

**OS106170**

**HIGH-PERFORMANCE THROUGH-BEAM SENSORS • THROUGH-BEAM SENSORS TRANSMITTERS**

Optical sensors function contactlessly. They detect objects independent of their characteristics (e.g., shape, color, surface structure, material). The basic operating principle is based on the transmission and reception of light. There are three different versions: 1. The through-beam sensor consists of two separate devices, a transmitter and a receiver that are aligned with one another. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. With the retro-reflective sensor, the transmitter and receiver are located in one device. The emitted light beam is reflected back to the receiver by a reflector that is to be mounted opposite the device. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. 3. With the diffuse reflection sensor, the transmitter and receiver are in one device. The emitted light beam is reflected by the object that is to be detected. As soon as the receiver detects the reflected light, the switching output integrated in the device changes its status.



**MECHANICAL DATA**

|                             |                |
|-----------------------------|----------------|
| Ambient temperature (MAX)   | 60 °C          |
| Ambient temperature (MIN)   | -25 °C         |
| Degree of protection (IP)   | IP67           |
| Housing design              | Cylinder plain |
| Housing material            | Plastic        |
| Material of optical surface | Plastic        |
| Sensor diameter             | 10 mm          |
| Sensor length               | 45 mm          |
| Shock resistance            | 30 g           |
| Storage temperature         | 80 °C          |
| Storage temperature         | -40 °C         |
| Vibration resistance        | 55 Hz          |

**ELECTRICAL DATA**

|                               |              |
|-------------------------------|--------------|
| Connection to amplifier       | Yes          |
| Rated switching distance      | 0 mm         |
| Transmitting power            | 0.35 W       |
| Type of electrical connection | Connector M8 |
| Type of input voltage         | DC           |
| Voltage type                  | DC           |
| With time function            | No           |

**OPTICAL DATA**

|                          |                |
|--------------------------|----------------|
| Angle of beam spread     | 6 °            |
| Light beam form          | Point          |
| Light source             | Infrared light |
| Wavelength of the sensor | 880 nm         |

## OTHER DATA

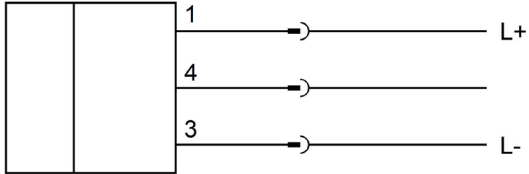
Heavy-duty devices

Yes

Scope of delivery of the one-way system

Transmitter

## CONNECTION



**Colors:** 1 = BN (brown), 3 = BU (blue), 4 = BK (black)

**Functions:** 1 = L+, 3 = L-, 4 = n. c.

## DIMENSIONAL DRAWING

### INSTALLATION



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

### DISPOSAL



### 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.