

**TERMOPTO
TOP 230VAC/48VDC 0,5A**

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

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

with AC or DC input, available in different versions:

- With PUSH IN 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 | TOP 230VAC/48VDC 0,5A |
| Order No. | 8951090000 |
| Version | TERMOPTO, solid-state relais, 1 NO contact (Transistor), Rated control voltage: 230 V AC +10 % / -20 % , Rated switching voltage: 5...48 V DC, Continuous current: 500 mA, PUSH IN |
| GTIN (EAN) | 4032248741861 |
| Qty. | 10 pc(s). |

Creation date May 1, 2020 4:37:57 AM CEST

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Technical data
Dimensions and weights

| | | | |
|------------|---------|-----------------|------------|
| Width | 6.1 mm | Width (inches) | 0.24 inch |
| Height | 79.4 mm | Height (inches) | 3.126 inch |
| Depth | 55 mm | Depth (inches) | 2.165 inch |
| Net weight | 19.8 g | | |

Temperatures

| | | | |
|-----------------------------|--|-----------------------------|----------------|
| Humidity | 5-95% relative humidity, T _u = 40°C, without 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 |
|------|-------------|

Environmental Product Compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

Control side

| | | | |
|-----------------------|------------------------|--------------------------|---------------------|
| Rated control voltage | 230 V AC +10 % / -20 % | Nominal control current | 1.75 mA AC |
| Power rating | ≤ 0.4 VA | Cut-in / dropout voltage | 207 V / 92 V AC |
| Status indicator | Green LED | Protective circuit | Varistor, Rectifier |

Load side

| | | | |
|-------------------------------|---------------------|--|---------|
| Rated switching voltage | 5...48 V DC | Continuous current | 500 mA |
| Load category | DC1 | Switch-on delay | < 12 ms |
| Switch-off delay | < 14 ms | Voltage drop at max. load | < 1 V |
| Leakage current | < 10 µA | Short-circuit-proof | No |
| Protective circuit, load side | Free-wheeling diode | max. switching frequency (AC control voltage) | 10 Hz |

Contact data

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

General data

| | | | |
|---------------------------|-------|--------|-------|
| 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 | | |

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Technical data**Further details of approvals / standards**

| | | | |
|-----------|--------------------------------|-------------------------|---------|
| Standards | DIN EN 50178, IEC 62314, UL508 | Certificate no. (cULus) | E223474 |
|-----------|--------------------------------|-------------------------|---------|

Connection data

| | | | |
|---|---------------------|---|---------------------|
| Wire connection method | PUSH IN | Stripping length, rated connection | 10 mm |
| Clamping range, rated connection | 1.5 mm ² | Clamping range, min. | 0.5 mm ² |
| Clamping range, max. | 2.5 mm ² | Wire connection cross section AWG, min. | AWG 20 |
| Wire connection cross section AWG, max. | AWG 14 | Wire cross-section, solid, min. | 0.5 mm ² |
| Wire cross-section, solid, max. | 1.5 mm ² | Wire connection cross-section, finely stranded, min. | 0.5 mm ² |
| Wire connection cross section, finely stranded, max. | 1.5 mm ² | Wire cross-section, finely stranded, min. (AWG) | AWG 20 |
| 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 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 |
| eClass 9.0 | 27-37-16-04 | eClass 9.1 | 27-37-16-04 |
| eClass 10.0 | 27-37-16-04 | | |

Approvals

Approvals



ROHS Conform

Downloads

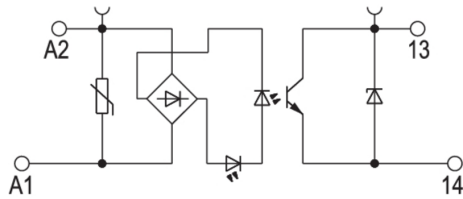
| | |
|---|---|
| Approval/Certificate/Document of Conformity | EU Konformitätserklärung / EU Declaration of Conformity |
| Brochure/Catalogue | CAT 4.2 ELECTR 18/19 EN |
| Engineering Data | EPLAN, WSCAD |
| Engineering Data | STEP |
| User Documentation | Beipackzettel / Package Insert - multilingual |

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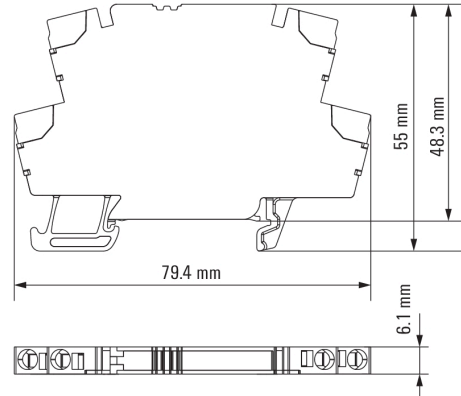
Drawings

Wiring diagram

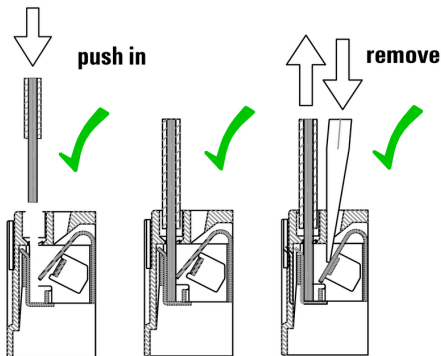


Schaltsymbol

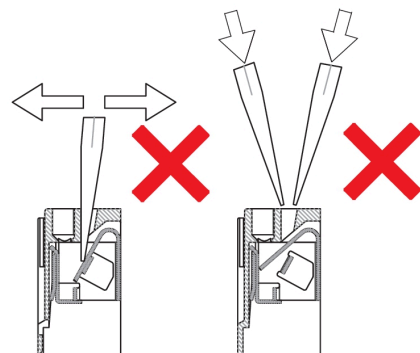
Dimensional drawing



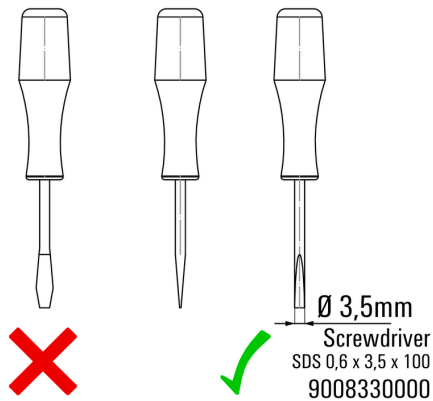
Correct handling PUSH IN connection



Wrong handling PUSH IN connection



Recommended screwdriver



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

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 | ZQV 4N/3 SW | Version |
| Order No. | 1794000000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233793 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/4 GE | Version |
| Order No. | 1762620000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248169771 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/4 BL | Version |
| Order No. | 1794020000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233816 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/10 SW | Version |
| Order No. | 1794060000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248234059 | |
| Qty. | 20 pc(s). | |
| Type | ZQV 4N/3 BL | Version |
| Order No. | 1793990000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233786 | |
| Qty. | 60 pc(s). | |

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Accessories

| | | |
|------------|----------------------------|------------------------------------|
| Type | ZQV 4N/4 SW | Version |
| Order No. | 1794030000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233915 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/2 SW | Version |
| Order No. | 1793970000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233762 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/2 GE | Version |
| Order No. | 1758250000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248169795 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/10 GE | Version |
| Order No. | 1758260000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248169764 | |
| Qty. | 20 pc(s). | |
| Type | ZQV 4N/20 RT | Version |
| Order No. | 1909150000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535934 | |
| Qty. | 20 pc(s). | |
| Type | ZQV 4N/20 GE | Version |
| Order No. | 1909020000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535644 | |
| Qty. | 20 pc(s). | |
| Type | ZQV 4N/2 RT | Version |
| Order No. | 1793950000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233748 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/3 RT | Version |
| Order No. | 1793980000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233779 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/2 BL | Version |
| Order No. | 1793960000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233755 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/20 BL | Version |
| Order No. | 1909100000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535774 | |
| Qty. | 20 pc(s). | |
| Type | ZQV 4N/10 RT | Version |
| Order No. | 1794040000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248234004 | |
| Qty. | 20 pc(s). | |
| Type | ZQV 4N/3 GE | Version |
| Order No. | 1762630000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248169788 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/10 BL | Version |
| Order No. | 1794050000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248234011 | |
| Qty. | 20 pc(s). | |

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Accessories

| | | |
|------------|----------------------------|------------------------------------|
| Type | ZQV 4N/4 RT | Version |
| Order No. | 1794010000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233809 | |
| Qty. | 60 pc(s). | |
| Type | ZQV 4N/20 SW | Version |
| Order No. | 1909120000 | Accessories, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535804 | |
| Qty. | 20 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. | 9008330000 | Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm |
| GTIN (EAN) | 4032248056286 | |
| Qty. | 1 pc(s). | |

PicoPak



PicoPak: the robust one

- Space-saving in the control cabinet thanks to the slim 6 mm width
- Passive isolator, loop-powered at the input and output
- Increased operating temperature range: -40°C ...+70°C
- Zero and Span adjustment possible

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, Allen-Bradley, white |
| GTIN (EAN) | 4008190203467 | |
| Qty. | 600 pc(s). | |

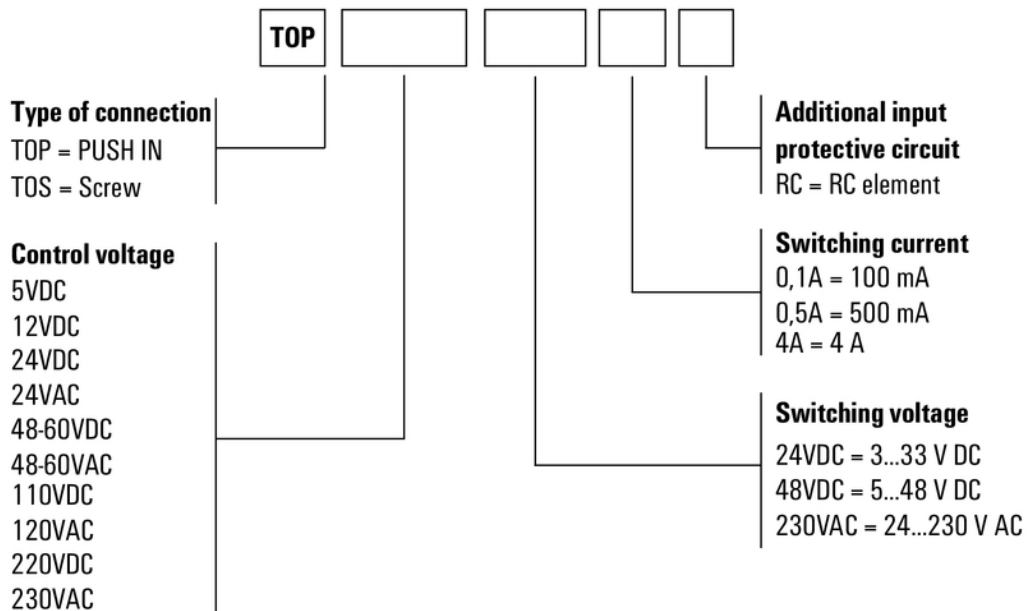
Data sheet

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Drawings

Miscellaneous



Type codes