

## PT640021

### Laser sensors • Distance measurement

sensor laser, diffuse-reflection sensor, 68x78x21mm, Sn:32-70mm, Resolution 10µm, Triangulation, 24V DC, 2x PNP/NPN Programmable/configurable, 0-10V/4-20mA, Rotatable M12-connector 8pin, IP67 / IP54, Aluminum Anodised+Glass, 3.3kHz, RS-232, Laser ...



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
Resolution	0.01mm
Type of switching function	Programmable/configurable
Type of alarm output	PNP/NPN
Type of analog output	0 - 10V   4 - 20mA
Type of electrical connection	M12 plug connector, rotatable
Type of switching output	PNP/NPN
Rated switching current	100mA
Setting procedure	other
Short-circuit protection	Yes
Laser power	1mW
No-load current	200mA
Number of pins	8
Relative linearity deviation	0.25%
Switching frequency	3300Hz
Switching function of the alarm output	Programmable/configurable
Reverse polarity protection	Yes
Absolute repeat accuracy	10mm
Type of plug-in contact, communication interface	Female (socket)
Type of plug-in connection, communication interface	Connector M5
Measurement principle	triangulation
Number of pins of interface connection	4
Supported communication interface	RS232
Operating voltage (DC)	24V
Measuring range	32 - 70mm

**Mechanical features**

Design	Cuboid
Width	20.6mm
Height	68mm
Storage temperature	-20 - 85°C
Length	78mm
Surface	teflon coated
Degree of protection (IP)	IP67 / IP54
Volume	Large
Active area material of sensor	glass
Housing material	Aluminum
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	670nm
focus	50mm

## Other features

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

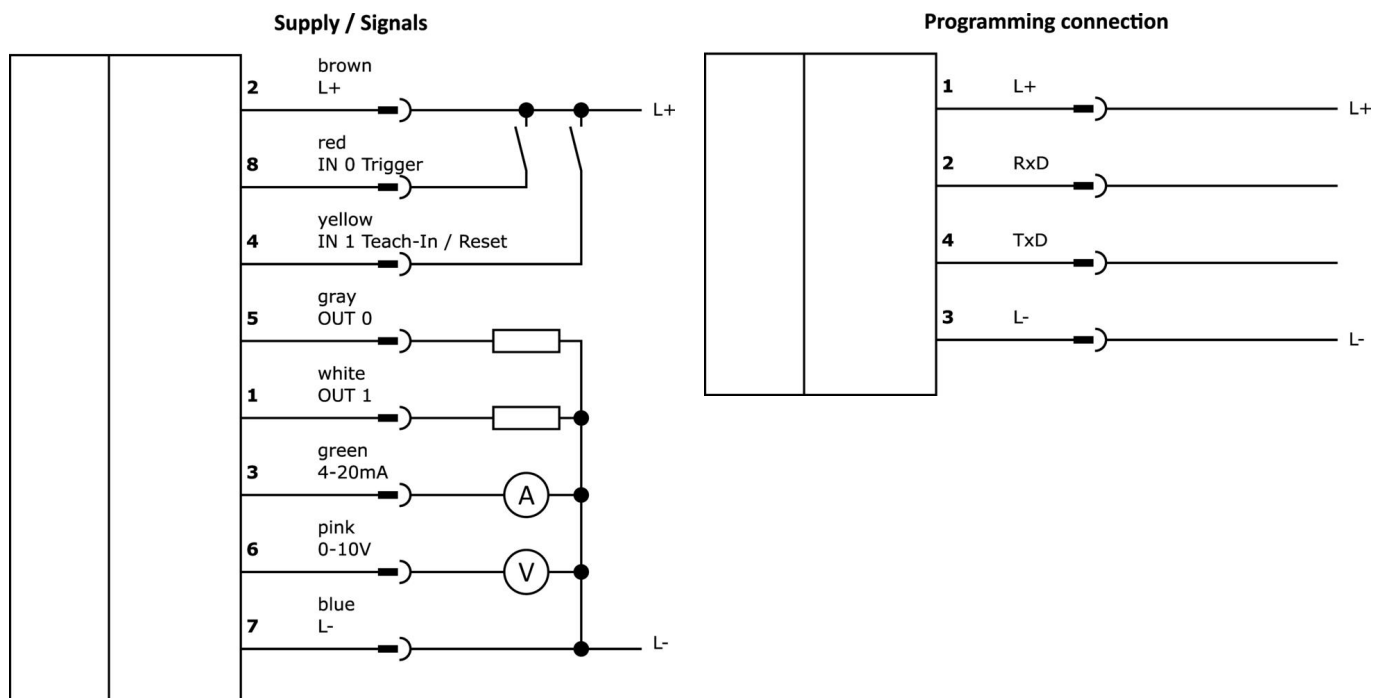
## Classification

ETIM 8	EC001825 Optical distance sensor
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## More

IPF Product Group	169 laser diffuse reflection sensors (analog)
packaging dimensions	160 x 99 x 60 mm
gross weight	176 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).

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**
