

OT120126

Optical sensors • Diffuse reflection sensors with intensity differentiation

sensor optical, diffuse-reflection sensor, M12x1 60long, Sn: 70-300, 10-35V DC, 1x PNP NO (NO), Connector M12 4pin, IP67, Brass Chrome-plated+Glass, 1kHz, Polarity free red light, Point, Manual adjustment

including Nut, Toothed washer



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 | 0.5 ms |
| Number of switching outputs | 1 |
| Display | LED display |
| Type of switching function | Normally open contact (NO) |
| Type of electrical connection | Connector M12 |
| Type of switching output | PNP |
| Rated switching current | 200 mA |
| Readiness delay | 60 ms |
| Setting procedure | Manual adjustment |
| Relative hysteresis | 10 % |
| Short-circuit protection | Yes |
| No-load current | 15 mA |
| Number of pins | 4 |
| Residual ripple | 20 % |
| Switching distance | 70 - 300 mm |
| Switching frequency | 1000 Hz |
| Protection class | III |
| Voltage drop | 2 V |
| Scanning function | Light switching |
| Reverse polarity protection | Yes |
| Decay time | 0.5 ms |
| Operating voltage (DC) | 10 - 35 V |

Mechanical features

| | |
|--------------------------------|------------------------|
| Design | Cylinder, screw-thread |
| Thread length | 41 mm |
| Thread pitch | 1 mm |
| Length | 60 mm |
| Maximum tightening torque | 10 Nm |
| Surface | Chrome-plated |
| Degree of protection (IP) | IP67 |
| Active area material of sensor | glass |
| Housing material | Brass |
| Thread dimension | M12 |
| Ambient temperature | -25 - 55 °C |

Optical features

| | |
|--------------------------|-------------------------|
| Light source | Polarity free red light |
| Light exit | axial |
| Light beam form | Point |
| Wavelength of the sensor | 660 nm |

Other features

| | |
|---------------------------|--------------------------------|
| Feeding technology | Yes |
| Reference medium / object | Material with 90% reflectivity |

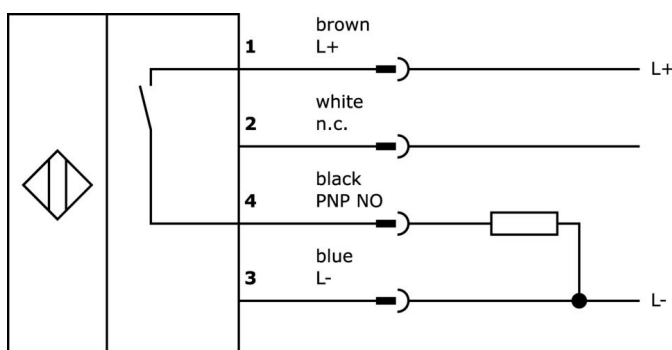
Classification

| | |
|--------|---------------------------------|
| ETIM 8 | EC001821 Light sensor energetic |
|--------|---------------------------------|

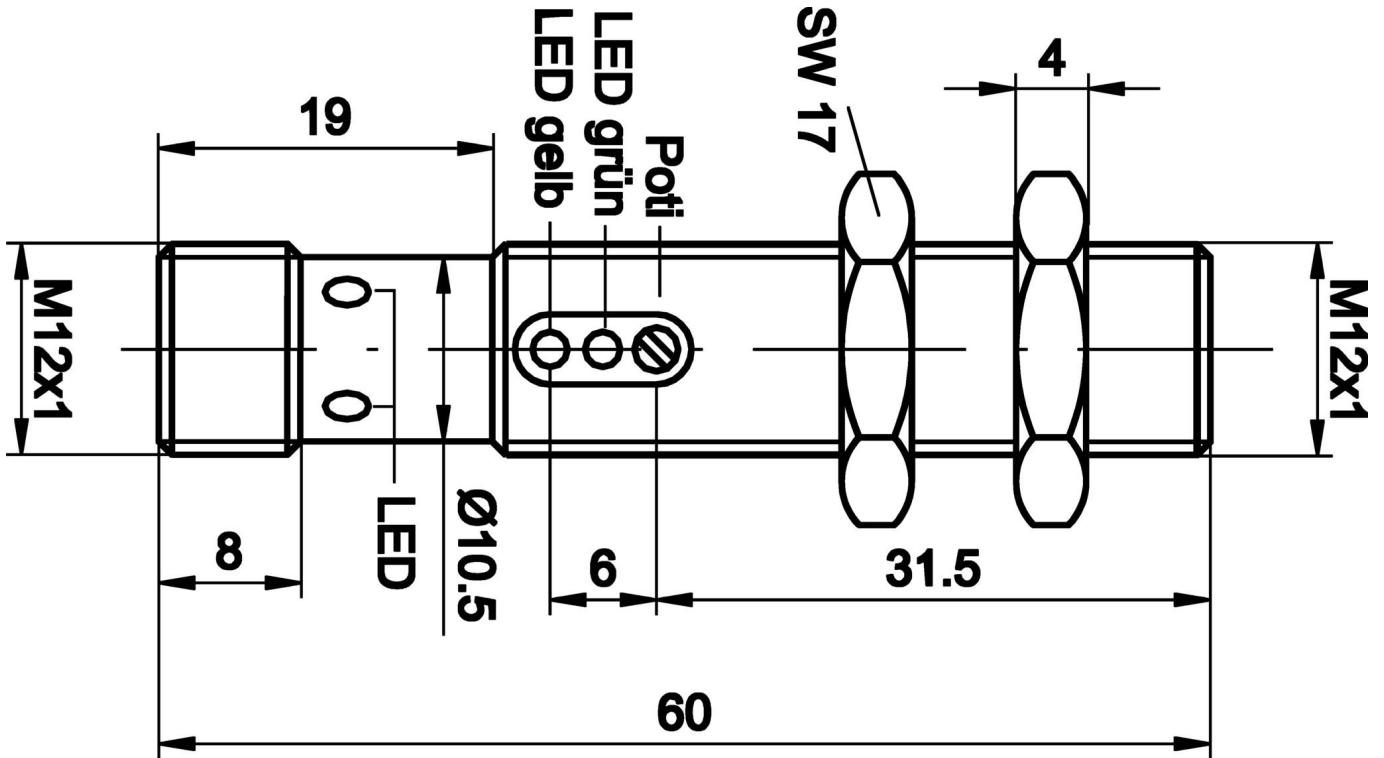
More

| | |
|-----------------------|---------------------|
| IPF Product Group | 100 optical sensors |
| packaging dimensions | 210 x 180 x 13 mm |
| gross weight | 37 g |
| Customs tariff number | 85365019 |
| WEEE number | 40951076 |
| Reach-compliant | Yes |
| RoHS-compliant | Yes |

Connection



Dimensional drawing



Extract accessories program

AY000115



accessories sensor, Fixture kit, Metal, ball joint

AY000162



Accessories, magnetic, Ø43mm, neodymium-iron-boron, inside thread M5, rubber

VK030F23



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm², PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK030F26



Connection cable, 0.3m, M12 socket 4-pin straight, M12 connector 4-pin straight, 4x0.34mm², PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK030F60



Connection cable, 0.3m, M12 socket 3-pin angular, M8 connector 3-pin straight, 3x0.34mm², PUR (polyurethane), 60V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK030F64



Connection cable, 0.3m, M12 socket 3-pin straight, M8 connector 3-pin straight, 3x0.34mm², PUR (polyurethane), 60V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK003021



Cable socket, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

VK003025



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

VK030F21



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm², 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

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.