

OE18042A

Optical sensors • Through-beam sensors receivers

Optical sensor, through-beam sensor receiver, M18x1 64long, Sn: 20m, 10-35V DC, PNP exclusive-OR, M12 connector, IP67, chrome-plated brass+glass, red light unpolarized

including Nut



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 |
| Display | LED display |
| Type of switching function | Exclusive-OR |
| Type of electrical connection | Connector M12 |
| Type of switching output | PNP |
| Rated switching current | 200 mA |
| Readiness delay | 20 ms |
| Short-circuit protection | Yes |
| No-load current | 10 mA |
| No-load current, receiver | 10 mA |
| Number of pins | 4 |
| Residual ripple | 20 % |
| Switching distance | 0 - 20000 mm |
| Switching frequency | 1000 Hz |
| Voltage drop | 2 V |
| Scanning function | Light-/dark-on mode |
| Reverse polarity protection | Yes |
| Decay time | 0.5 ms |
| Operating voltage (DC) | 10 - 35 V |

Mechanical features

| | |
|--------------------------------|------------------------|
| Design | Cylinder, screw-thread |
| Thread length | 42 mm |
| Thread pitch | 1 mm |
| Length | 63.5 mm |
| Maximum tightening torque | 20 Nm |
| Surface | Chrome-plated |
| Degree of protection (IP) | IP67 |
| Active area material of sensor | glass |
| Housing material | Brass |
| Thread dimension | M18 |
| Ambient temperature | -25 - 55 °C |

Optical features

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

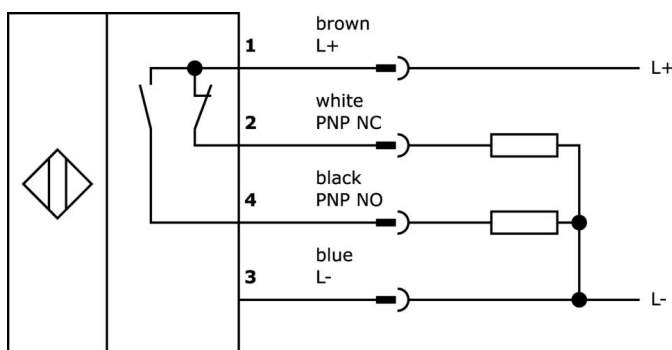
Classification

| | |
|--------|--|
| ETIM 8 | EC002716 Through-beam photoelectric sensor |
|--------|--|

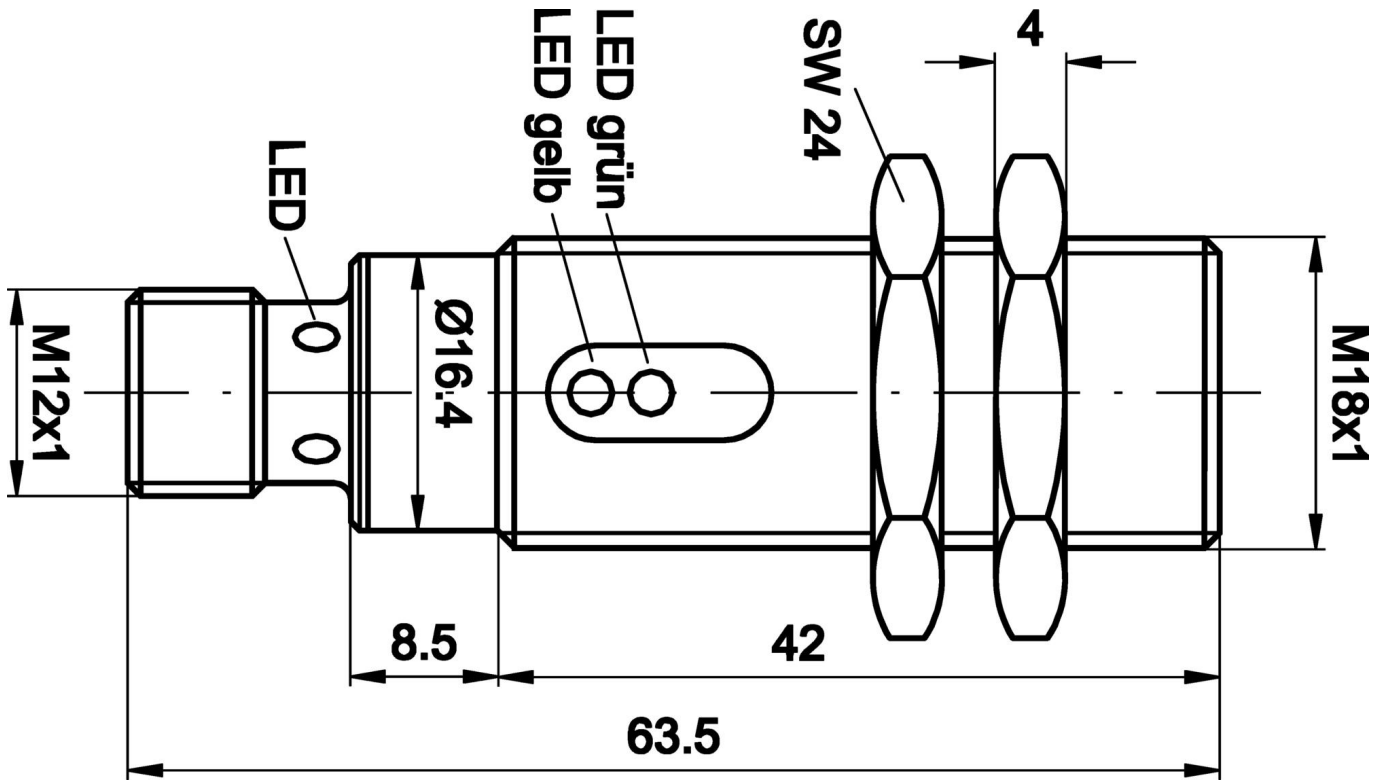
More

| | |
|-----------------------|---------------------|
| IPF Product Group | 100 optical sensors |
| packaging dimensions | 215 x 180 x 22 mm |
| gross weight | 66 g |
| Customs tariff number | 85365019 |
| WEEE number | 40951076 |
| Reach-compliant | Yes |
| RoHS-compliant | Yes |

Connection



Dimensional drawing



Extract accessories program

AO000297



accessories optical, Protection cap, M18x1, Plastic+Glass, With heat protection glass

VK200321



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, 250V, -40-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

VK200325



Connection cable, 2m, M12 Female (socket) 4pin Straight, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, 250V, -40-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

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

VK030F25



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

VK003020



Cable socket, angular, self-assembly, screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 socket 4-pin, IP67, PBT

VK003024



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Female (socket) 4pin, IP67, PBT

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

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.