

# **MICROOPTO** **MOS 5VTTL/24VDC 0,1A**

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



To adjust sensitive TTL signals to the typical voltage level of 24 V DC used in industrial automation applications, the MICROOPTO TTL modules are used. For the protection of the electronics, the sensitive TTL signals require electrical isolation from the 24 V world. To control the opto circuit via the 5 V TTL signal, an additional auxiliary voltage is fed in.

## General ordering data

|            |                                                                                                                                                                                             |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type       | MOS 5VTTL/24VDC 0,1A                                                                                                                                                                        |
| Order No.  | <a href="#">8937920000</a>                                                                                                                                                                  |
| Version    | MICROOPTO, solid-state relais, 1 NO contact (Bipolar transistor), Rated control voltage: 5 V TTL, Rated switching voltage: 24 VDC $\pm 20\%$ , Continuous current: 100 mA, Screw connection |
| GTIN (EAN) | 4032248716159                                                                                                                                                                               |
| Qty.       | 1 pc(s).                                                                                                                                                                                    |

Creation date August 17, 2020 8:09:09 AM CEST

Catalogue status 24.07.2020 / We reserve the right to make technical changes.

**MICROOPTO**  
**MOS 5VTTL/24VDC 0,1A**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Technical data**
**Dimensions and weights**

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Width      | 6.1 mm  | Width (inches)  | 0.24 inch  |
| Height     | 88.1 mm | Height (inches) | 3.468 inch |
| Depth      | 97.8 mm | Depth (inches)  | 3.85 inch  |
| Net weight | 34.8 g  |                 |            |

**Temperatures**

|                             |                                                   |                             |                |
|-----------------------------|---------------------------------------------------|-----------------------------|----------------|
| Humidity                    | 5 - 93% rel. humidity, Tu = 40°C, no condensation | Operating temperature, max. | 60 °C          |
| Operating temperature, min. | -25 °C                                            | Storage temperature, max.   | 60 °C          |
| Storage temperature, min.   | -40 °C                                            | Operating temperature       | -25 °C...60 °C |
| Storage temperature         | -40 °C...60 °C                                    |                             |                |

**Probability of failure**

|      |             |
|------|-------------|
| MTTF | 1,686 Years |
|------|-------------|

**Environmental Product Compliance**

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

**Control side**

|                           |                                                 |                          |                                       |
|---------------------------|-------------------------------------------------|--------------------------|---------------------------------------|
| Rated control voltage     | 5 V TTL                                         | Nominal control current  | < 100 µA                              |
| Power rating              | < 0.5 mW                                        | Cut-in / dropout voltage | 2 V / 1 V DC                          |
| Status indicator          | Green LED                                       | Protective circuit       | Varistor, Reverse polarity protection |
| Nominal auxiliary voltage | 5 V DC ± 5 % / HIGH: max. 9 mA, LOW: max 400 µA |                          |                                       |

**Load side**

|                               |                              |                                               |         |
|-------------------------------|------------------------------|-----------------------------------------------|---------|
| Rated switching voltage       | 24 VDC ±20%                  | Continuous current                            | 100 mA  |
| Load category                 | LC A                         | Switch-on delay                               | < 1.3 µ |
| Switch-off delay              | < 1 µs                       | Voltage drop at max. load                     | < 1 V   |
| Leakage current               | < 20 µA                      | Short-circuit-proof                           | No      |
| Protective circuit, load side | Free-wheeling diode          | max. switching frequency (DC control voltage) | 100 kHz |
| Nominal auxiliary voltage     | 24 V DC ± 20 % / max. 110 mA |                                               |         |

**Contact data**

|              |                                   |
|--------------|-----------------------------------|
| Contact type | 1 NO contact (Bipolar transistor) |
|--------------|-----------------------------------|

**General data**

|                           |       |        |       |
|---------------------------|-------|--------|-------|
| Rail                      | TS 35 | Colour | black |
| UL 94 flammability rating | V-0   |        |       |

**MICROOPTO  
MOS 5VTTL/24VDC 0,1A**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Technical data****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 | 3 kV <sub>eff</sub> / 1 Min. | Dielectric strength to mounting rail                          | 4 kV <sub>eff</sub> / 1 Min. |
| Impulse withstand voltage                        | 4 kV (1.2/50 µs)             | Protection degree                                             | IP20                         |

**Further details of approvals / standards**

|                             |                                                   |                         |            |
|-----------------------------|---------------------------------------------------|-------------------------|------------|
| Standards                   | DIN EN 50178, GL 2003-VI-Abs. 9, IEC 62314, UL508 | Certificate No. (DNVGL) | TAE000033E |
| Certificate No. (GERMLLOYD) | 54853-08                                          | 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 mm <sup>2</sup> | Clamping range, min.                                                                    | 0.5 mm <sup>2</sup> |
| Clamping range, max.                                                                    | 4 mm <sup>2</sup>   | Wire cross-section, solid, min.                                                         | 0.5 mm <sup>2</sup> |
| Wire cross-section, solid, max.                                                         | 4 mm <sup>2</sup>   | Wire connection cross-section, finely stranded, min.                                    | 0.5 mm <sup>2</sup> |
| Wire connection cross section, finely stranded, max.                                    | 2.5 mm <sup>2</sup> | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.5 mm <sup>2</sup> |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 1.5 mm <sup>2</sup> | Conductor cross-section, flexible, AEH (DIN 46228-1), min.                              | 0.5 mm <sup>2</sup> |
| Conductor cross-section, flexible, AEH (DIN 46228-1), max.                              | 1.5 mm <sup>2</sup> | 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 | UNSPSC     | 30-21-18-01 |

**Product information**

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

**Approvals**

Approvals



|      |         |
|------|---------|
| ROHS | Conform |
|------|---------|

### **MICROOPTO MOS 5VTTL/24VDC 0,1A**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
[www.weidmueller.com](http://www.weidmueller.com)

## Technical data

### Downloads

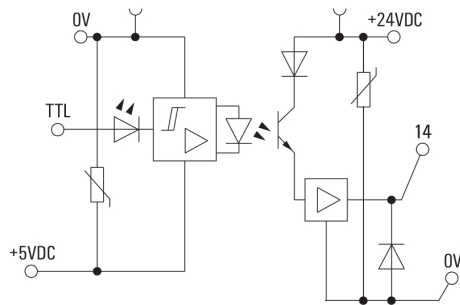
|                                             |                                                                         |
|---------------------------------------------|-------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">EU Konformitätserklärung / EU Declaration of Conformity</a> |
| Brochure/Catalogue                          | <a href="#">CAT 4.2 ELECTR 18/19 EN</a>                                 |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                                            |
| Engineering Data                            | <a href="#">STEP</a>                                                    |
| User Documentation                          | <a href="#">Beipackzettel / Package Insert – multilingual</a>           |

## MICROOPTO MOS 5VTTL/24VDC 0,1A

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

### Wiring diagram



### Dimensional drawing

