

PT120520

Laser sensors • Diffuse reflection sensors with background suppression

sensor laser, diffuse-reflection sensor, M12x1 72long, Sn: 50-1200, 10-30V DC, 1x PNP/NPN NC/NO, M12-connector 4pin, IP65, Stainless steel+PMMA, 0.04kHz, Laser diode, infrared light, Point, Teach-In

including 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

Response/decay time	20ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Connector M12
Type of switching output	PNP/NPN
Rated switching current	100mA
Setting procedure	Teach-In
Operating principle	Time-of-flight measurement
Short-circuit protection	Yes
Number of pins	4
Switching distance	50 - 1200mm
Switching frequency	40Hz
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	45mm
Thread pitch	1mm
Storage temperature	-10 - 60°C
Length	72mm
Degree of protection (IP)	IP65
Active area material of sensor	Plastic (PMMA)
Housing material	Stainless steel
Thread dimension	M12
Ambient temperature	-10 - 60°C

Optical features

Laser class	Class 1
Light source	Laser diode, infrared light
Light beam form	Point
Wavelength of the sensor	940nm

Other features

Reference medium / object	Material with 90% reflectivity
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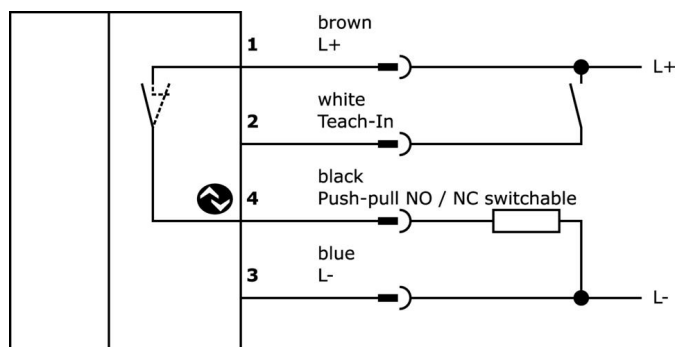
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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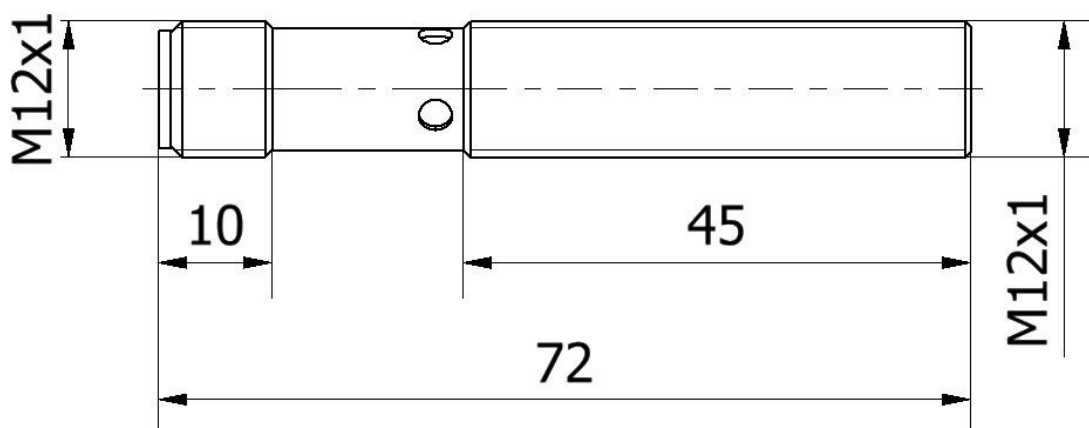
More

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	58 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

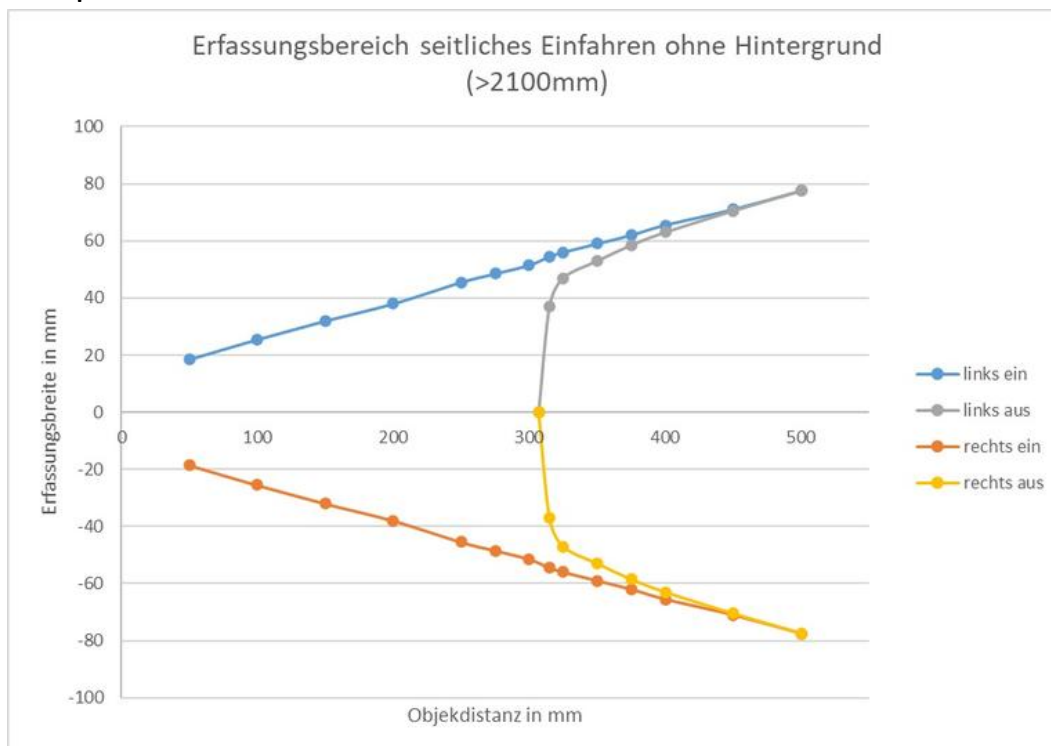
Connection



Dimensional drawing

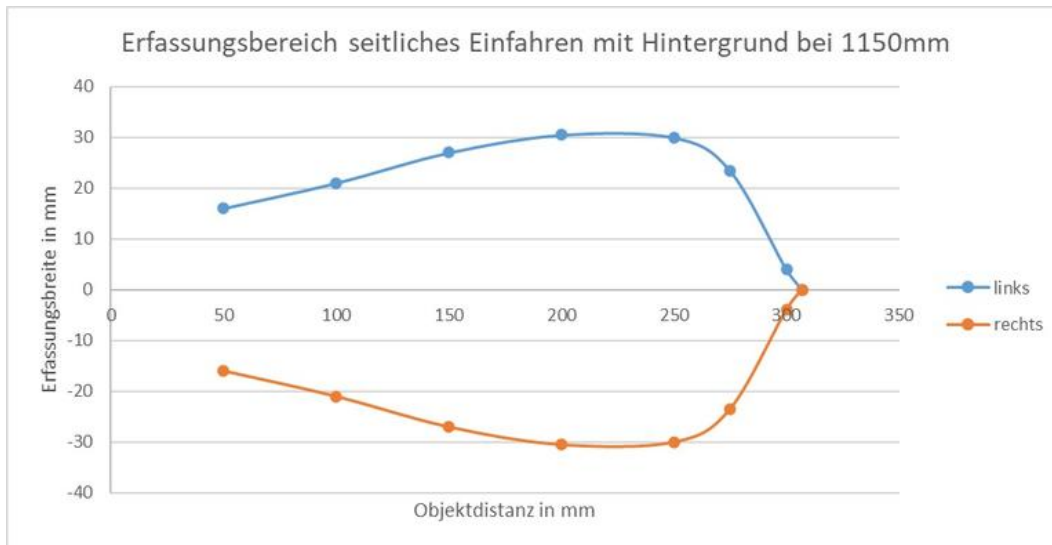


Beam path



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Beam path



ipf_gsv_PT120520_with_background_en.jpg

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.

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