# MOS 24VDC/8-30VDC 2A

Compact and powerful solid-state relays in terminal block format

Saving space in the panel is becoming more and more important, and requires increasingly compact components. With the compact and powerful MICROOPTO solid-state relays, you benefit from our decades of experience in manufacturing

products in terminal block format. The MICROOPTO family comprises high-quality solid-state relays for application-specific problem solving and delivers high performance in a width of just 6.1 mm. The wide range of accessories from plug-in cross-connections to end-to-end marking solutions makes it particularly versatile. Thanks to international approvals, they can be used worldwide. Reliable function is ensured by the integrated protective suppressor circuit for inputs and outputs.

## General ordering data

| | |
|---|---|
| Version | MICROOPTO, Solid-state relay, Rated control voltage: 24 V DC ±20 % , Rated switching voltage: 8...30 V DC, Continuous current: 2 A, Screw connection |
| Order No. | 8937970000 |
| Type | MOS 24VDC/8-30VDC 2A |
| GTIN (EAN) | 4032248716203 |
| Qty. | 1 items |

## MOS 24VDC/8-30VDC 2A

## Technical data

### Approvals

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

### Dimensions and weights

| Depth | 97 mm | Depth (inches) | 3.8189 inch |
|---|---|---|---|
| Height | 88.1 mm | Height (inches) | 3.4685 inch |
| Width | 6.1 mm | Width (inches) | 0.2402 inch |
| Net weight | 35.81 g | | |

### Temperatures

| Storage temperature | -40 °C...80 °C | Ambient temperature | -25 °C...60 °C |
|---|---|---|---|
| Operating temperature | | Humidity | 5-95% relative humidity, Tu = 55°C, without condensation |

### Probability of failure

| MTTF | 847 a |
|---|---|

### Environmental Product Compliance

| RoHS Compliance Status | Compliant with exemption |
|---|---|
| RoHS Exemption (if applicable/known) | 7a, 7cl |
| REACH SVHC | Lead 7439-92-1 |
| SCIP | d32f8e61-6733-45d6-9062-c95f9903aad6 |

### Control side

| Rated control voltage | 24 V DC ±20 % | Power rating | ≤ 170 mW |
|---|---|---|---|
| Protective circuit | Varistor, Reverse polarity protection | Input frequency | 125 Hz |

### Load side

| Rated switching voltage | 8...30 V DC | Continuous current | 2 A |
|---|---|---|---|
| Max. switching current | 4 A | Load category | LC A |
| Switch-on delay | 0.1 ms | Switch-off delay | <0.5 ms |
| Voltage drop at max. load | ≤ 50 mV | Leakage current | <10 µA |
| Min. switching current | 100 µA | Short-circuit-proof | Yes (thermal cut-out) |
| Load side status indicator | LED green, output switched, LED red, short-circuit /overload at the output | Protective circuit, load side | Varistor, Free-wheeling diode |
| Contact type | 1 NO contact (Intelligent POWER MOS-FET) | max. switching frequency (DC control voltage) | 125 Hz |
| Nominal auxiliary voltage | 8...30 V DC / max. 6 mA | | |

## MOS 24VDC/8-30VDC 2A

## Technical data

### General data

| | |
|---|---|
| Version | with functional earth connection |
| Mounting rail | TS 35 |
| Colour | black |
| UL 94 flammability rating | V-0 |
| UL94 flammability rating component | Component |

| | Housing |
|---|---|
| UL94 flammability rating | V-0 |

### Insulation coordination

| | | | |
|---|---|---|---|
| Rated voltage | 30 V | Pollution severity | 2 |
| Surge voltage category | III | Dielectric strength for control side - load side | 350 Veff / 1 min. |
| Dielectric strength to mounting rail | 350 Veff / 1 min. | Impulse withstand voltage | 500 V (1,2/50 µ) |
| Protection degree | IP20 | | |

### Further details of approvals / standards

| | | | |
|---|---|---|---|
| Certificate No. (DNV) | TAE000033E | Certificate no. (cULus) | E141197 |

### Connection data

| | | | |
|---|---|---|---|
| Wire connection method | Screw connection | Stripping length, rated connection | 7 mm |
| Tightening torque, min. | 0.4 Nm | Tightening torque, max. | 0.6 Nm |
| Clamping range, rated connection | 2.5 mm² | Clamping range, min. | 0.5 mm² |
| Clamping range, max. | 4 mm² | Wire cross-section, solid, min. | 0.5 mm² |
| Wire cross-section, solid, max. | 4 mm² | Wire connection cross section, finely stranded, min. | 0.5 mm² |
| Wire connection cross section, finely stranded, max. | 2.5 mm² | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.5 mm² |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 1.5 mm² | Conductor cross-section, flexible, AEH (DIN 46228-1), min. | 0.5 mm² |
| Conductor cross-section, flexible, AEH (DIN 46228-1), max. | 1.5 mm² | Blade size | 0.6 x 3.5 mm |

### Important note

| | |
|---|---|
| Product information | The cable lengths must not exceed 30 m. |

### 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 | | |

# MOS 24VDC/8-30VDC 2A

## Drawings

### Wiring diagram
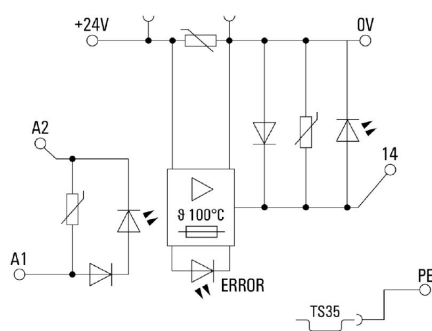


### Graph
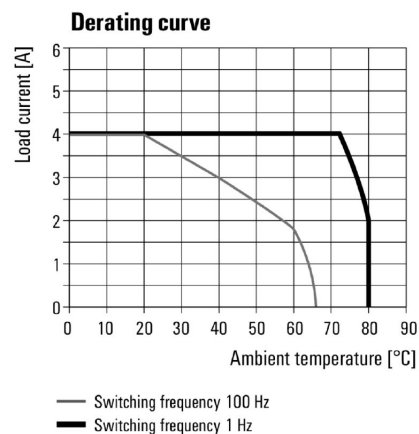


Deratingkurve

### Dimensional drawing
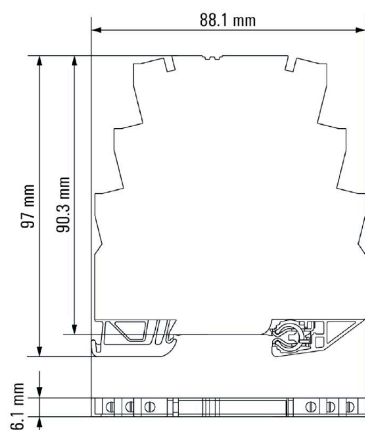
MOS 24VDC/8-30VDC 2A

## 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 |
| GTIN (EAN) | 4050118895568 | thickness (A): 0.6 mm |
| Qty. | 1 ST | |
| 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 ST | |

### MICROOPTO



Compact and powerful solid-state relays in terminal block format
Saving space in the panel is becoming more and more important, and requires increasingly compact components. With the compact and powerful MICROOPTO solid-state relays, you benefit from our decades of experience in manufacturing products in terminal block format. The MICROOPTO family comprises high-quality solid-state relays for applicationspecific problem solving and delivers high performance in a width of just 6.1 mm. The wide range of accessories from plug-in cross-connections to end-to-end marking solutions makes it particularly versatile. Thanks to international approvals, they can be used worldwide. Reliable function is ensured by the integrated protective suppressor circuit for inputs and outputs. The wide MICROOPTO portfolio includes a range of solutions for special loads. For example, for inductive loads up to 10 A at 24 V DC or for DC loads up to 300 V. In addition, there are solutions for decoupling 5 V TTL inputs and outputs, for frequencies up to 550 kHz, as well as the single CO contact version for inverting signals.

### General ordering data

| Type | MOS FEED THROUGH | Version |
|---|---|---|
| Order No. | 8973450000 | MICROOPTO, Feed-through terminal, Screw connection |
| GTIN (EAN) | 4032248799534 | |
| Qty. | 1 ST | |

Creation date 27.11.2025 08:35:31 MEZ

MOS 24VDC/8-30VDC 2A

## 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. | 2749610000 | Mounting tool, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade |
| GTIN (EAN) | 4050118896350 | thickness (A): 0.6 mm |
| Qty. | 1 ST | |

### MICROOPTO

Compact and powerful solid-state relays in terminal block format
Saving space in the panel is becoming more and more important, and requires increasingly compact components. With the compact and powerful MICROOPTO solid-state relays, you benefit from our decades of experience in manufacturing products in terminal block format. The MICROOPTO family comprises high-quality solid-state relays for applicationspecific problem solving and delivers high performance in a width of just 6.1 mm. The wide range of accessories from plug-in cross-connections to end-to-end marking solutions makes it particularly versatile. Thanks to international approvals, they can be used worldwide. Reliable function is ensured by the integrated protective suppressor circuit for inputs and outputs. The wide MICROOPTO portfolio includes a range of solutions for special loads. For example, for inductive loads up to 10 A at 24 V DC or for DC loads up to 300 V. In addition, there are solutions for decoupling 5 V TTL inputs and outputs, for frequencies up to 550 kHz, as well as the single CO contact version for inverting signals.

#### General ordering data

| Type | MOS SUPPLY | Version |
| --- | --- | --- |
| Order No. | 8973460000 | MICROOPTO, Supply module, Screw connection |
| GTIN (EAN) | 4032248799541 | |
| Qty. | 1 ST | |

**Weidmüller** ⋝⋤

## Accessories

### Cross-connections

The distribution or multiplication of a potential to adjoining terminal blocks is realized via a cross-connection. Additional wiring effort can be easily avoided. Even if the poles are broken out, contact reliability in the terminal blocks is still ensured. Our portfolio offers pluggable and screwable cross-connection systems for modular terminal blocks.

### General ordering data

| 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 ST | |

| 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 ST | |

| 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 ST | |

| Type | ZQV 4N/2 SW | Version |
|---|---|---|
| Order No. | 1793970000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233762 | |
| Qty. | 60 ST | |

| 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 ST | |

| 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 ST | |

| 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 ST | |

| Type | ZQV 4N/3 SW | Version |
|---|---|---|
| Order No. | 1794000000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233793 | |
| Qty. | 60 ST | |

| 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 ST | |

| 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 ST | |

## MOS 24VDC/8-30VDC 2A

## Accessories

| 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 ST | |

| Type | ZQV 4N/4 SW | Version |
|---|---|---|
| Order No. | 1794030000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248233915 | |
| Qty. | 60 ST | |

| 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 ST | |

| 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 ST | |

| 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 ST | |

| Type | ZQV 4N/10 SW | Version |
|---|---|---|
| Order No. | 1794060000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248234059 | |
| Qty. | 20 ST | |

| Type | ZQV 4N/20 GE | Version |
|---|---|---|
| Order No. | 1909020000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535644 | |
| Qty. | 20 ST | |

| Type | ZQV 4N/20 RT | Version |
|---|---|---|
| Order No. | 1909150000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535934 | |
| Qty. | 20 ST | |

| Type | ZQV 4N/20 BL | Version |
|---|---|---|
| Order No. | 1909100000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535774 | |
| Qty. | 20 ST | |

| Type | ZQV 4N/20 SW | Version |
|---|---|---|
| Order No. | 1909120000 | W-Series, Cross-connector, 32 A |
| GTIN (EAN) | 4032248535804 | |
| Qty. | 20 ST | |

## MOS 24VDC/8-30VDC 2A

## 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 ST | | |