

OS050075 / OE050175

optical sensors
through-beam sensors

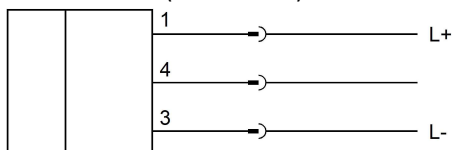
- / stainless steel housing
- / high degree of protection IP67
- / status LED for switching output and functional reserve
- / connection via M8-connector



subminiature devices visible red light

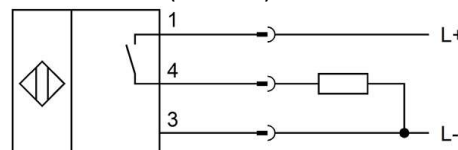
| TECHNICAL DATA | OS050075 (transmitter) | OE050175 (receiver) |
|---|---------------------------------------|---------------------|
| sensing range max. | 600mm | |
| operating range | 0 ... 500mm | |
| transmitting element (transmitter OS050075) | LED, red light | - |
| wavelength (transmitter OS050075) | 630nm | - |
| light spot diameter (at 200mm) | 50mm | - |
| operating voltage U_B | 10 ... 30V DC | |
| residual ripple | ≤ 10% | |
| current consumption (w/o load) | ≤ 8mA | ≤ 10mA |
| output signal | - | pnp, no |
| output current (max. load) | - | ≤ 100mA |
| voltage drop (max. load) | - | ≤ 2V DC |
| sampling frequency | - | ≤ 1kHz |
| status LED (functional reserve) | - | LED green |
| status LED (switching state) | - | LED yellow |
| short-circuit protection | - | + |
| reverse polarity protection | + | + |
| housing material | stainless steel V2A | |
| optics material | PMMA | |
| degree of protection (EN 60529) | IP 67 | |
| dimensions | M5 x 0.5 | |
| length (thread / complete) | 30mm / 35.75mm | |
| operating temperature | -20 ... +65°C | |
| connection | 300mm PUR cable / M8-connector, 3-pin | |
| connection accessories | e.g. VK200075 | |
| mounting accessories (mounting holder) | AY000115 | |

Connection (transmitter)



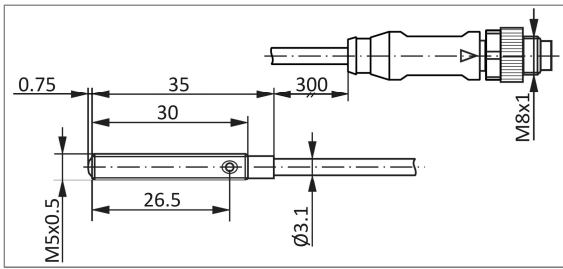
Colors: 1 = BN (brown), 3 = BU (blue), 4 = BK (black)
Functions: 1 = L+, 3 = L-, 4 = n.c.

Connection (receiver)



Colors: 1 = BN (brown), 3 = BU (blue), 4 = BK (black)
Functions: 1 = L+, 3 = L-, 4 = PNP NO

Dimensional drawing



Installation and environment

Two nuts are included to attach the device.

The maximum tightening torque of 1Nm must not be exceeded!

Coverings on the optics impair the function. Please install the device in such a way that dust cannot be deposited or liquids can get on the optics. The device should be accessible for cleaning.

From time to time, the optics should be cleaned with a soft cloth moistened with soapy water.

Cable

The connecting cable between sensor and M8-connector should be laid as fixed as possible or strain-relieved.

Installation and alignment

1. First mount the receiver (OE) at the desired position.
2. Then mount the transmitter (OS) temporarily at its position, the maximum distance for a reliable operation is 500mm.
3. Now align the optical axis of the transmitter to that of the receiver. When the light path is free, the green LED of the receiver must light up.
4. Mount the transmitter finally.
5. When the light beam is interrupted, the switching output of the receiver must now switch reliably – the LEDs don't light up.

Notes

The sensitivity is non-adjustable and can only be changed using the IO-Link interface.

When the light beam is interrupted, the switching output (dark-on mode) of the receiver switches and the LEDs extinguish.

Reliable operation is ensured if the green LED lights up with free light path and extinguishes when the switching output switches.

If the light path is free and only the yellow LED lights up or no LED lights up, either the distance between transmitter and receiver is too large, the alignment is incorrect or the optics are soiled. Realign the devices and / or clean the optics.

SAFETY WARNINGS:

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

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