

PT310370

Laser sensors • Diffuse reflection sensors with background suppression

Sensor laser, diffuse reflection sensor, 42x20x11mm, Sn: 10-500, 10-30V DC, PNP programmable/configurable, M8 plug-in connector 4-pin, IP67, plastic, ABS+PMMA, 2kHz, laser diode, red light, dot, manual setting

- / plastic housing
- / switching output no/nc switchable
- / M8 plug connection



Laser class 1 background suppression

Optical sensors operate contactless. They detect objects regardless of their nature (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmission and reception of light. Three versions are distinguished: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. When the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. In the case of the reflex light barrier, the transmitter and receiver are located in one device. The transmitted light beam is reflected onto the receiver by a reflector to be mounted opposite. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. With diffuse reflection sensors, the transmitter and receiver are located in one device. The transmitted light beam is reflected by the object 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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|-------------------------------|--|
| Response/decay time | 0.25 ms |
| Number of switching outputs | 1 |
| Display | LED display |
| Type of switching function | Programmable/configurable |
| Type of electrical connection | Connector M8 |
| Type of switching output | PNP |
| Rated switching current | 100 mA |
| Setting procedure | Manual adjustment Tornillo de ajuste |
| Short-circuit protection | Yes |
| No-load current | 35 mA |
| Number of pins | 4 |
| Reaction time | 0.25 ms |
| Residual ripple | 10 % |
| Switching distance | 10 - 500 mm |
| Switching frequency | 2000 Hz |
| Voltage drop | 2 V |
| Scanning function | Light-/dark-on mode |
| Reverse polarity protection | Yes |
| Decay time | 0.25 ms |
| Operating voltage (DC) | 10 - 30 V |
| Dead zone | 0 - 10 |

Mechanical features

| | |
|--------------------------------|----------------|
| Design | Cuboid |
| Width | 10.8 mm |
| Height | 42.3 mm |
| Storage temperature | -40 - 70 °C |
| Length | 19.5 mm |
| Maximum tightening torque | 0.4 Nm |
| Shock resistance, acceleration | 30 g |
| Shock resistance, pulse time | 11 ms |
| Degree of protection (IP) | IP67 |
| Active area material of sensor | Plastic (PMMA) |
| Housing material | Plastic (ABS) |
| Vibration resistance Amplitude | 0.5 mm |
| Vibration resistance Frequency | 10 - 55 Hz |
| Ambient temperature | -20 - 55 °C |

Optical features

| | |
|--------------------------|------------------------|
| Laser class | Class 1 |
| Light source | Laser diode, red light |
| Light beam form | Point |
| Triangulation | Background suppression |
| Wavelength of the sensor | 650 nm |

Other features

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

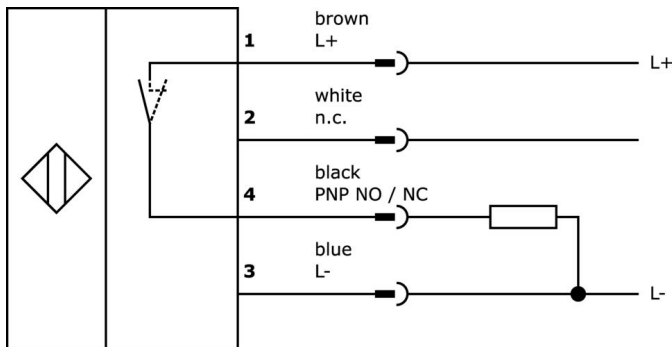
Classification

| |
|--------|
| ETIM 8 |
|--------|

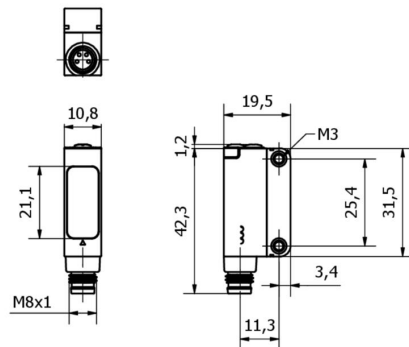
More

| | |
|-----------------------|-------------------|
| IPF Product Group | 160 laser sensor |
| packaging dimensions | 160 x 123 x 15 mm |
| gross weight | 13 g |
| Customs tariff number | 85365019 |
| WEEE number | 40951076 |
| POP-compliant | Yes |
| Reach-compliant | Yes |
| RoHS-compliant | Yes |

Connection



Dimensional drawing



Extract accessories program

VK003071



Cable socket, Angular, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 30V, -40-85°C, M8 Female (socket) 4pin, IP67, Brass

VK003075



Cable socket, Straight, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 30V, -40-85°C, M8 Female (socket) 4pin, IP67, Brass

VY000004



DC power supply, sensor tester, 120x26x72mm, 18V, 0.04A, Spring clamp connection 4pin, IP20, Plastic

NG530002



DC power supply, single-phase, 99x114x22mm, 24V, 0.1A, Number of relay outputs 2, 100-264V AC 50Hz, 100-264V AC 60Hz, Screw connection, IP20, Plastic, Stabilized, Output voltage, pulsed

VK200371



Connection cable, 2m, M8 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, 30V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

VK200375



Connection cable, 2m, M8 Female (socket) 4pin Straight, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, 30V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

AY000118



accessories sensor, Fixture kit, Metal, ball joint

AO000474



accessories optical, Mounting angle bracket, 43x13x22mm, Mounting material for sensor, brackets, Steel

You can find further accessories on our homepage



Installation

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



Disposal

WEEE number according to § 6 para. 3 ElektroG: 40951076

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.