

## PS12F001

### Laser sensors • Through-beam sensors transmitters

Sensor laser, through beam transmitter, M12x1 76 long, orifice Ø2mm, Sn: 5m, 12-32V DC, M12-connector 4 pole, IP67, nickel plated brass + glass, laser diode, red light

including 2x 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

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

#### Mechanical features

Design	Cylinder, screw-thread
Aperture diameter	2mm
Thread length	45mm
Thread pitch	1mm
Storage temperature	85°C
Length	76mm
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**

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

**Other features**

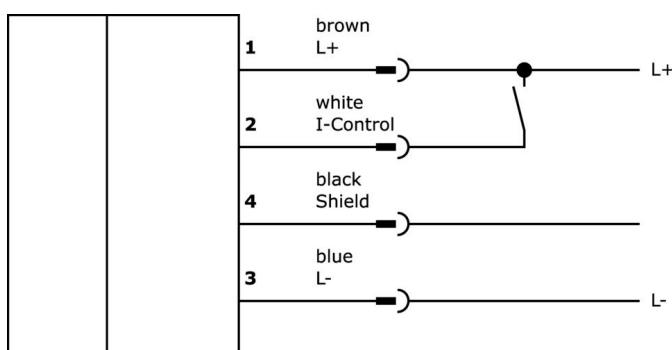
Features	with test input
Scope of delivery	Transmitter
Ambient temperature	-20 - 50°C
Version	Through-beam sensor transmitter

**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	55 g
Customs tariff number	85365019
WEEE number	40951076
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection****Installation**

Mounting / installation may only be carried out by a qualified electrician!

**Disposal**

**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.

For suitable connection and mounting accessories, please refer to our website [www.ipf-electronic.com](http://www.ipf-electronic.com).

**Dimensional drawing**