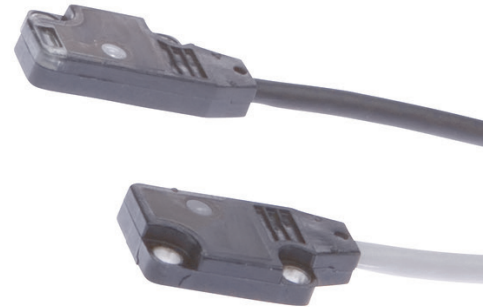


## OYQ30203

### OPTICAL SENSORS • THROUGH-BEAM SENSORS

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.



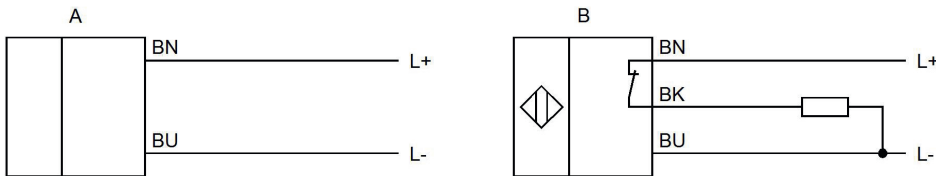
#### TECHNICAL DATA

Alarm output	No
Ambient temperature	-25 °C ... 55 °C
Cable length	2 m
Connection to amplifier	No
Decay time	0.5 ms
Degree of protection (IP)	IP67
Function test	No
Heavy-duty devices	No
Housing design	Cuboid
Housing material	Plastic PET
Increased ambient temperatures >70°C	No
Input (TeachIn)	No
Light beam form	Point
Light source	Polarity free red light
Material of cable sheath	PVC
Material of optical surface	Polyallylate
Max. output current	50 mA
Measuring range	1 m
No-load current, receiver	15 mA
No-load current, transmitter	10 mA
Number of wires	3
Operating voltage	12 V ... 24 V
Rated switching distance	1000 mm
Relative repeat accuracy	50 µm
Residual ripple	10 %
Response time	0.5 ms
Reverse polarity protection	Yes

## TECHNICAL DATA

Scanning function	Light switching
Scope of delivery of the one-way system	Transmitter and receiver
Sensor height	10 mm
Sensor length	3.5 mm
Sensor width	14.5 mm
Shock resistance	50 G
Short-circuit-proof	Yes
Storage temperature	70 °C
Storage temperature	-30 °C
Switching frequency	1000 Hz
Type of electrical connection	Cable
Type of input voltage	DC
Type of switching function	Breaker contact (NC)
Type of switching output	PNP
Vibration resistance	500 Hz
Voltage drop	2 V
Voltage type	DC
Wavelength of the sensor	680 nm
Wire cross section	0.1 mm <sup>2</sup>
With LED display	Yes
With LED display (functional reserve)	Yes
With LED display (signal)	Yes
With time function	No

## CONNECTION



**Colors:** A: BN (brown), BU (blue)

B: BN (brown), BU (blue), BK (black) **Functions:** A: BN = L+, BU = L-

B: BN = L+, BU = L-, BK = PNP NC

## 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.