

OS050070

OPTICAL 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	0 °C ... 55 °C
Degree of protection (IP)	IP67
Housing design	Cylinder, screw-thread
Housing material	Stainless steel V2A
Material of optical surface	Glass
Max. tightening torque	1.5 Nm
Sensor length	45 mm
Thread length	30 mm
Thread pitch	0.5 mm
Thread size, metric	5

ELECTRICAL DATA

Clock frequency of the transmitter	1 kHz
Function test	Yes
IO-Link compatible	No
Measuring range	0.25 m
No-load current	10 mA
No-load current, transmitter	10 mA
Number of pins	3
Operating voltage	10 V ... 30 V
Rated switching distance	250 mm
Readiness delay	20 ms
Residual ripple	20 %
Reverse polarity protection	Yes
Type of electrical connection	Connector M8
Type of input voltage	DC
Voltage type	DC

ELECTRICAL DATA

With time function

No

OPTICAL DATA

Light beam form

Point

Light source

Infrared light

Wavelength of the sensor

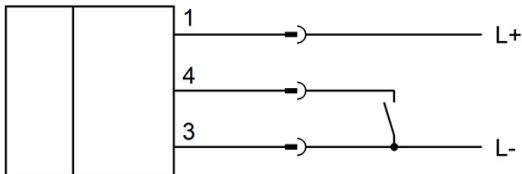
880 nm

OTHER DATA

Scope of delivery of the one-way system

Transmitter

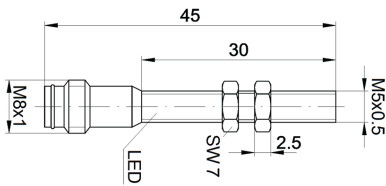
CONNECTION



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

Functions: 1 = L+, 3 = L-, 4 = test

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!