

## PS180020

### Laser sensors • Through-beam sensors transmitters

sensor laser, Through-beam sensor transmitter, M18x1 90long, aperture Ø1mm, Sn: 5m, 12-32V DC, Connector M12 4pin, IP67, Brass Nickel-plated+Plastic PK, Laser diode, red light

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

Type of electrical connection	Connector M12
Laser power	1 mW
No-load current	50 mA
No-load current, transmitter	50 mA
Number of pins	4
Switching distance	0 - 5000 mm
Reverse polarity protection	Yes
Operating voltage (DC)	12 - 32 V

#### Mechanical features

Design	Cylinder, screw-thread
Aperture diameter	1 mm
Thread length	60 mm
Thread pitch	1 mm
Storage temperature	85 °C
Length	90 mm
Surface	nickel-plated
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PK)
Housing material	Brass
Thread dimension	M18
Ambient temperature	-20 - 50 °C

**Optical features**

Laser class	Class 1
Light source	Laser diode, red light
Light beam form	Point
Wavelength of the sensor	670 nm
Light spot diameter at focal point	0.5 mm

**Other features**

Features	with test input
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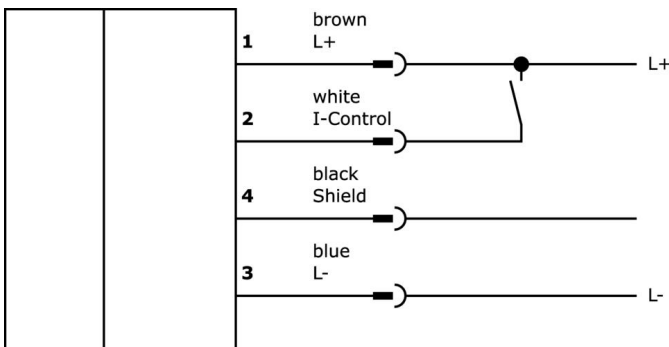
**Classification**

ETIM 8	EC002716 Through-beam photoelectric sensor
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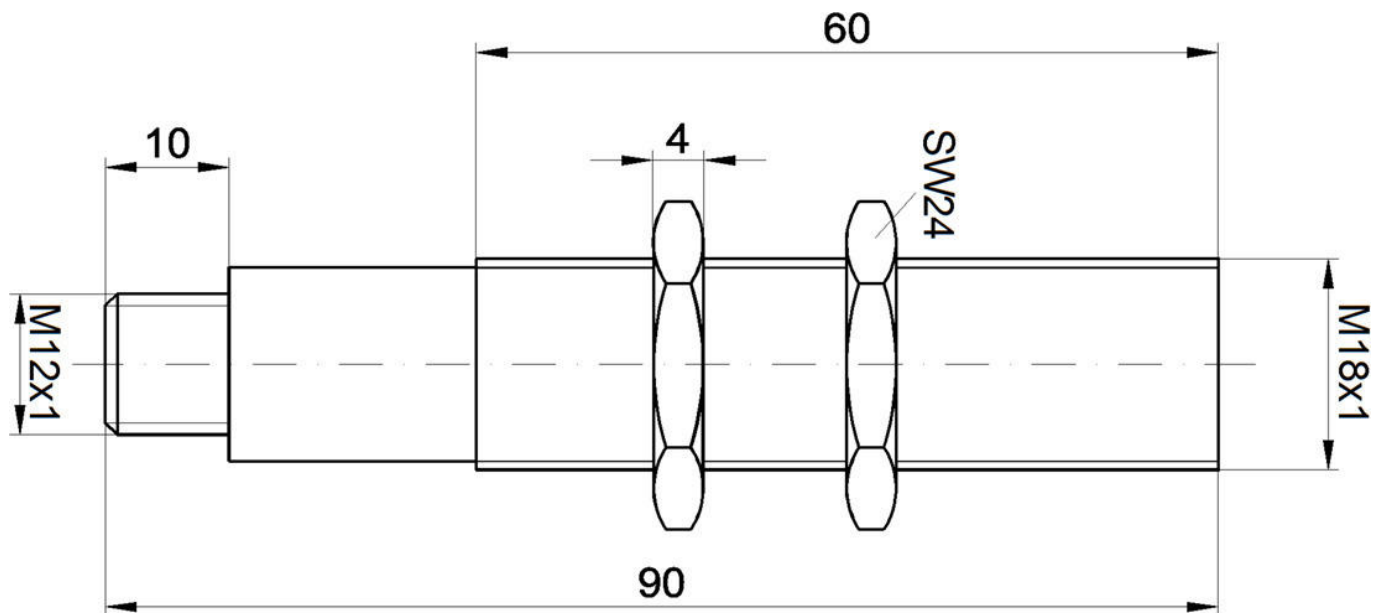
**More**

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	90 g
Customs tariff number	85365019
WEEE number	40951076
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



**Extract accessories program**

**AO98A353**



accessories optical, Cleaning air nozzle, M18x1, Metal

**AO98E281**



accessories optical, Cleaning air nozzle, M18x1, Metal

**VK030F21**



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm<sup>2</sup>, 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, 4x0.34mm<sup>2</sup>, PUR (polyurethane), 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F23**



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm<sup>2</sup>, 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, 4x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**AP000015**



accessories laser, Mounting angle bracket, 28x40x36mm, Precision bracket, Aluminum

**AP000016**



accessories laser, Flange, 14x40x36mm, Mounting material and precision flange, Aluminum

**AY000162**



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

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

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**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.