

PE12F001

Laser sensors • Through-beam sensors receivers

Laser sensor, through beam receiver, M12x1 80 long, aperture Ø2mm, Sn: 5m, 12-32V DC, PNP/NPN push-pull, 0-10V, M12-connector 4 pin, IP67, nickel plated brass+glass, laser diode, red light

including Nut



Optical sensors operate without contact. They detect objects, regardless of their nature (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmission and reception of light. Three variants are distinguished: 1. The through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. When the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its state. 2. In the case of the reflex light barrier, the transmitter and receiver are located in one device. The transmitted light beam is reflected onto the receiver by a reflector to be mounted opposite. As soon as the light beam is interrupted, the switching output integrated in the device changes its state. 3. With the diffuse-reflection sensor, the transmitter and receiver are located in one device. The transmitted light beam is reflected by the object to be detected. As soon as the receiver detects the reflected light, the switching output integrated in the device changes its state.

Electrical features

Resolution	0.02 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
Short-circuit protection	Yes
Laser power	1 mW
No-load current	30 mA
No-load current, receiver	30 mA
Number of pins	4
Switching distance	0 - 5000 mm
Switching frequency	25000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Absolute repeat accuracy	0.02 mm
Operating voltage (DC)	12 - 32 V

Mechanical features

Design	Cylinder, screw-thread
Aperture diameter	1 mm
Thread length	46 mm
Thread pitch	1 mm
Storage temperature	-20 - 85 °C
Length	80 mm
Surface	nickel-plated
Degree of protection (IP)	IP67
Active area material of sensor	glass
Housing material	Brass
Thread dimension	M12
Ambient temperature	-20 - 50 °C

Optical features

Aperture width	2 mm
Filter	Interference filter
Light source	Laser diode, red light
Light beam form	Point

Other features

ardTE00_Anwendungen	starke Verschmutzung
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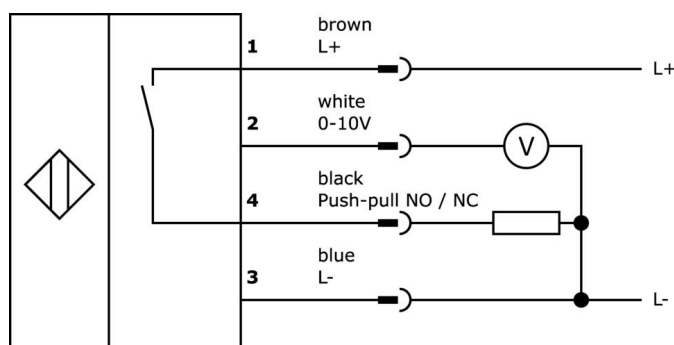
Classification

ETIM 8	EC002716 Through-beam photoelectric sensor
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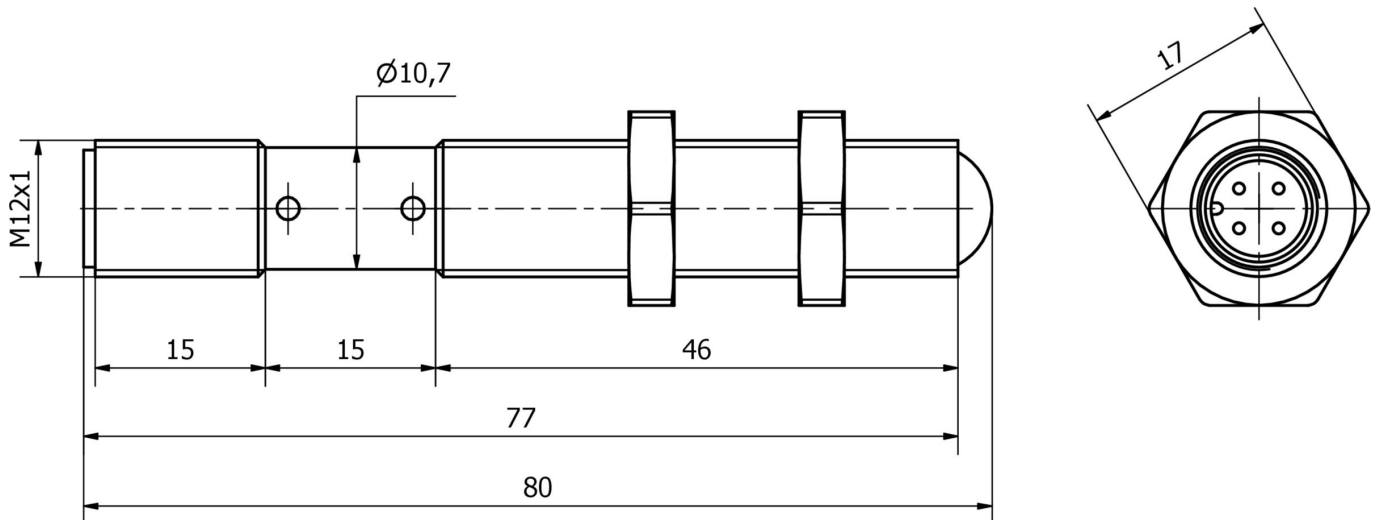
More

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	60 g
Customs tariff number	85365019
WEEE number	40951076
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AY000162



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

AY000159



accessories sensor, Mounting pipe, Ø12mm 200long, Aluminum Anodised

AP000013



accessories laser, Mounting angle bracket, 28x30x34mm, Precision bracket, Aluminum

AP000014



accessories laser, Flange, 14x30x34mm, Mounting material and precision flange, Aluminum

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

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.