

PE12E136

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)	50 °C
Ambient temperature (MIN)	-20 °C
Aperture diameter	1 mm
Degree of protection (IP)	IP67
Heavy soiling	Yes
Housing coating	Nickel-plated
Housing design	Cylinder, screw-thread
Housing material	Brass
Material of optical surface	Glass
Storage temperature	85 °C
Storage temperature	-20 °C
Thread length	46 mm
Thread pitch	1 mm
Thread size, metric	12

ELECTRICAL DATA

Analogue output 0 V ... 10 V	Yes
Max. output current	100 mA
Max. switching distance	8 m
Measuring range	5 m
No-load current	30 mA
No-load current, receiver	30 mA
Number of pins	4
Number of semiconductor outputs with signaling function	1
Operating voltage (MAX)	32 V
Operating voltage (MIN)	12 V
Rated control supply voltage U_s at DC (MAX)	32 V

ELECTRICAL DATA

Rated control supply voltage U_s at DC (MIN)	12 V
Rated switching distance	5000 mm
Relative repeat accuracy	20 μ m
Reverse polarity protection	Yes
Short-circuit-proof	Yes
Suitable for safety functions	No
Switching frequency	25000 Hz
Type of analog output	0 V ... 10 V
Type of electrical connection	Connector M12
Type of input voltage	DC
Type of switching output	PNP/NPN
Voltage drop	2 V
Voltage type	DC
With time function	No

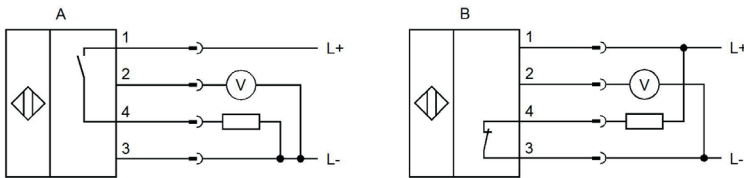
OPTICAL DATA

Filter	Interference filter
Light beam form	Point
Resolution	20 μ m

OTHER DATA

Scope of delivery of the one-way system	Receiver
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CONNECTION

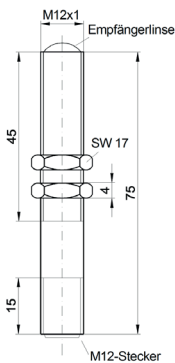


Colors: A: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)

B: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black) **Functions:** A: 1 = L+, 2 = 0-10V, 3 = L-, 4 = PNP NO

B: 1 = L+, 2 = 0-10V, 3 = L-, 4 = NPN NC

DIMENSIONAL DRAWING



INSTALLATION

DISPOSAL



Mounting / Installation may only be carried out by a qualified electrician!



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.