

## PY98E158

### LASER SENSORS • LINE 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.



#### MECHANICAL DATA

Ambient temperature (MAX)	45 °C
Ambient temperature (MIN)	5 °C
Degree of protection (IP)	IP67
Housing coating	Anodised
Housing design	Cuboid
Housing material	Aluminium
Material of optical surface	Plastic
Reflector included in the scope of delivery	No
Sensor height	16 mm
Sensor length	60 mm
Sensor width	35 mm
With interchangeable lens	No

#### ELECTRICAL DATA

Alarm output	No
Equipment protection class	Protection class 3
High repeat accuracy	No
Interference suppression	No
Max. output current	150 mA
Max. switching distance	40 mm
No-load current	30 mA
Number of pins	3
Operating voltage (MAX)	30 V
Operating voltage (MIN)	10 V
Power consumption	0.9 VA
Pre-failure message	No
Reaction time	10 ms

**ELECTRICAL DATA**

Reverse polarity protection	Yes
Sensing range (MAX)	40 mm
Sensing range (MIN)	20 mm
Setting procedure	Manual adjustment
Suitable for safety functions	No
Type of electrical connection	Connector M8
Type of switching function	Normally closed contact/normally open contact
Type of switching output	PNP/NPN
Voltage drop	2.5 V
Voltage type	DC
With communication interface, RS-232	No
With LED display	Yes
With monitoring function of downstream devices	No
With other analog output	No
With restart lock	No
With time function	Yes

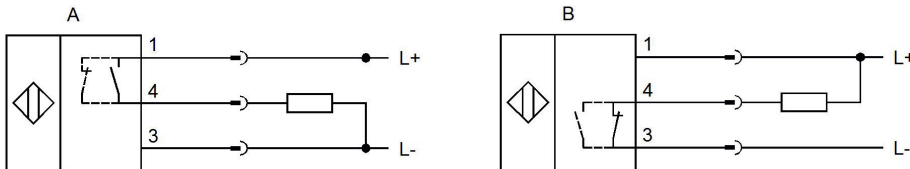
**OPTICAL DATA**

Laser protection class	1M
Light beam form	Point
Light exit	Axial
Light source	Laser diode, infrared light
Light spot	3.14 mm <sup>2</sup>
Line scanner	No
Min. object size	2 mm
Small light beam diameter	No
Wavelength of the sensor	850 nm

**OTHER DATA**

Feeding technology	Yes
For gloss queries	No
Is line scan camera	No

**CONNECTION**



**Colors:** A: 1 = BN (brown), 3 = BU (blue), 4 = BK (black)  
 B: 1 = BN (brown), 3 = BU (blue), 4 = BK (black)  
**Functions:**

**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.