

## PE180123

### Laser sensors • Through-beam sensors receivers

sensor laser, Through-beam sensor receiver, M18x1 90long, aperture 0.5x4mm, Sn: 3m, 12-32V DC, PNP/NPN Push-pull, 0-10V, Connector M12 4pin, IP67, Brass Nickel-plated+Glass, 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

Display	LED display
Resolution	0.04 mm
Type of switching function	Normally open (NO for PNP) Normally closed (NC for NPN)
Type of analog output	0 - 10V
Type of electrical connection	Connector M12
Type of switching output	Push-pull
Rated switching current	100 mA
Setting procedure	Manual adjustment
Short-circuit protection	Yes
No-load current	30 mA
No-load current, receiver	30 mA
Number of pins	4
Switching distance	0 - 3000 mm
Switching frequency	5000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Absolute repeat accuracy	0.01 mm
Operating voltage (DC)	12 - 32 V

**Mechanical features**

Design	Cylinder, screw-thread
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	glass
Housing material	Brass
Thread dimension	M18
Ambient temperature	-20 - 50 °C

**Optical features**

Aperture width	4 mm
Aperture length	0.5 mm
Filter	Interference filter
Light source	Laser diode, red light
Light beam form	Line
Wavelength of the sensor	670 nm

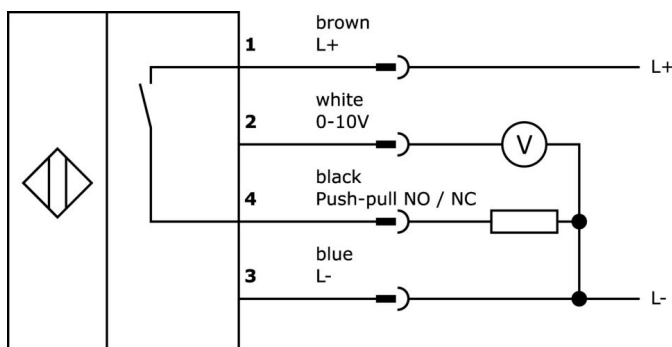
**Classification**

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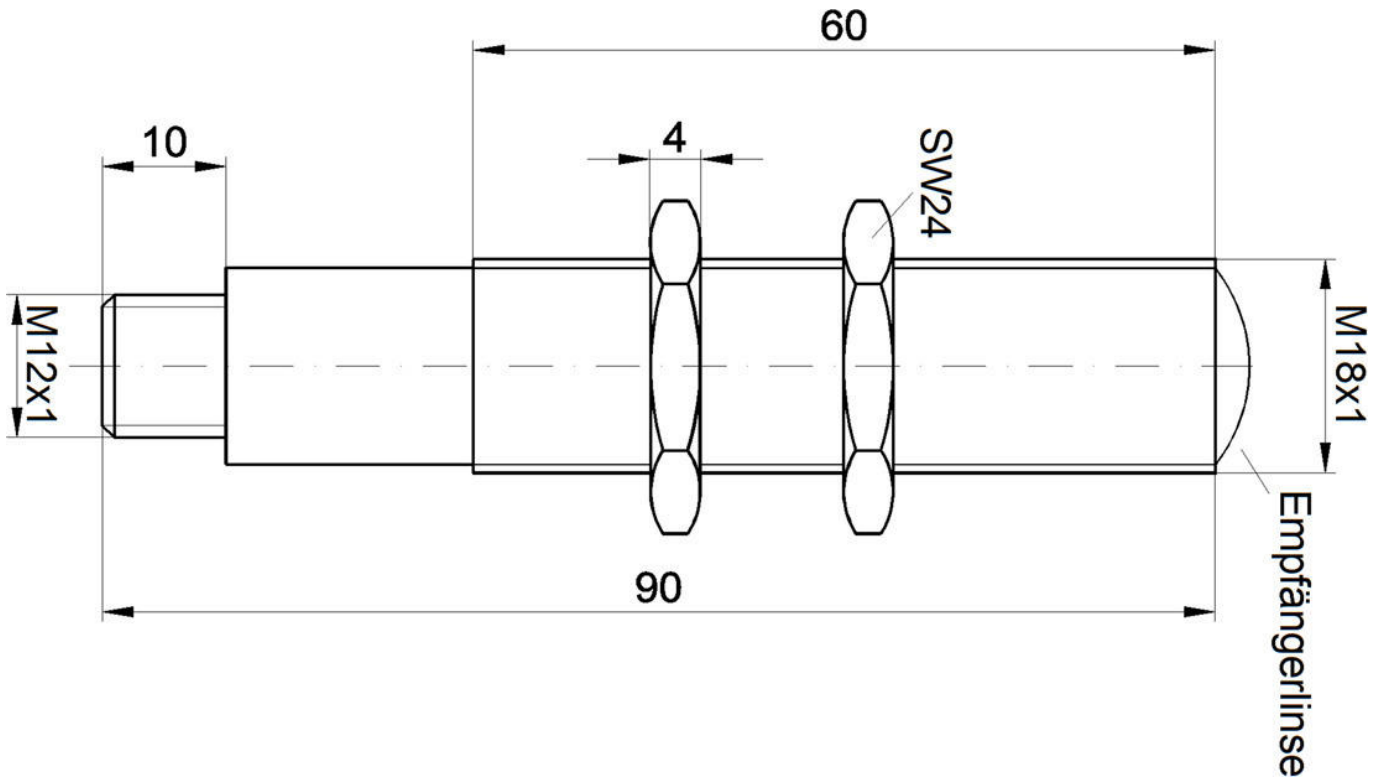
**More**

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
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



**Extract accessories program**

**AY000117**



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.  
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

**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

**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

**AY000070**



Tool, Flat-tip screwdriver, 1.6x0.  
4mm, Grip design 1-component

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.