

PT140400

Laser sensors • Diffuse reflection sensors with background suppression

Sensor laser, diffuse reflection sensor, 27x16x12mm, Sn: 22-130, 11-30V diagnostic coverage, 2x PNP NC/NO, cable tail 2m PUR (polyurethane), IP67, plastic ASA+PMMA, 2kHz, laser diode, red light, dot, manual setting



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

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|-------------------------------|---|
| Number of switching outputs | 2 |
| Display | LED display |
| Resolution | 0.2mm |
| Type of switching function | Normally closed contact/normally open contact |
| Type of electrical connection | Cable |
| Type of switching output | PNP |
| Rated switching current | 100mA |
| Setting procedure | Manual adjustment |
| Short-circuit protection | Yes |
| Laser power | 1mW |
| No-load current | 30mA |
| Switching distance | 22 - 130mm |
| Switching frequency | 2000Hz |
| Voltage drop | 1.8V |
| Scanning function | Light-/dark-on mode |
| Reverse polarity protection | Yes |
| Absolute repeat accuracy | 0.2mm |
| Operating voltage (DC) | 11 - 30V |

Mechanical features

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|--------------------------------|---------------------|
| Number of cores | 4 |
| Conductor cross-section | 0.34mm ² |
| Design | Cuboid |
| Width | 12mm |
| Height | 27mm |
| Cable length | 2m |
| Length | 16.3mm |
| Maximum tightening torque | 0.5Nm |
| Degree of protection (IP) | IP67 |
| Active area material of sensor | Plastic (PMMA) |
| Housing material | Plastic ASA |
| Material of cable sheath | Plastic (PUR) |
| Ambient temperature | -10 - 50°C |

Optical features

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|---|------------------------|
| 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 | 0.2mm |
| Focus distance | 40mm |
| Light spot diameter at the start of the measuring range | 2.5mm |
| Light spot diameter at the end of the measuring range | 7mm |

Other features

| | |
|---------------------------|--------------------------------|
| Operational mode | Background suppression |
| Reference medium / object | Material with 90% reflectivity |

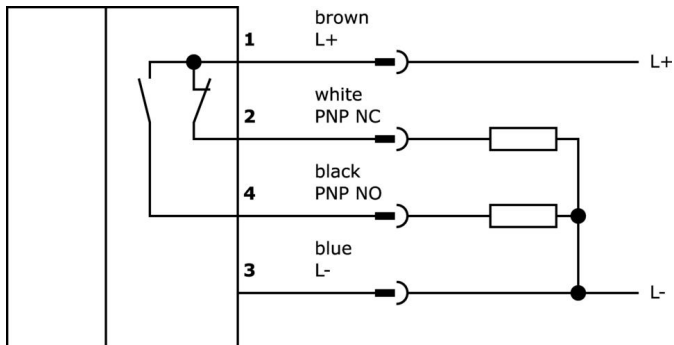
Classification

| | |
|--------|---|
| ETIM 8 | EC002719 Photoelectric proximity switch with background suppression |
|--------|---|

More

| | |
|-----------------------|------------------|
| IPF Product Group | 160 laser sensor |
| packaging dimensions | 123 x 77 x 25 mm |
| gross weight | 60 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



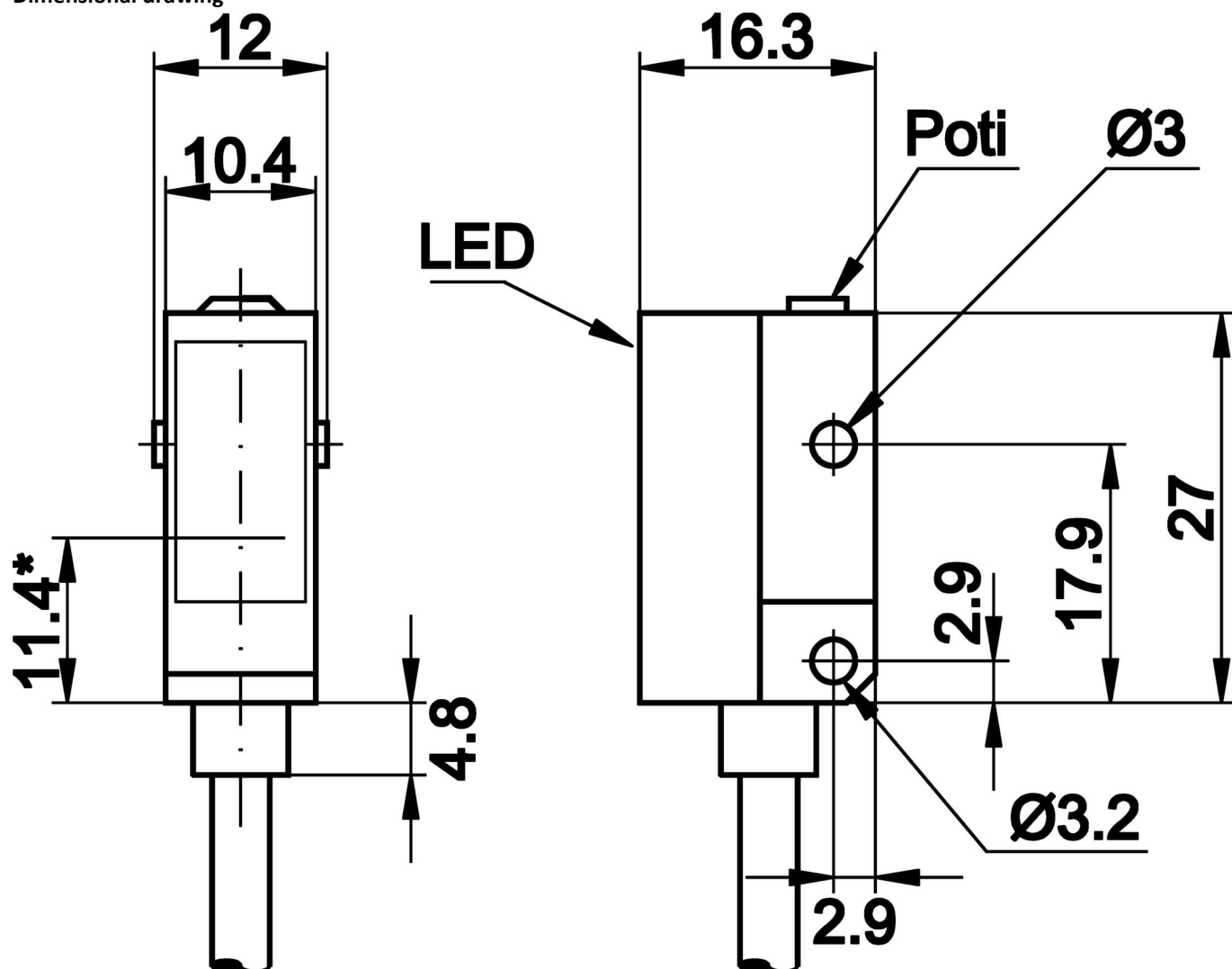
Safety warnings

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



*** Senderachse**