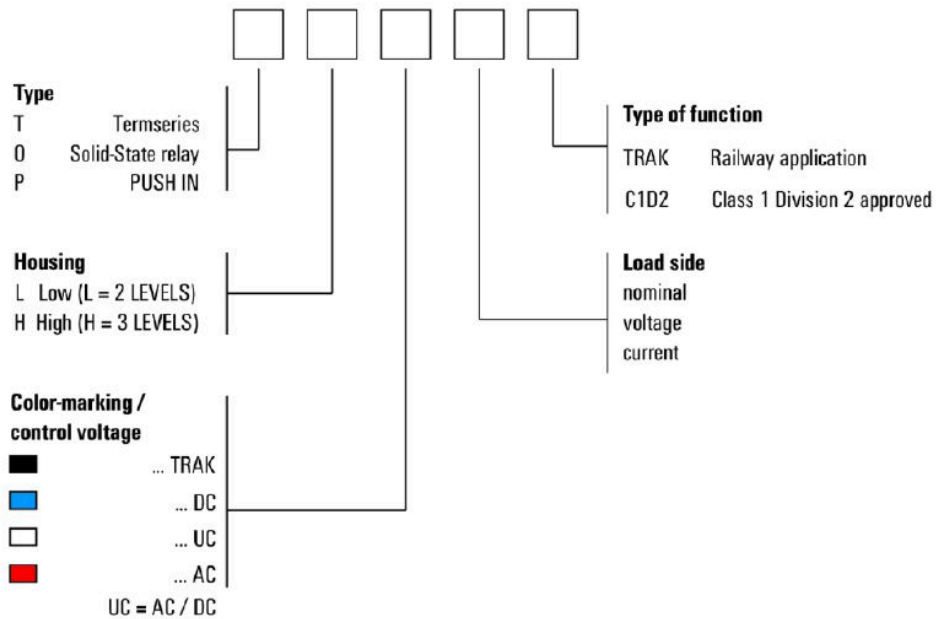


### Dimensional drawing



Miscellaneous

**Type code solid-state relay**



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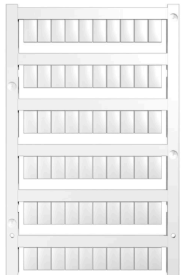
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## Accessories

### Blank



WS markers are the perfect match for the W-series connectors. Thanks to their system compatibility, the WS tags can also be used with the I-series and the Z-series. The large marking surfaces do not only permit long character strings but also multi-line text. WS markers are ideal for labels with long, customised character strings. Thanks to the proven MultiCard format, printing with PrintJet CONNECT oder/or Plotter is possible.

- Can be fitted in strips or individually
- Markers in proven MultiCard format

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

### General ordering data

Type	WS 10/6 M MC NE WS	Version
Order No.	<a href="#">1818400000</a>	WS, Terminal marker, 10 x 6 mm, Pitch in mm (P): 6.00 Weidmueller,
GTIN (EAN)	4032248310876	Allen-Bradley, white
Qty.	600 ST	

### Cross-connections



#### Adjustable cross-connections

Increase the flexibility of your cross-connections. The TERMSERIES CROSS-CONNECTION (TCC) enables individually adjustable cross-connections with up to 51 poles. The maximum number of pluggable poles has been increased to 32 poles. The strip material can be shortened to the required length very easily. The cross-connectors convince thanks to their easy handling and visibility as well as their universal connection possibilities. An additional web prevents the spring from deforming during assembly.

- Individually adjustable cross-connection with 51 poles
- Additional bar to avoid deformation of the spring
- Increased cross-connection – up to 32 poles possible
- Vibration resistance

### General ordering data

Type	TCC 6.4/51 RD	Version
Order No.	<a href="#">2556410000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566925	
Qty.	10 ST	
Type	TCC 6.4/51 OR	Version
Order No.	<a href="#">2556370000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566680	
Qty.	10 ST	
Type	TCC 6.4/51 BL	Version
Order No.	<a href="#">2556450000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566963	
Qty.	10 ST	

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## Accessories

Type	TCC 6.4/51 BK	Version
Order No.	<a href="#">2556490000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118567007	
Qty.	10 ST	
Type	TCC 6.4/2 OR	Version
Order No.	<a href="#">2556350000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566826	
Qty.	10 ST	
Type	TCC 6.4/2 BL	Version
Order No.	<a href="#">2556430000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566949	
Qty.	10 ST	
Type	TCC 6.4/2 BK	Version
Order No.	<a href="#">2556470000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566987	
Qty.	10 ST	
Type	TCC 6.4/10 RD	Version
Order No.	<a href="#">2556400000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566918	
Qty.	10 ST	
Type	TCC 6.4/10 OR	Version
Order No.	<a href="#">2556360000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566673	
Qty.	10 ST	
Type	TCC 6.4/10 BL	Version
Order No.	<a href="#">2556440000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566956	
Qty.	10 ST	
Type	TCC 6.4/10 BK	Version
Order No.	<a href="#">2556480000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566994	
Qty.	10 ST	
Type	TCC 12.8/26 RD	Version
Order No.	<a href="#">2556420000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566932	
Qty.	10 ST	
Type	TCC 12.8/26 OR	Version
Order No.	<a href="#">2556380000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566697	
Qty.	10 ST	
Type	TCC 12.8/26 BL	Version
Order No.	<a href="#">2556460000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566970	
Qty.	10 ST	
Type	TCC 12.8/26 BK	Version
Order No.	<a href="#">2556500000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118567014	
Qty.	10 ST	
Type	TCC 6.4/2 RD	Version
Order No.	<a href="#">2556390000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566901	
Qty.	10 ST	

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## Accessories

## WS 12/6



## WS/ DEK

MultiMark terminal markers use an innovative composite material made from two components. The hard base contour of the marker snaps securely into the connector. The elastic surface finish makes the marker easy to mount. This specially punched material enables the strips to be stretched to accommodate the slight variations in spacing that tend to add up, especially with long terminal blocks. Another advantage: the excellent printability of the surface material guarantees durable and wear-resistant labelling. A print resolution of 300 dpi also produces a very legible script.

## Your benefits with MultiMark

- Firm hold and durable printing
- Continuous strips save installation time
- Easy mounting thanks to an innovative composite material
- Large label field for optimal legibility
- High flexibility thanks to manufacturer independence

## General ordering data

Type	WS 12/6 MM WS	Version
Order No.	<a href="#">2007200000</a>	WS, Terminal marker, 12 x 6 mm, Weidmueller, white
GTIN (EAN)	4050118391886	
Qty.	600 ST	

## 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	SDIS 0.6X3.5X100	Version
Order No.	<a href="#">2749810000</a>	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4050118897012	
Qty.	1 ST	
Type	SDS 0.6X3.5X100	Version
Order No.	<a href="#">2749340000</a>	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4050118895568	
Qty.	1 ST	



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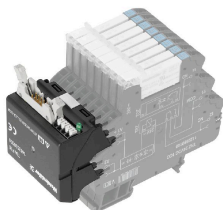
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## Accessories

### Interface adapters



#### Faster signal wiring with less space

To reduce wiring times, pre-assembled cables are used between the control system and the interface level and are simply connected to the TERMSERIES adapter. This enables throughput times in electrical cabinet building to be significantly reduced. The adapter has a universal fit and offers a genuine space advantage in interaction with the TERMSERIES products with identical contours.

- Reduced wiring time due to plug-and-play concept with pre-assembled cables
- Can be applied to the input and output sides of the TERMSERIES
- Ready for plus and minus switching logic
- High space-saving due to universal fit to other TERMSERIES products

### General ordering data

Type	TIA F10	Version
Order No.	<a href="#">1463520000</a>	TERMSERIES, Adapter, 10-pole plug according to DIN EN 60603-13,
GTIN (EAN)	4050118323535	long locking lever, Number of signal paths: 8, Rated voltage DC : 24 V,
Qty.	1 ST	Rated current (per signal path): 125 mA
Type	TIA SUBD 15S	Version
Order No.	<a href="#">1463530000</a>	TERMSERIES, Adapter, Sub-D, 15-pole, DIN 41652 / IEC 60807,
GTIN (EAN)	4050118323542	Number of signal paths: 8, Rated voltage DC : 24 V, Rated current (per
Qty.	1 ST	signal path): 125 mA
Type	TIAL F10	Version
Order No.	<a href="#">1463540000</a>	TERMSERIES, Adapter, 10-pole plug according to DIN EN 60603-13,
GTIN (EAN)	4050118323559	long locking lever, Number of signal paths: 8, Rated voltage DC : 24 V,
Qty.	1 ST	Rated current (per signal path): 125 mA
Type	TIAL F20	Version
Order No.	<a href="#">1463550000</a>	TERMSERIES, Adapter, 20-pole plug according to DIN EN 60603-13,
GTIN (EAN)	4050118331783	long locking lever, Number of signal paths: 16, Rated voltage DC : 24
Qty.	1 ST	V, Rated current (per signal path): 60 mA

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## Accessories

### Partition plate



#### Versatile separation plates

Separation plates can be used to group together signals visually, to electrically isolate modules and to insert markings for a better overview. This makes them a particularly versatile accessory. Separation plates increase the clearance and creepage distances between two modules, thus increasing the rated insulation voltage between two modules to up to 600 V. Double separation plates can be marked with WAD5 or WS10/5 markers and enable continuous cross-connections. Installation is made easier with the perforations to individually break out the cross-connection channels.

- Partition plates visually separates groups from each other
- Indentations for individual breaking out the crossconnection channels
- Partition plates isolates between two modules by increasing the clearance and creepage distances of up to 600 V

### General ordering data

Type	TW TXS/TXZ R3.2	Version
Order No.	<a href="#">1240800000</a>	TERMSERIES, Partition plate
GTIN (EAN)	4050118028188	
Qty.	10 ST	
Type	TXL PP	Version
Order No.	<a href="#">2774090000</a>	TERMSERIES-compact, Partition plate
GTIN (EAN)	4064675037866	
Qty.	10 ST	

### Feed through module



#### Precision-fit feed-through terminals

The precisely fitting terminals enable potentials to be brought from the control side to the load side and vice versa. Due to the compatibility with the TERMSERIES, there is a uniform test system with a standardised test tap.

### General ordering data

Type	TXPL FT	Version
Order No.	<a href="#">2774080000</a>	TERMSERIES-compact, Feed-through terminal, PUSH IN
GTIN (EAN)	4064675037859	
Qty.	1 ST	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Supply module****Space-saving feed-in terminals**

For easy feed-in of neutral or negative potentials at the input of switched potentials at the output. Cross-connections enable space-saving connection of sensors and actuators without additional feed-through terminal blocks.

**General ordering data**

Type	TXPL S	Version
Order No.	<a href="#">2774100000</a>	TERMSERIES-compact, Supply module, PUSH IN
GTIN (EAN)	4064675037873	
Qty.	1 ST	