

## PT180428

### Laser sensors • Diffuse reflection sensors with intensity differentiation

sensor laser, diffuse-reflection sensor, M18x1 94long, Sn: 0-250, 10-30V DC, 2x PNP Anticoincidence, Connector M12 4pin, IP67, Brass Chrome-plated+PMMA, 1.5kHz, Laser diode, red light, Point, Manual adjustment

including 2x 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

Number of switching outputs	2
Display	LED display
Type of switching function	Exclusive-OR
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	100mA
Setting procedure	Manual adjustment
Short-circuit protection	Yes
No-load current	35mA
Number of pins	4
Switching distance	0 - 250mm
Switching frequency	1500Hz
Protection class	III
Voltage drop	2V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Operating voltage (DC)	10 - 30V

**Mechanical features**

Design	Cylinder, screw-thread
Thread length	43mm
Thread pitch	1mm
Storage temperature	-25 - 70°C
Length	93.5mm
Surface	Chrome-plated
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Brass
Thread dimension	M18
Ambient temperature	-10 - 50°C

**Optical features**

Laser class	Class 1
Light source	Laser diode, red light
Light exit	Lateral
Light beam form	Point
Wavelength of the sensor	650nm

**Other features**

Feeding technology	Yes
Reference medium / object	Material with 90% reflectivity
Ambient temperature	-10 - 50°C

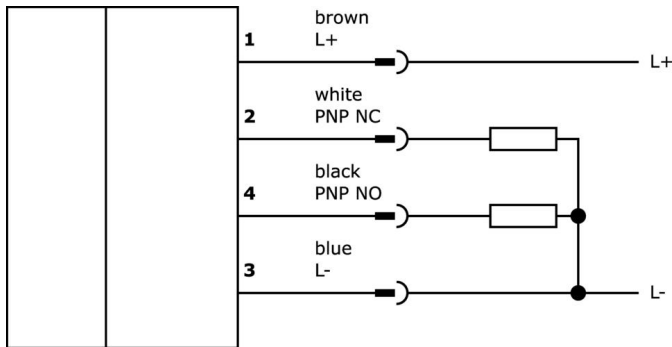
**Classification**

ETIM 8	EC001821 Light sensor energetic
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**More**

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	80 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).