

## PR170420

### Laser sensors • Retro-reflective sensors

sensor laser, reflective, 50x50x15mm, Laser diode, red light, Point, Sn: 11000, 10-30V DC, PNP Anticoincidence, Connector M12 4pin 2m, IP67, Zinc die-cast+Glass, With polarizing filter



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

Response/decay time	0.1ms
Display	LED display
Resolution	5mm
Type of switching function	Exclusive-OR
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	200mA
Short-circuit protection	Yes
Laser power	0.4mW
No-load current	70mA
Number of pins	4
Switching distance	0 - 11000mm
Voltage drop	2V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.1ms
Absolute repeat accuracy	1.5mm
Operating voltage (DC)	10 - 30V
With polarizing filter	Yes

**Mechanical features**

Number of cores	4
Design	Cuboid
Width	15.4mm
Height	50mm
Cable length	2m
Length	50mm
Degree of protection (IP)	IP67
Volume	Medium
Active area material of sensor	glass
Housing material	Zinc die-cast
Ambient temperature	-10 - 50°C

**Optical features**

Laser class	Class 1
Light source	Laser diode, red light
Light beam form	Point
Wavelength of the sensor	650nm
focus	400mm

**Other features**

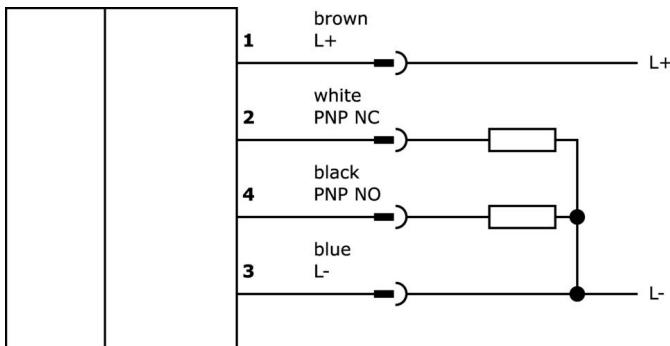
Ambient temperature	-10 - 50°C
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**Classification**

ETIM 8	EC002717 Retro-reflective sensor
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**More**

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	120 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
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

