

TOPL 24-110VDC 5-110VDC0.25A TRAK

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

www.weidmueller.com

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The ultra-compact TERMSERIES-compact TRAK complete modules comply with the strict standards of the railway industry. Their relays are permanently installed, which makes them particularly vibration-proof. They operate reliably in a temperature range of -40 to +70 °C and are protected against condensation. Typical railway voltage fluctuations and interruptions are tolerated without functional failure. Thanks to their slim, flat design, they can be installed anywhere. And since their contours are identical to those of the tried-and-tested TERMSERIES, all accessories of the series can be used. This means that extremely robust solutions can be realised - even outside the railway industry.

- Developed according to the strict railway standards EN 50155, EN 61373 and EN 45545-2
- Resistant to voltage and temperature fluctuations
- Insensitive to shocks and vibrations
- Extremely compact with a width of only 6.4 mm and a depth of 63 mm
- Integrated status LED for easy function testing
- Compatible with the complete range of TERMSERIES accessories

General ordering data

Version	TERMSERIES-compact, Solid-state relay, Rated control voltage: 24...110 V DC -30 / +25 % , Rated switching voltage: 5...110 V DC, Continuous current: 250 mA, PUSH IN
Order No.	277360000
Type	TOPL 24-110VDC 5-110VDC0.25A TRAK
GTIN (EAN)	4064675037378
Qty.	10 pc(s).

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Technical data
Dimensions and weights

Depth	62.5 mm	Depth (inches)	2.461 inch
Height	89.4 mm	Height (inches)	3.52 inch
Width	6.4 mm	Width (inches)	0.252 inch
Net weight	0 g		

Temperatures

Operating temperature	-40 °C...70 °C	Humidity	5-85% relative humidity, Tu = 40°C, without condensation
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Probability of failure

MTTF	2,551 a
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Control side

Rated control voltage	24...110 V DC -30 / +25 %	Rated current DC	1.9 mA @ 24 V DC, 3.2 mA @ 110 V DC
Power rating	46 mW @ 24 V DC, 352 mW @ 110 V DC	Status indicator	Green LED
Protective circuit	Free-wheeling diode, Suppressor diode	Input frequency	10 Hz

Load side

Rated switching voltage	5...110 V DC	Continuous current	0.25 A
Inrush current	11.4 mA	Switch-on delay	<4 ms
Switch-off delay	<150 ms	Contact type	NO contact

General data

Operating altitude	≤ 2000 m, above sea level		
Version	for railway applications		
Rail	TS 35		
Test button available	No		
Mechanical switch position indicator	No		
Colour	black		
UL 94 flammability rating	V-0		
UL94 flammability rating component	Component	Housing	
	UL94 flammability rating	V-0	
	Component	Relay status indicator	
	UL94 flammability rating	V-0	
	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	2.5 kV _{eff}
Type of isolation at input and output	reinforced insulation	Dielectric strength to mounting rail	4 kV _{eff} / 1 Min.
Impulse withstand voltage	6 kV (1.2/50 µs)	Protection degree	IP20

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Technical data**Connection data**

Stripping length	9 mm	Wire connection method	PUSH IN
Stripping length, rated connection	9 mm	Clamping range, rated connection	1.5 mm ²
Clamping range, min.	0.14 mm ²	Clamping range, max.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 14
Wire cross-section, solid, min.	0.14 mm ²	Wire cross-section, solid, max.	1.5 mm ²
Wire cross-section, solid, min. (AWG)	AWG 26	Wire cross-section, solid, max. (AWG)	AWG 16
Wire connection cross section, finely stranded, min.	0.14 mm ²	Wire connection cross section, finely stranded, max.	2.5 mm ²
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.	0.25 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.	0.15 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 6.0	EC001504	ETIM 7.0	EC001504
ETIM 8.0	EC001504	ETIM 9.0	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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Downloads

Engineering Data	CAD data – STEP
Catalogues	Catalogues in PDF-format

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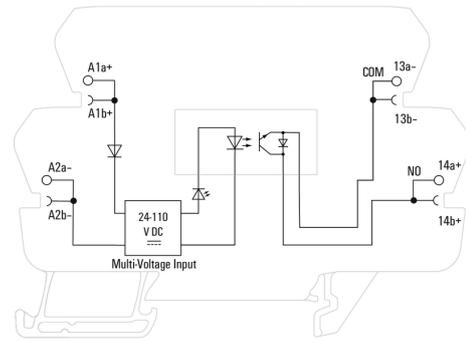
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Drawings

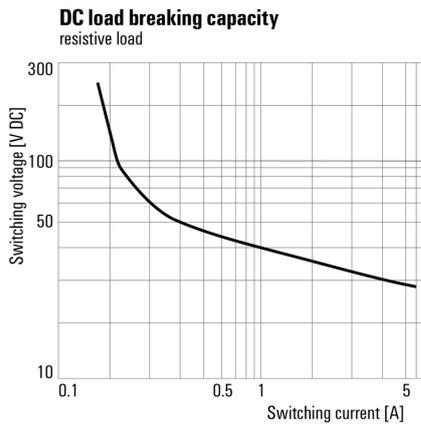
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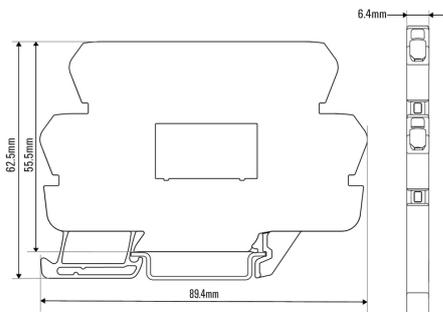
Wiring diagram



Graph



Dimensional drawing



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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	TXL PP	Version
Order No.	2774090000	TERMSERIES-compact, Partition plate
GTIN (EAN)	4064675037866	
Qty.	10 pc(s).	
Type	TW TXS/TXZ R3.2	Version
Order No.	1240800000	TERMSERIES, Partition plate
GTIN (EAN)	4050118028188	
Qty.	10 pc(s).	

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Accessories

Slotted screwdriver



Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

General ordering data

Type	SDS 0.6X3.5X100	Version
Order No.	2749340000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4050118895568	
Qty.	1 pc(s).	

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.	2007200000	WS, Terminal marker, 12 x 6 mm, Weidmueller, white
GTIN (EAN)	4050118391886	
Qty.	600 pc(s).	

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Accessories

TERMSERIES interface adapter



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 SUBD 15S	Version
Order No.	1463530000	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 pc(s).	signal path): 125 mA
Type	TIA F10	Version
Order No.	1463520000	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 pc(s).	Rated current (per signal path): 125 mA
Type	TIAL F20	Version
Order No.	1463550000	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 pc(s).	V, Rated current (per signal path): 60 mA
Type	TIAL F10	Version
Order No.	1463540000	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 pc(s).	Rated current (per signal path): 125 mA

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Accessories

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 6.4/2 RD	Version
Order No.	2556390000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566901	
Qty.	10 pc(s).	
Type	TCC 6.4/2 BL	Version
Order No.	2556430000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566949	
Qty.	10 pc(s).	
Type	TCC 6.4/10 RD	Version
Order No.	2556400000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566918	
Qty.	10 pc(s).	
Type	TCC 6.4/10 BK	Version
Order No.	2556480000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566994	
Qty.	10 pc(s).	
Type	TCC 6.4/2 OR	Version
Order No.	2556350000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566826	
Qty.	10 pc(s).	
Type	TCC 6.4/10 BL	Version
Order No.	2556440000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566956	
Qty.	10 pc(s).	
Type	TCC 6.4/51 BK	Version
Order No.	2556490000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118567007	
Qty.	10 pc(s).	
Type	TCC 6.4/51 BL	Version
Order No.	2556450000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566963	
Qty.	10 pc(s).	

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Accessories

Type	TCC 12.8/26 RD	Version
Order No.	2556420000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566932	
Qty.	10 pc(s).	
Type	TCC 6.4/51 RD	Version
Order No.	2556410000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566925	
Qty.	10 pc(s).	
Type	TCC 6.4/10 OR	Version
Order No.	2556360000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566673	
Qty.	10 pc(s).	
Type	TCC 12.8/26 BL	Version
Order No.	2556460000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566970	
Qty.	10 pc(s).	
Type	TCC 6.4/2 BK	Version
Order No.	2556470000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566987	
Qty.	10 pc(s).	
Type	TCC 6.4/51 OR	Version
Order No.	2556370000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566680	
Qty.	10 pc(s).	
Type	TCC 12.8/26 BK	Version
Order No.	2556500000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118567014	
Qty.	10 pc(s).	
Type	TCC 12.8/26 OR	Version
Order No.	2556380000	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566697	
Qty.	10 pc(s).	

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.	2774080000	TERMSERIES-compact, Feed-through terminal, PUSH IN
GTIN (EAN)	4064675037859	
Qty.	1 pc(s).	

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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.	181840000	WS, Terminal marker, 10 x 6 mm, Pitch in mm (P): 6.00 Weidmueller,
GTIN (EAN)	4032248310876	Allen-Bradley, white
Qty.	600 pc(s).	

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.

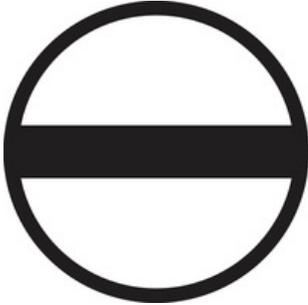
General ordering data

Type	TXPL S	Version
Order No.	277410000	TERMSERIES-compact, Supply module, PUSH IN
GTIN (EAN)	4064675037873	
Qty.	1 pc(s).	

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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	SDIS 0.6X3.5X100	Version
Order No.	2749810000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4050118897012	
Qty.	1 pc(s).	

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Drawings

Miscellaneous

Type code solid-state relay (TERMSERIES-compact)

