

**TOS 5VDC 230VAC1A****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image**

Similar to illustration

- 1 NO contact
- Type: Triac (zero-cross switch), MOS-FET, Bipolar transistor
- 2 A DC, 0,1 A DC, 1 A AC output current
- Input voltages 5 V DC and 12 V DC with coloured marking: DC: blue

**General ordering data**

Version	TERMSERIES, Solid-state relay, Rated control voltage: 5 V DC $\pm 20\%$ , Rated switching voltage: 24...240 V AC, Continuous current: 1 A, Screw connection
Order No.	<a href="#">1127390000</a>
Type	TOS 5VDC 230VAC1A
GTIN (EAN)	4032248909131
Qty.	10 pc(s).

## TOS 5VDC 230VAC1A

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www.weidmueller.com

## Technical data

## Dimensions and weights

Depth	87.8 mm	Depth (inches)	3.457 inch
Height	89.6 mm	Height (inches)	3.528 inch
Width	6.4 mm	Width (inches)	0.252 inch
Net weight	33.1 g		

## Temperatures

Storage temperature	-40 °C...70 °C	Operating temperature	-20 °C...60 °C
Humidity	5-95% relative humidity, T <sub>u</sub> = 40°C, without condensation		

## Probability of failure

MTTF	1,120 a
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## Rated data UL

Ambient temperature (operational), max.	60 °C	Output current derating (ohmic)	1 A @ 25 °C, 0.3 A @ 60 °C
Connection cross-section AWG, min.	AWG 26	Connection cross-section AWG, max.	AWG 14
Type of conductor	rigid copper conductor, flexible copper conductor	Tightening torque, max.	0.4 Nm
Pollution severity level	2		

## Control side

Rated control voltage	5 V DC $\pm$ 20 %	Nominal control current	15 mA DC ( $\pm$ 20 %)
Power rating	75 mW	Status indicator	Green LED
Protective circuit	Free-wheeling diode, Reverse polarity protection	Input frequency	3 Hz
Coil voltage of the replacement relay deviating from the rated control voltage	No	Coil voltage of the replacement relay	5 V DC

## Load side

Rated switching voltage	24...240 V AC	Continuous current	1 A
Rated switching current	1 A	Max. switching voltage, AC	250 V
Inrush current	15 A / 10 ms	Switch-on delay	<12 ms
Switch-off delay	<12 ms	Voltage drop at max. load	$\leq$ 1.6 V
Leakage current	<1.5 mA	Min. switching current	20 mA
Short-circuit-proof	No	Protective circuit, load side	RC element
Contact type	1 NO contact (Triac (zero-cross switch))	Output voltage frequency range	50 / 60 Hz
max. switching frequency (DC control voltage)	3 Hz		

## General data

Rail	TS 35	
Test button available	No	
Colour	black	
UL94 flammability rating component	Component	Housing
	UL94 flammability rating	V-0
	Component	Retaining clip
	UL94 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	≥ 5.5 mm
Dielectric strength for control side - load side	2.5 kV <sub>eff</sub>	Dielectric strength to mounting rail	4 kV <sub>eff</sub> / 1 Min.
Impulse withstand voltage	6 kV (1.2/50 µs)	Protection degree	IP20

## Further details of approvals / standards

Certificate No. (DNV)	TAA00001E5	Certificate no. (cULus)	E141197
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## Connection data

Wire connection method	Screw connection	Stripping length, rated connection	8 mm
Tightening torque, max.	0.4 Nm	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.	0.14 mm <sup>2</sup>	Wire cross-section, solid, max.	2.5 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.	0.14 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.	0.25 mm <sup>2</sup>	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	2.5 mm <sup>2</sup>
Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.25 mm <sup>2</sup>	Conductor cross-section, flexible, AEH (DIN 46228-1), max.	2.5 mm <sup>2</sup>
Wire connection cross section, finely stranded, two clampable wires, min.	0.5 mm <sup>2</sup>	Wire cross-section, finely stranded, two clampable wires, max.	1 mm <sup>2</sup>
Blade size	size PHO		

## 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
SCIP	9e2cbc49-76d9-4611-b8ec-5b4f549a0aa9

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Approvals**

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">EU Konformitätserklärung / EU Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a>
User Documentation	<a href="#">Beipackzettel / Package Insert – multilingual</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	

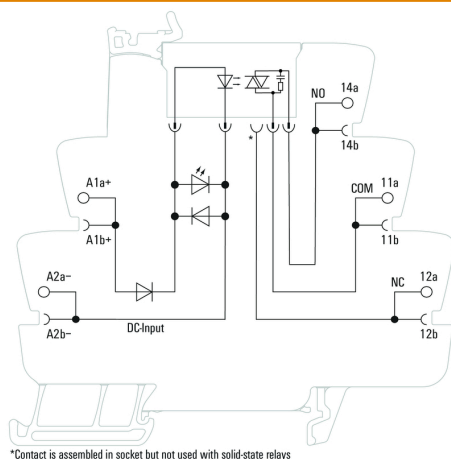
## TOS 5VDC 230VAC1A

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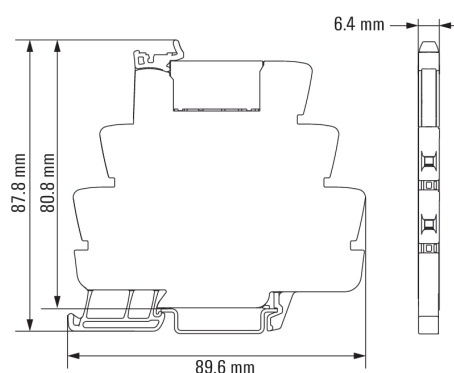
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## Drawings

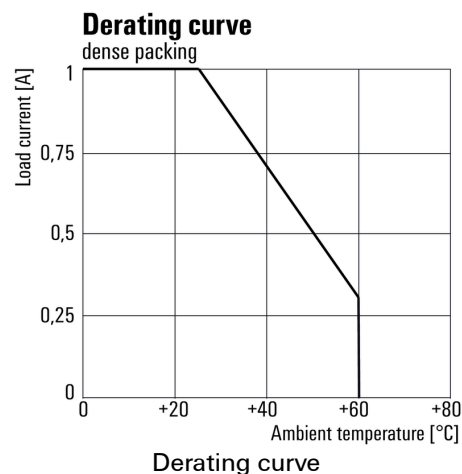
## Wiring diagram



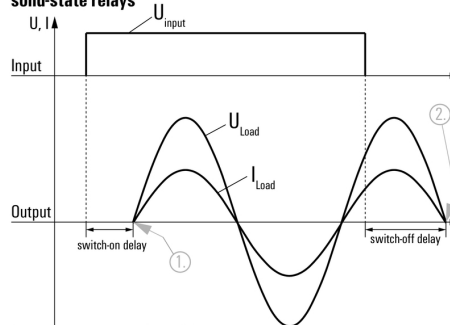
## Dimensional drawing



## Graph



## Graph

Signal characteristics of zero cross switching  
solid-state relays

Shown at an example with resistive load.

1. Switches on at first zero cross of mains voltage while control input gets signal.
2. Switches off at next zero cross of mains current after control input signal was switched off.

Switching DC voltages is not possible with this solid-state relays.

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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	SDIS SLIM 0.6X3.5X100	Version
Order No.	<a href="#">2749610000</a>	Mounting tool, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4050118896350	thickness (A): 0.6 mm
Qty.	1 pc(s).	

**Crosshead screwdriver Phillips**

Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip

**General ordering data**

Type	SDK PH0 X 60	Version
Order No.	<a href="#">2749400000</a>	Screwdriver, Blade width (B): 60 mm, Blade thickness (A):
GTIN (EAN)	4050118895629	
Qty.	1 pc(s).	

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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 pc(s).	

## ZQV

## General ordering data

Type	ZQV 1.5N/R6.4/10 BL	Version
Order No.	<a href="#">1390350000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118190793	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/2 SW	Version
Order No.	<a href="#">1446040000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118251067	
Qty.	10 pc(s).	

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## Accessories

Type	ZQV 1.5N/R6.4/19 SW	Version
Order No.	<a href="#">1391600000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118191806	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/2 RT	Version
Order No.	<a href="#">1446090000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118250886	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/19 GE	Version
Order No.	<a href="#">1193690000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4032248976645	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/19 RT	Version
Order No.	<a href="#">1391610000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118191783	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/2 GE	Version
Order No.	<a href="#">1193670000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4032248976638	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/2 BL	Version
Order No.	<a href="#">1446140000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118251074	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/10 RT	Version
Order No.	<a href="#">1391640000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118191660	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/10 SW	Version
Order No.	<a href="#">1391630000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118191776	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/19 BL	Version
Order No.	<a href="#">1391620000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118191813	
Qty.	10 pc(s).	
Type	ZQV 1.5N/R6.4/10 GE	Version
Order No.	<a href="#">1193680000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4032248976454	
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.	<a href="#">2749340000</a>	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4050118895568	thickness (A): 0.6 mm
Qty.	1 pc(s).	

## 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.	<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 pc(s).	signal path): 125 mA
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 pc(s).	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 pc(s).	V, Rated current (per signal path): 60 mA

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## Accessories

## Cross-connections



## Adjustable cross-connections

Increase the flexibility of your cross-connections. The TERM SERIES 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.	<a href="#">2556390000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566901	
Qty.	10 pc(s).	
Type	TCC 6.4/2 BL	Version
Order No.	<a href="#">2556430000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566949	
Qty.	10 pc(s).	
Type	TCC 6.4/10 RD	Version
Order No.	<a href="#">2556400000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566918	
Qty.	10 pc(s).	
Type	TCC 6.4/10 BK	Version
Order No.	<a href="#">2556480000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566994	
Qty.	10 pc(s).	
Type	TCC 6.4/2 OR	Version
Order No.	<a href="#">2556350000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566826	
Qty.	10 pc(s).	
Type	TCC 6.4/10 BL	Version
Order No.	<a href="#">2556440000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566956	
Qty.	10 pc(s).	
Type	TCC 6.4/51 BK	Version
Order No.	<a href="#">2556490000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118567007	
Qty.	10 pc(s).	
Type	TCC 6.4/51 BL	Version
Order No.	<a href="#">2556450000</a>	TERMSERIES, Cross-connector
GTIN (EAN)	4050118566963	
Qty.	10 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories**

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

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[www.weidmueller.com](http://www.weidmueller.com)**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 pc(s).	

**Crosshead screwdriver Phillips**

VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip

**General ordering data**

Type	SDIK PHO X 60	Version
Order No.	<a href="#">2749880000</a>	Screwdriver, Blade width (B): 0 mm, 60 mm, Blade thickness (A): 0
GTIN (EAN)	4050118897081	
Qty.	1 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Supply module****Space-saving supply modules**

Our supply terminals enable potentials to be fed at the input – e.g. neutral or minus potentials – or switched potentials to be fed at the output. In conjunction with precisely fitting cross-connections from the TEMR SERIES, the connections for the cables on the relay module remain free for actuators or sensors. No additional feed-through terminal blocks are required, resulting in huge space savings in the panel. At the same time, the wiring is simplified as no double wire-end ferrules are required for the potential feed.

**General ordering data**

Type	TXP SUPPLY	Version
Order No.	<a href="#">2618940000</a>	TERMSERIES, Supply module, Number of contacts: 5, , Continuous
GTIN (EAN)	4050118667592	current: 10 A, PUSH IN
Qty.	10 pc(s).	
Type	TXS SUPPLY	Version
Order No.	<a href="#">1240780000</a>	TERMSERIES, Supply module, Number of contacts: 5, , Continuous
GTIN (EAN)	4050118028140	current: 10 A, Screw connection
Qty.	10 pc(s).	
Type	TXZ SUPPLY	Version
Order No.	<a href="#">1240790000</a>	TERMSERIES, Supply module, Number of contacts: 5, , Continuous
GTIN (EAN)	4050118028164	current: 10 A, Tension-clamp connection
Qty.	10 pc(s).	

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## Drawings

## Miscellaneous

## Type code TERMSERIES solid-state relay versions



Type codes