

## PT380523

### Laser sensors • Diffuse reflection sensors with background suppression

Sensor laser, diffuse reflection sensor, 48x38x15mm, Sn: 5-400, 18-30V diagnostic coverage, 2x PNP/NPN NO, M12 plug connector 5-pin, IP67, metal+glass, 2kHz, laser diode, red light, dot, manual setting



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	Normally open contact (NO)
Type of electrical connection	Connector M12
Type of switching output	PNP/NPN
Rated switching current	100mA
Readiness delay	100ms
Setting procedure	Manual adjustment
Short-circuit protection	Yes
Laser power	1mW
No-load current	35mA
Number of pins	5
Switching distance	50 - 400mm
Switching frequency	2000Hz
Reverse polarity protection	Yes
Operating voltage (DC)	18 - 30V
Dead zone	0 - 5

**Mechanical features**

Design	Cuboid
Width	15mm
Height	48mm
Storage temperature	-10 - 40°C
Length	38mm
Degree of protection (IP)	IP67
Volume	Medium
Active area material of sensor	glass
Housing material	Metal
Ambient temperature	-10 - 40°C

**Optical features**

Laser class	Class 2
Light source	Laser diode, red light
Light beam form	Point
Wavelength of the sensor	670nm
focus	350mm
Light spot diameter at focal point	0.5mm

**Other features**

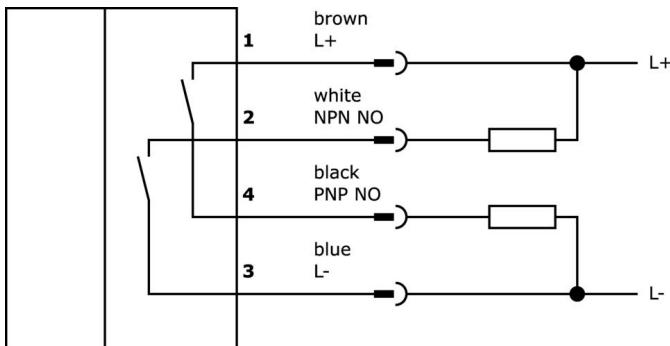
Operational mode	Background suppression
Important note	Die beiliegenden Warnschilder sind nach der Unfallvorschrift für Laserstrahlung (BGV B 2) vom 01. 01.1993 gut sichtbar in der Nähe des Laserstrahlaustritts anzubringen.
Reference medium / object	Material with 90% reflectivity
Ambient temperature	-10 - 40°C

**Classification**

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
--------	---

**More**

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	90 g
Customs tariff number	85365019
WEEE number	40951076
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).