

## PT900021

### Laser sensors • Distance measurement

Sensor laser, diffuse reflection sensor, 50x194x95mm, Sn:200-35000mm, phase comparison measurement, 10-30V diagnostic coverage, 1x PNP programmable/configurable, 4-20mA, M12 connector 8-pin, IP65, aluminum anodized/anodized+glass, 0.01kHz, RS-232, laser diode, red light, dot,...



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	1
Resolution	1mm
Type of switching function	Programmable/configurable
Type of analog output	4 - 20mA
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	500mA
Setting procedure	Parameterization
Short-circuit protection	Yes
No-load current	100mA
Linearity deviation	2 - 3mm
Number of pins	8
Switching frequency	10Hz
Reverse polarity protection	Yes
Absolute measuring accuracy	3mm
Absolute repeat accuracy	500mm
Type of plug-in contact, communication interface	Female (socket)
Type of plug-in connection, communication interface	D-Sub
Measurement principle	Phase comparison measurement
Number of pins of interface connection	9
Supported communication interface	RS232
Operating voltage (DC)	10 - 30V
Measuring range	200 - 35000mm

**Mechanical features**

Design	Cuboid
Width	95mm
Height	50mm
Length	194mm
Surface	teflon coated
Degree of protection (IP)	IP65
Active area material of sensor	glass
Housing material	Aluminum
Ambient temperature	-10 - 60°C

**Optical features**

Laser class	Class 2
Light source	Laser diode, red light
Light beam form	Point
Wavelength of the sensor	650nm
Light spot diameter at focal point	1.8mm

**Other features**

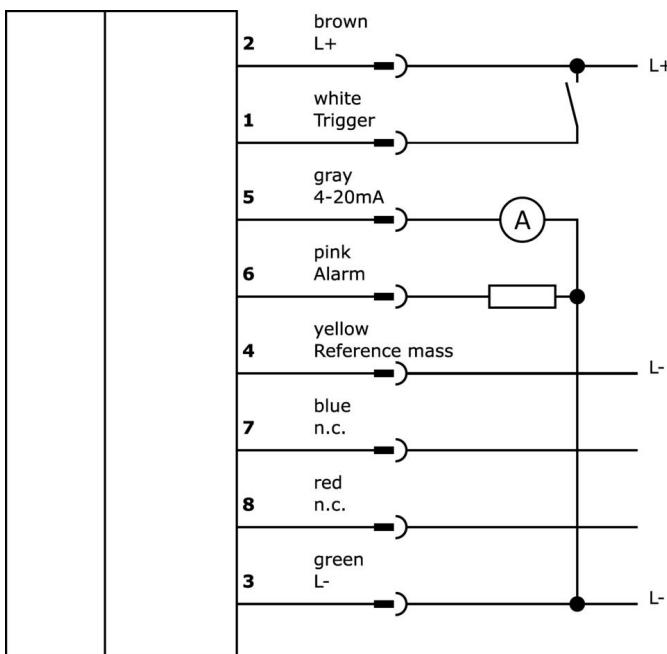
Features	150 m range to reflector
Reference medium / object	Material with 90% reflectivity

**Classification**

ETIM 8	EC001825 Optical distance sensor
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**More**

IPF Product Group	169 laser diffuse reflection sensors (analog)
packaging dimensions	300 x 205 x 110 mm
gross weight	1118 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).

Any software, drivers or IODD files that may be required to operate your device can be downloaded free of charge from our homepage: [www.ipf-electronic.com](http://www.ipf-electronic.com)

**Dimensional drawing**