

PS180022

Laser sensors • Through-beam sensors transmitters

Sensor laser, through-beam sensor transmitter, M18x1 90long, aperture 1x6.5mm, Sn: 5m, 12-32V DC, M12 plug connector 4-pin, IP67, nickel-plated brass+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

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
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	6.5 mm
Aperture length	1 mm
Laser class	Class 1
Light source	Laser diode, red light
Light beam form	Line
Wavelength of the sensor	670 nm
Light spot diameter at focal point	1.5 mm

Other features

Features	with test input
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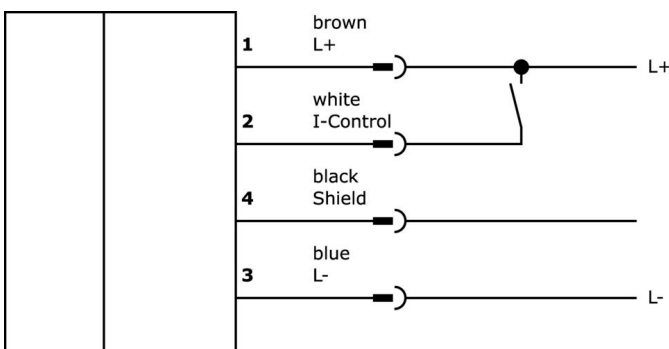
Classification

ETIM 8	EC002716 Through-beam photoelectric sensor
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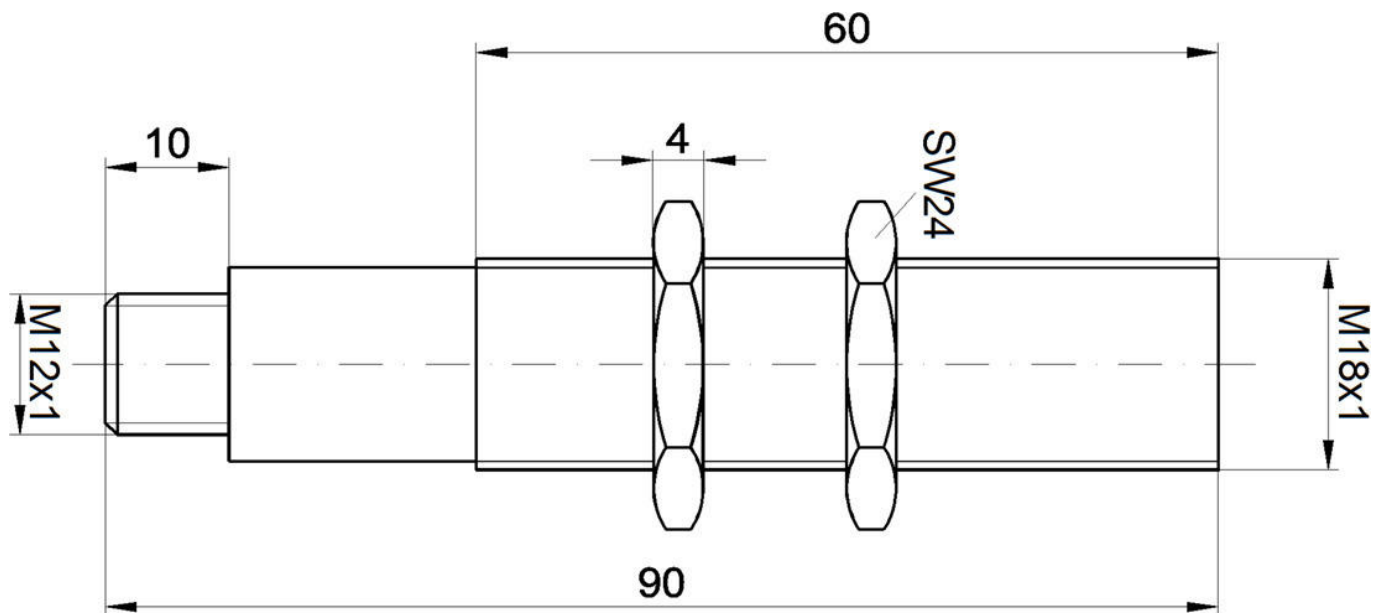
More

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	114 g
Customs tariff number	85365019
WEEE number	40951076
POP-compliant	Yes
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

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

AP000015



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

AP000016



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

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

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.