# PT660021

## Laser sensors ● Distance measurement

Sensor laser, diffuse reflection sensor, 65x50x21mm, Sn:30-130mm, resolution 60µm, triangulation, 12-28V DC, 0-10V/4-20mA, M12 connector 8-pin, IP67, zinc diecast+glass, laser diode, red light, dot, teach-in


Optical sensors work contactless. They detect objects, regardless of their properties (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmitter and receiver of light. There are three different versions: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. in 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. 3. the diffuse reflection sensor has a transmitter and receiver 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**

| | |
|---|---|
| Response/decay time | 0.9 ms |
| Display | LED display |
| Resolution | 0.06 mm |
| Type of alarm output | PNP |
| Type of analog output | 0 - 10V \| 4 - 20mA |
| Type of electrical connection | Connector M12 |
| Rated switching current | 100 mA |
| Setting procedure | Teach-In |
| Short-circuit protection | Yes |
| No-load current | 100 mA |
| Number of pins | 8 |
| Relative linearity deviation | 0.2 % |
| Reverse polarity protection | Yes |
| Decay time | 0.9 ms |
| Absolute linearity deviation | 0.2 mm |
| Measurement principle | triangulation |
| Operating voltage (DC) | 12 - 28 V |
| Measuring range | 30 - 130 mm |

**Mechanical features**

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

**Optical features**

| | |
|---|---|
| Teach-in limits distance | 3 mm |
| Laser class | Class 2 |
| Light source | Laser diode, red light |
| Light beam form | Point |
| Wavelength of the sensor | 650 nm |
| Light spot diameter at focal point | 0.5 mm |

**Other features**

| | |
|---|---|
| Reference medium / object | Material with 90% reflectivity |

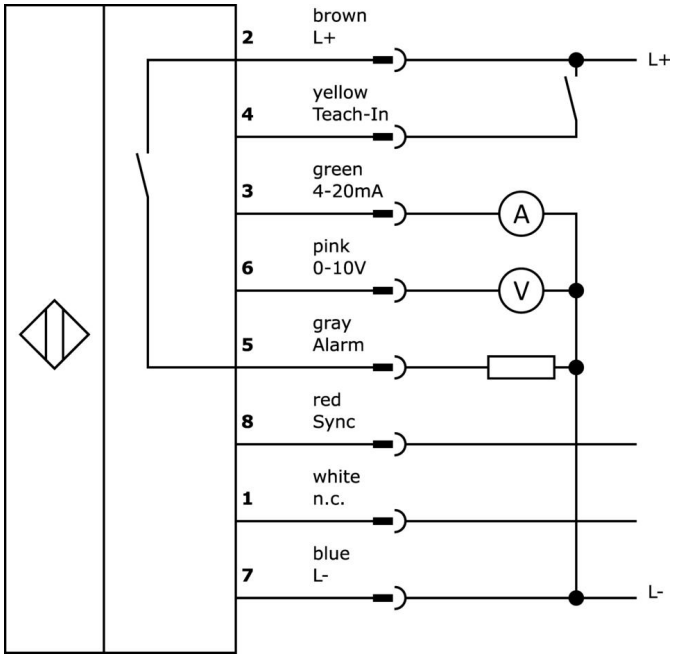
**Classification**

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

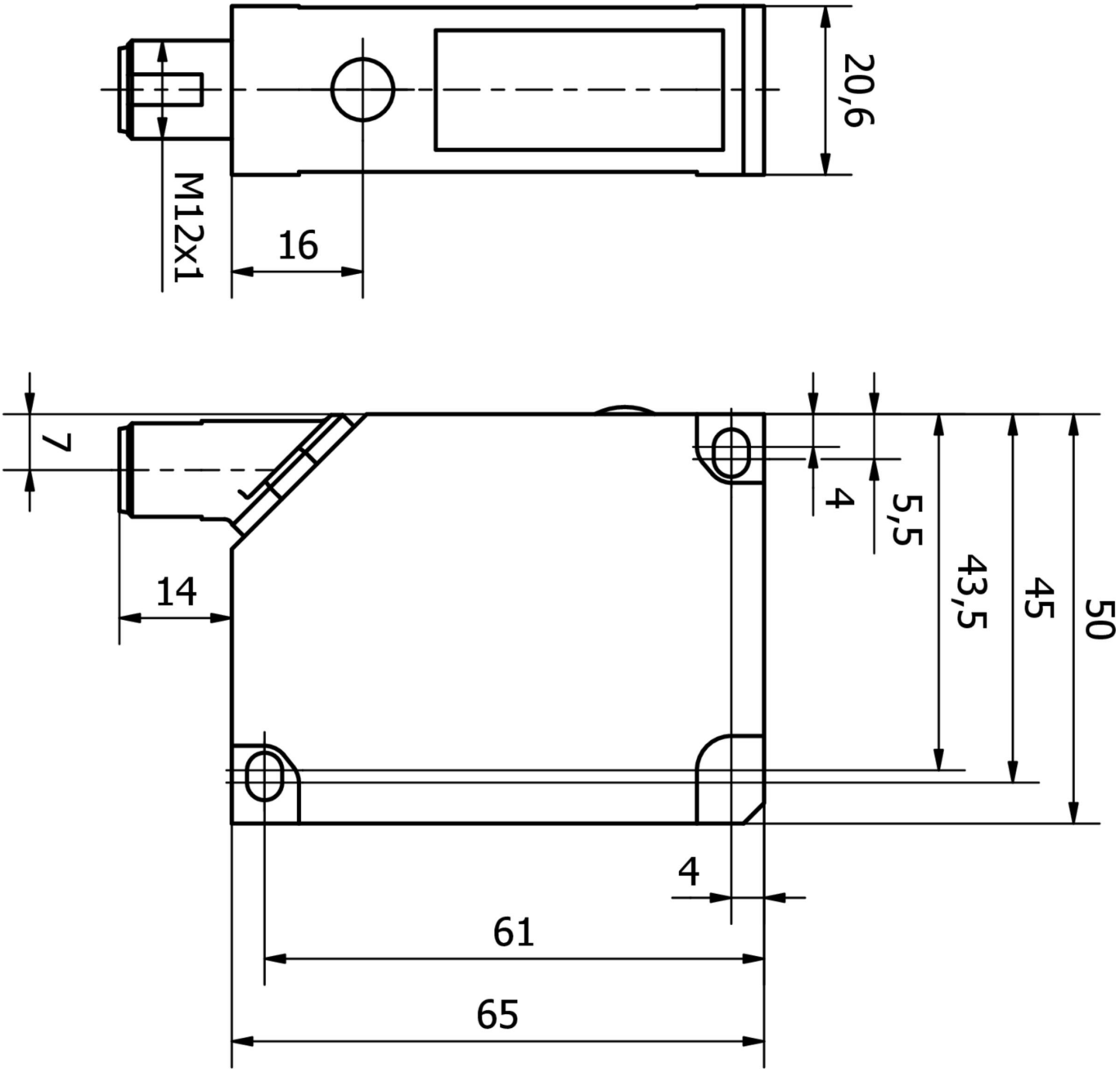
**More**

| | |
|---|---|
| IPF Product Group | 169 laser diffuse reflection sensors (analog) |
| packaging dimensions | 160 x 99 x 60 mm |
| gross weight | 210 g |
| Customs tariff number | 85365019 |
| WEEE number | 40951076 |
| OzDS-compliant | Yes |
| POP-compliant | Yes |
| Reach-compliant | Yes |
| RoHS-compliant | Yes |

## Connection


2
brown
L+
L+
4
yellow
Teach-In
3
green
4-20mA
A
6
pink
0-10V
V
5
gray
Alarm
8
red
Sync
1
white
n.c.
7
blue
L-
L-

## Dimensional drawing



## Extract accessories program

**AP98E154**

Documentation laser, Test protocol, Suitable for PT16, PT49, PT65

**NG400501**

DC power supply, 1-phase, 125x114x40mm, 24-28V, 5A, 90-264V AC 50Hz, 90-264V AC 60Hz, 127-370V DC, screw connection, IP20, aluminum, stabilized, pulsed output voltage

**VY000004**

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

**VK205A21**

Connection cable, 2m, M12 Female (socket) 8pin Angular, Free conductor end, 8x0.25mm², PUR (Polyurethane), Ø6.6mm, 30V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone.. .

**VK205A25**

Connection cable, 2m, M12 Female (socket) 8pin Straight, Free conductor end, 8x0.25mm², PUR (Polyurethane), Ø6.6mm, 30V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicon...

**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.