

PT650027

Laser sensors • Distance measurement

sensor laser, diffuse-reflection sensor, 65x50x21mm, Sn:50-300mm, Triangulation, 12-28V DC, 4-20mA, Connector M12 5pin, IP67, Zinc die-cast Anodised+Glass, Laser diode, red light, Point, Teach-In



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.

Electrical features

| | |
|-------------------------------|---------------|
| Response/decay time | 0.9ms |
| Display | LED display |
| Resolution | 0.33mm |
| Type of analog output | 4 - 20mA |
| Type of electrical connection | Connector M12 |
| Setting procedure | Teach-In |
| Short-circuit protection | Yes |
| No-load current | 100mA |
| Linearity deviation | 0,03 - 1mm |
| Number of pins | 5 |
| Relative linearity deviation | 0.33% |
| Reverse polarity protection | Yes |
| Measurement principle | triangulation |
| Operating voltage (DC) | 12 - 28V |
| Measuring range | 50 - 300mm |

Mechanical features

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|--------------------------------|---------------|
| Design | Cuboid |
| Width | 20.6mm |
| Height | 65mm |
| Length | 50mm |
| Surface | teflon coated |
| Degree of protection (IP) | IP67 |
| Volume | Medium |
| Active area material of sensor | glass |
| Housing material | Zinc die-cast |
| Ambient temperature | 0 - 50°C |

Optical features

| | |
|------------------------------------|------------------------|
| Teach-in limits distance | 5mm |
| Laser class | Class 2 |
| Light source | Laser diode, red light |
| Light beam form | Point |
| Wavelength of the sensor | 650nm |
| Light spot diameter at focal point | 1mm |

Other features

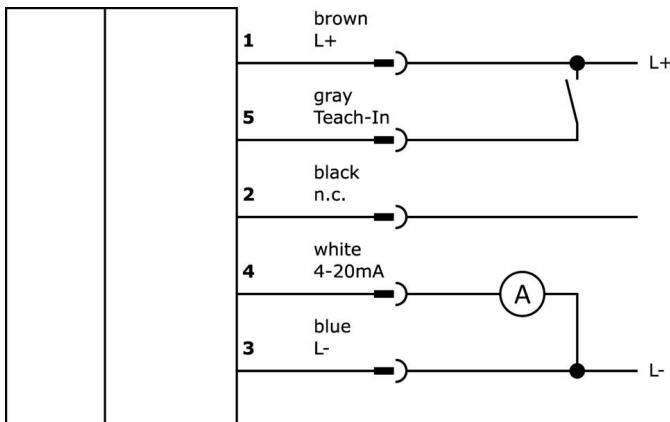
| | |
|---------------------------|--------------------------------|
| Reference medium / object | Material with 90% reflectivity |
| Ambient temperature | 0 - 50°C |

Classification

| | |
|--------|----------------------------------|
| ETIM 8 | EC001825 Optical distance sensor |
|--------|----------------------------------|

More

| | |
|-----------------------|---|
| IPF Product Group | 169 laser diffuse reflection sensors (analog) |
| packaging dimensions | 160 x 99 x 60 mm |
| gross weight | 190 g |
| Customs tariff number | 85365019 |
| WEEE number | 40951076 |
| OzDS-compliant | Yes |
| POP-compliant | Yes |
| Reach-compliant | Yes |
| RoHS-compliant | Yes |

Connection**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.

For suitable connection and mounting accessories, please refer to our website www.ipf-electronic.com.

Dimensional drawing