

**OT450521**
**OPTICAL SENSORS • DIFFUSE REFLECTION SENSORS WITH BACKGROUND SUPPRESSION**

sensor optical, diffuse-reflection sensor, 56x32x18mm, Sn: 30-400, 10-30V DC, 1x PNP/NPN Push-pull, IO-Link, Connector M12 4pin, IP67, Plastic ASA+PMMA, 1kHz, Background suppression, Polarity free red light, Point, Teach-In


**MECHANICAL FEATURES**

|                                             |                  |
|---------------------------------------------|------------------|
| Ambient temperature                         | -25 °C ... 60 °C |
| Degree of protection (IP)                   | IP67             |
| Design                                      | Cuboid           |
| Housing material                            | Plastic ASA      |
| Material of optical surface                 | PMMA             |
| Reflector included in the scope of delivery | -                |
| Sensor height                               | 56.2 mm          |
| Sensor length                               | 32.2 mm          |
| Sensor width                                | 18 mm            |
| Volume                                      | Medium           |

**ELECTRICAL FEATURES**

|                               |                     |
|-------------------------------|---------------------|
| Adjustment range              | 30 mm ... 600 mm    |
| Analog output 0 mA ... 20 mA  | -                   |
| Analog output 0 V ... 10 V    | -                   |
| Analog output -10 V ... +10 V | -                   |
| Analog output 4 mA ... 20 mA  | -                   |
| Decay time                    | 0.49 ms             |
| Interference suppression      | +                   |
| IO-Link compatible            | +                   |
| Max. switching distance       | 400 mm              |
| Min. switching distance       | 30 mm               |
| No-load current               | 30 mA               |
| Number of pins                | 4                   |
| Number of switching outputs   | 1                   |
| Operating voltage             | 10 V ... 30 V       |
| Rated switching current       | 100 mA              |
| Rated switching distance      | 400 mm              |
| Response time                 | 0.49 ms             |
| Reverse polarity protection   | +                   |
| Scanning function             | Light-/dark-on mode |
| Sensing range                 | 30 mm ... 400 mm    |
| Setting procedure             | Teach-In            |

## ELECTRICAL FEATURES

|                               |               |
|-------------------------------|---------------|
| Short-circuit protection      | +             |
| Switching frequency           | 1000 Hz       |
| Type of electrical connection | Connector M12 |
| Type of switching function    | Push-pull     |
| Type of switching output      | PNP/NPN       |
| Voltage drop                  | 3 V           |
| Voltage type                  | DC            |
| With LED display              | +             |
| With LED display (operation)  | +             |
| With LED display (signal)     | +             |
| With other analog output      | -             |
| With time function            | -             |

## OPTICAL FEATURES

|                           |                         |
|---------------------------|-------------------------|
| Light source              | Polarity free red light |
| Wavelength of the sensor  | 630 nm                  |
| Triangulation             | Background suppression  |
| Light beam form           | Point                   |
| Background suppression    | +                       |
| Small light beam diameter | +                       |

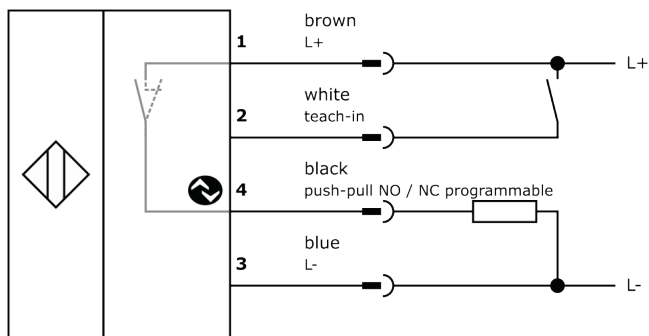
## Other

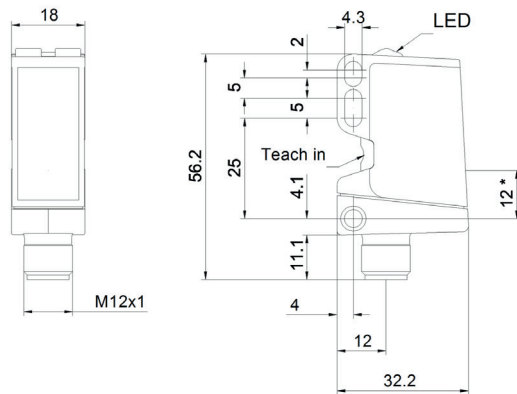
|                      |                           |
|----------------------|---------------------------|
| Packaging dimensions | 77.0mm x 25.0mm x 123.0mm |
| Shipping weight      | 0.04kg                    |
| Tariff code          | 85365019                  |

## Classification

|                   |          |
|-------------------|----------|
| ipf product group | 100      |
| eClass 8.0        | 27270904 |
| eClass 9.0        | 27270904 |
| eClass 9.1        | 27270904 |
| ETIM-5.0          | EC002719 |
| ETIM-6.0          | EC002719 |
| ETIM-7.0          | EC002719 |

## Connection



**Dimensional drawing****Installation**

Mounting / installation may only be carried out by a qualified electrician!

**Disposal****Software**

Any software, drivers or IODD files that may be required to operate your device can be downloaded free of charge from our homepage: [www.ipf-electronic.com](http://www.ipf-electronic.com)

**Safety warnings**

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.

Never use these devices in applications where the safety of a person depends on their functionality.

LED lighting systems can generate intensive UV radiation, which can damage your eyes in case of improper use. The manufacturer cannot be held responsible for damages that result from improper use or connection.