

PT440302

Laser sensors • Diffuse reflection sensors with background suppression

sensor laser, diffuse-reflection sensor, 44x25x20mm, Sn:65-135mm, Resolution 70µm, Triangulation, 12-24V DC, 1x PNP NC/NO, 0V ... 5V / 4mA ... 20mA, Cable 2m, IP67, Aluminum+Acrylic glass, Laser diode, red light, Point, Parameterization



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	5ms
Number of switching outputs	1
Display	LED display
Resolution	0.07mm
Type of switching function	Normally closed contact/normally open contact
Type of analog output	0 - 5V 4 - 20mA
Type of electrical connection	Cable
Type of switching output	PNP
Rated switching current	50mA
Setting procedure	Parameterization
Short-circuit protection	Yes
Laser power	1mW
No-load current	60mA
Relative linearity deviation	0.1%
Relative repeat accuracy	0.2%
Residual ripple	10%
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	5ms
Absolute linearity deviation	0.1mm
Measurement principle	triangulation
Operating voltage (DC)	12 - 24V
Measuring range	65 - 135mm
Time function	Yes

Mechanical features

Number of cores	5
Conductor cross-section	0.2mm ²
Design	Cuboid
Width	20mm
Height	44mm
Cable length	2m
Storage temperature	-20 - 60°C
Length	25mm
Degree of protection (IP)	IP67
Volume	Small
Active area material of sensor	acrylic glass
Housing material	Aluminum
Ambient temperature	-10 - 45°C

Optical features

Laser class	Class 2
Light source	Laser diode, red light
Light beam form	Point
Wavelength of the sensor	655nm
Light spot diameter at focal point	0.06mm

Other features

Reference medium / object	Material with 90% reflectivity
Ambient temperature	-10 - 45°C

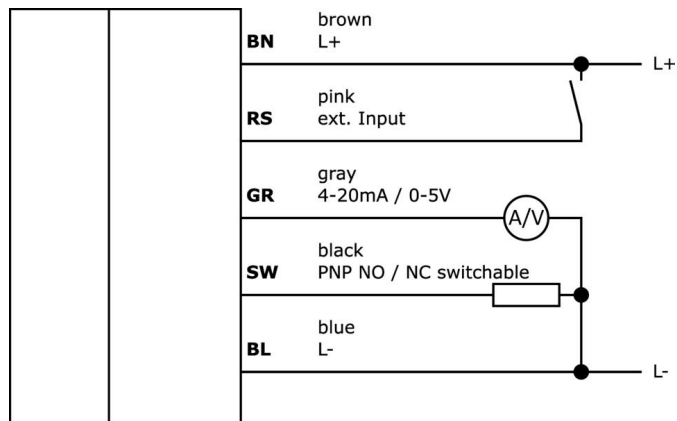
Classification

ETIM 8	EC001825 Optical distance sensor
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More

IPF Product Group	160 laser sensor
packaging dimensions	125 x 70 x 40 mm
gross weight	130 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.

Dimensional drawing

