

TOS 48-60VDC/48VDC 0,1A**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Similar to illustration

- 1 NO contact (Transistor)
- Ensures wear- and maintenance-free potential separation in compact terminal block format
- Suitable accessories from the cross-connection to the marker
- Integrated protective circuit for inputs and outputs

**General ordering data**

Version	TERMOPTO, Solid-state relay, Rated control voltage: 48...60 V DC $\pm 20\%$, Rated switching voltage: 5...48 V DC, Continuous current: 0.1 A, Screw connection
Order No.	8950730000
Type	TOS 48-60VDC/48VDC 0,1A
GTIN (EAN)	4032248742103
Qty.	10 pc(s).

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Technical data

Dimensions and weights

Depth	55 mm	Depth (inches)	2.165 inch
Height	74.4 mm	Height (inches)	2.929 inch
Width	6.1 mm	Width (inches)	0.24 inch
Net weight	20.8 g		

Temperatures

Storage temperature	-40 °C...80 °C	Operating temperature	-20 °C...60 °C
Humidity	5-95% relative humidity, T _u = 40°C, without condensation		

Probability of failure

MTTF	2,500 a
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Control side

Rated control voltage	48...60 V DC $\pm 20\%$	Nominal control current	4.3 mA DC
Power rating	<200 mW	Status indicator	Green LED
Protective circuit	Varistor, Reverse polarity protection	Input frequency	500 Hz

Load side

Rated switching voltage	5...48 V DC	Continuous current	0.1 A (DC1)
Rated switching current	100 mA	Load category	DC1
Max. switching voltage, DC	48 V	Switch-on delay	<170 μ s
Switch-off delay	<310 μ s	Voltage drop at max. load	<1 V
Leakage current	<10 μ A	Min. switching current	100 μ A
Short-circuit-proof	No	Protective circuit, load side	Free-wheeling diode
Contact type	1 NO contact (Transistor)	max. switching frequency (DC control voltage)	500 Hz

General data

Rail	TS 35	
Test button available	No	
Colour	black	
UL94 flammability rating component	Component	Housing
	UL94 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 μ s)
Protection degree	IP20		

Further details of approvals / standards

Certificate no. (cULus)	E223474
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Technical data

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 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		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	9e2cbc49-76d9-4611-b8ec-5b4f549a0aa9

Approvals

Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E223474

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Technical data

Downloads

Approval/Certificate/Document of Conformity

[EU Konformitätserklärung / EU Declaration of Conformity](#)

Engineering Data

[CAD data – STEP](#)

User Documentation

[Beipackzettel / Package Insert – multilingual](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

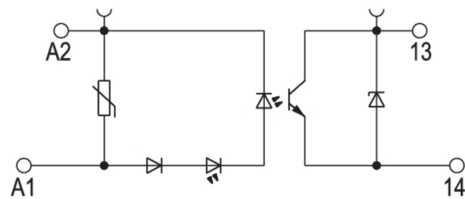
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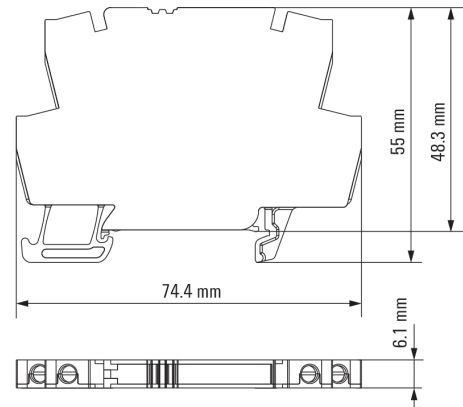
Drawings

Wiring diagram



Schaltsymbol

Dimensional drawing



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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.

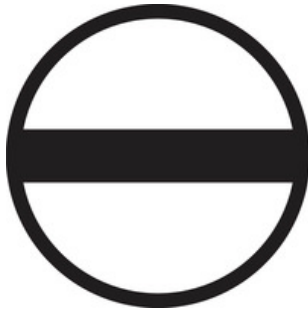
- Can be fitted in strips or individually
- Markers in proven MultiCard format

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 12/6 MC NE WS	Version
Order No.	1609900000	WS, Terminal marker, 12 x 6 mm, Pitch in mm (P): 6.00 Weidmueller,
GTIN (EAN)	4008190203467	Allen-Bradley, white
Qty.	600 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	SDIS SLIM 0.6X3.5X100	Version
Order No.	2749610000	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).	

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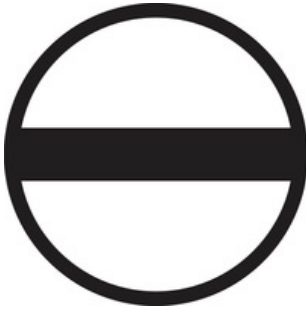
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Accessories

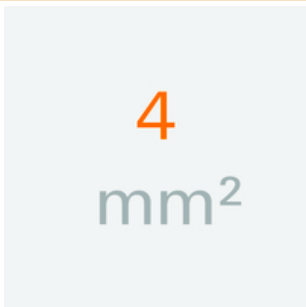
Slotted screwdriver



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
GTIN (EAN)	4050118897012	thickness (A): 0.6 mm
Qty.	1 pc(s).	

4 mm²

The plug-in cross-connections feature easy handling and quick installation. This saves a great deal of time during installation in comparison with screwed solutions.

General ordering data

Type	ZQV 4N/10 SW	Version
Order No.	1794060000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248234059	
Qty.	20 pc(s).	
Type	ZQV 4N/3 SW	Version
Order No.	1794000000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248233793	
Qty.	60 pc(s).	
Type	ZQV 4N/20 GE	Version
Order No.	1909020000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248535644	
Qty.	20 pc(s).	
Type	ZQV 4N/2 SW	Version
Order No.	1793970000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248233762	
Qty.	60 pc(s).	
Type	ZQV 4N/20 BL	Version
Order No.	1909100000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248535774	
Qty.	20 pc(s).	

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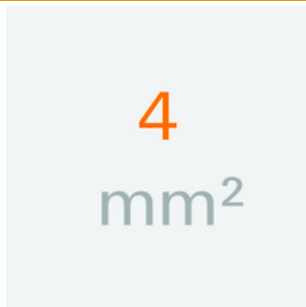
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Accessories

Type	ZQV 4N/4 SW	Version
Order No.	1794030000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248233915	
Qty.	60 pc(s).	
Type	ZQV 4N/20 RT	Version
Order No.	1909150000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248535934	
Qty.	20 pc(s).	
Type	ZQV 4N/20 SW	Version
Order No.	1909120000	W-Series, Cross-connector, 32 A
GTIN (EAN)	4032248535804	
Qty.	20 pc(s).	

4 mm²

The plug-in cross-connections feature easy handling and quick installation. This saves a great deal of time during installation in comparison with screwed solutions.

General ordering data

Type	ZQV 4N/2 RD	Version
Order No.	2460450000	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 2,
GTIN (EAN)	4050118476149	Pitch in mm (P): 6.10, Insulated: Yes, Width: 9.9 mm
Qty.	60 pc(s).	
Type	ZQV 4N/10 BL	Version
Order No.	1528230000	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 10,
GTIN (EAN)	4050118333138	Pitch in mm (P): 6.10, Insulated: Yes, Width: 58.7 mm
Qty.	20 pc(s).	
Type	ZQV 4N/3 BL	Version
Order No.	1528080000	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 3,
GTIN (EAN)	4050118333008	Pitch in mm (P): 6.10, Insulated: Yes, Width: 16 mm
Qty.	60 pc(s).	
Type	ZQV 4N/10 RD	Version
Order No.	2460740000	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 10,
GTIN (EAN)	4050118476163	Pitch in mm (P): 6.10, Insulated: Yes, Width: 58.7 mm
Qty.	20 pc(s).	
Type	ZQV 4N/10	Version
Order No.	1528090000	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332896	10, Pitch in mm (P): 6.10, Insulated: Yes, Width: 58.7 mm
Qty.	20 pc(s).	
Type	ZQV 4N/3	Version
Order No.	1527940000	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332865	3, Pitch in mm (P): 6.10, Insulated: Yes, Width: 16 mm
Qty.	60 pc(s).	

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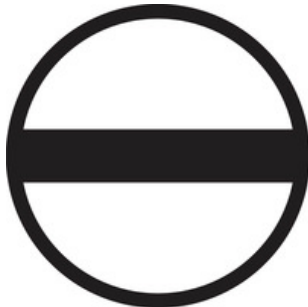
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Accessories

Type	ZQV 4N/2 BL	Version
Order No.	1528040000	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 2,
GTIN (EAN)	4050118332773	Pitch in mm (P): 6.10, Insulated: Yes, Width: 9.9 mm
Qty.	60 pc(s).	
Type	ZQV 4N/4	Version
Order No.	1527970000	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332889	4, Pitch in mm (P): 6.10, Insulated: Yes, Width: 22.1 mm
Qty.	60 pc(s).	
Type	ZQV 4N/4 RD	Version
Order No.	2460800000	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 4,
GTIN (EAN)	4050118476224	Pitch in mm (P): 6.10, Insulated: Yes, Width: 22.1 mm
Qty.	60 pc(s).	
Type	ZQV 4N/2	Version
Order No.	1527930000	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332766	2, Pitch in mm (P): 6.10, Insulated: Yes, Width: 9.9 mm
Qty.	60 pc(s).	
Type	ZQV 4N/3 RD	Version
Order No.	2460810000	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 3,
GTIN (EAN)	4050118476231	Pitch in mm (P): 6.10, Insulated: Yes, Width: 16 mm
Qty.	60 pc(s).	
Type	ZQV 4N/4 BL	Version
Order No.	1528120000	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 4,
GTIN (EAN)	4050118332872	Pitch in mm (P): 6.10, Insulated: Yes, Width: 22.1 mm
Qty.	60 pc(s).	

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
GTIN (EAN)	4050118895568	thickness (A): 0.6 mm
Qty.	1 pc(s).	

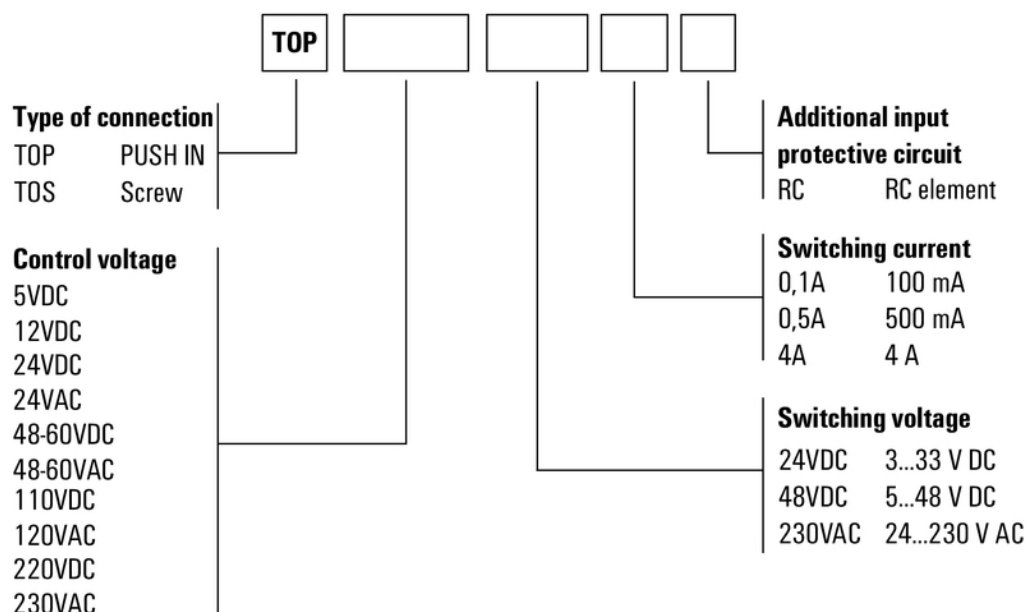
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Drawings

Miscellaneous



Type codes