

## PE430470

### LASER SENSORS • THROUGH-BEAM SENSORS RECEIVERS

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)	65 °C
Ambient temperature (MIN)	-25 °C
Degree of protection (IP)	IP67
Housing design	Cuboid
Housing material	Plastic
Material of optical surface	PMMA
Reflector included in the scope of delivery	No
Sensor height	43 mm
Sensor length	32.5 mm
Sensor width	14.8 mm

#### ELECTRICAL DATA

Decay time	0.5 ms
Max. output current	100 mA
Measuring range	8 m
No-load current	20 mA
No-load current, receiver	20 mA
Number of pins	4
Operating voltage (MAX)	30 V
Operating voltage (MIN)	10 V
Rated switching distance	8000 mm
Response time	0.5 ms
Reverse polarity protection	Yes
Scanning function	Light-/dark-on mode
Short-circuit-proof	Yes
Switching frequency	1000 Hz
Type of electrical connection	Connector M8

## ELECTRICAL DATA

Type of input voltage	DC
Type of switching function	Anticoincidence
Type of switching output	PNP
Voltage drop	1.8 V
Voltage type	DC
With LED display	Yes
With time function	No

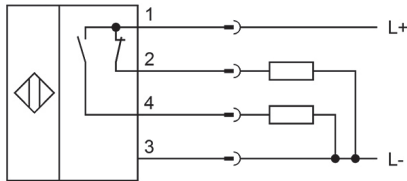
## OPTICAL DATA

Light beam form	Point
Light source	Laser diode, red light
Wavelength of the sensor	650 nm

## OTHER DATA

Scope of delivery of the one-way system	Receiver
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## CONNECTION



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

**Functions:** 1 = L+, 2 = pnp/nc, 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!

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