

**OY200120**
**OPTICAL SENSORS • RING LIGHT BARRIERS**

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 ... 60 °C
Degree of protection (IP)	IP67
Housing coating	Chromium-plated
Housing design	Ring-shaped
Housing material	PA 6.6 (synthetic)
Material of optical surface	Plastic
Sensor diameter	20.6 mm
Sensor height	84.5 mm
Sensor length	20 mm
Sensor width	60 mm

**ELECTRICAL DATA**

IO-Link compatible	No
Max. output current	200 mA
No-load current	30 mA
Number of pins	3
Operating voltage	10 V ... 35 V
Scanning function	Dark switching
Setting procedure	Manual adjustment
Short-circuit-proof	Yes
Type of electrical connection	Connector M12
Type of input voltage	DC
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	Yes
With time function	Yes

## OPTICAL DATA

Light beam form

Point

Resolution

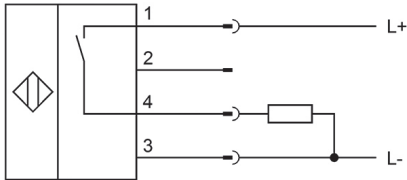
1.5  $\mu\text{m}$

## OTHER DATA

Scope of delivery of the one-way system

Transmitter and receiver

## CONNECTION



**Colors:** 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)

**Functions:** 1 = L+, 2 = n. c., 3 = L-, 4 = PNP NO

## 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!