

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 4-pin, IP65, stainl. steel+PMMA, 0.04kHz, laser diode, infrared light, dot, teach-in

including Nut



Optical sensors work contactless. They detect objects, regardless of their properties (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmitter and receiver of light. There are three different versions: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. in the reflex light barrier, the transmitter and receiver are located in one device. The transmitted light beam is reflected onto the receiver by a reflector to be mounted opposite. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. 3. the diffuse reflection sensor has a transmitter and receiver in one device. The transmitted light beam is reflected by the object 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	20 ms
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	100 mA
Setting procedure	Teach-In
Operating principle	Time-of-flight measurement
Number of pins	4
Switching distance	50 - 1200 mm
Switching frequency	40 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Supported communication interface	IO-Link
Operating voltage (DC)	10 - 30 V
ardTEEL_Schutzfunktionen	Short circuit protection Reverse polarity protection

Mechanical features

Design	Cylinder, screw-thread
Thread length	45 mm
Thread pitch	1 mm
Storage temperature	-10 - 60 °C
Length	72 mm
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	940 nm

Other features

Reference medium / object	Material with 90% reflectivity
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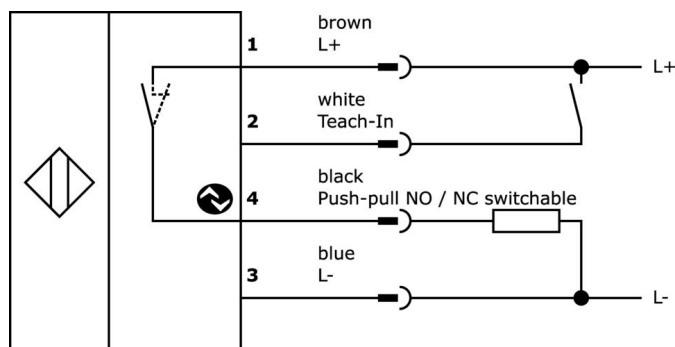
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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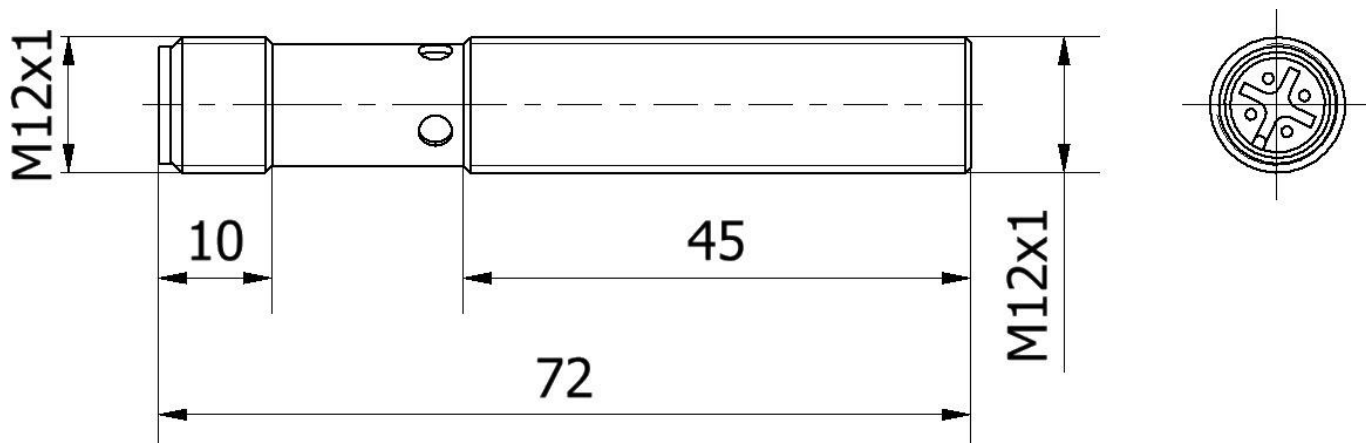
More

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

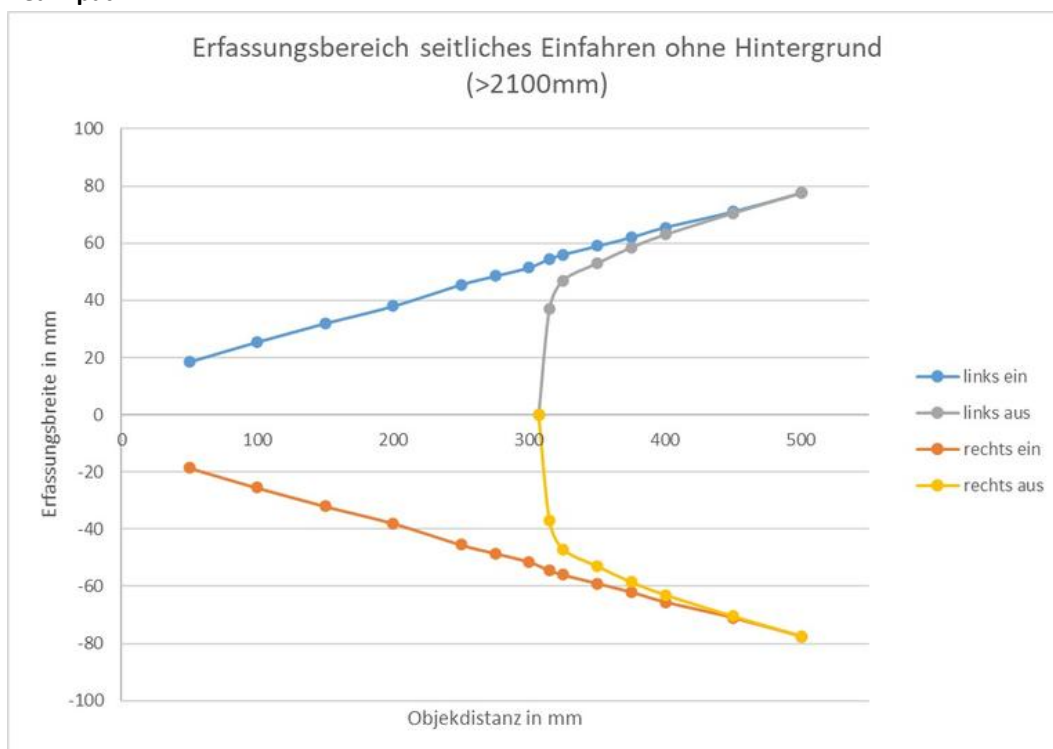
Connection



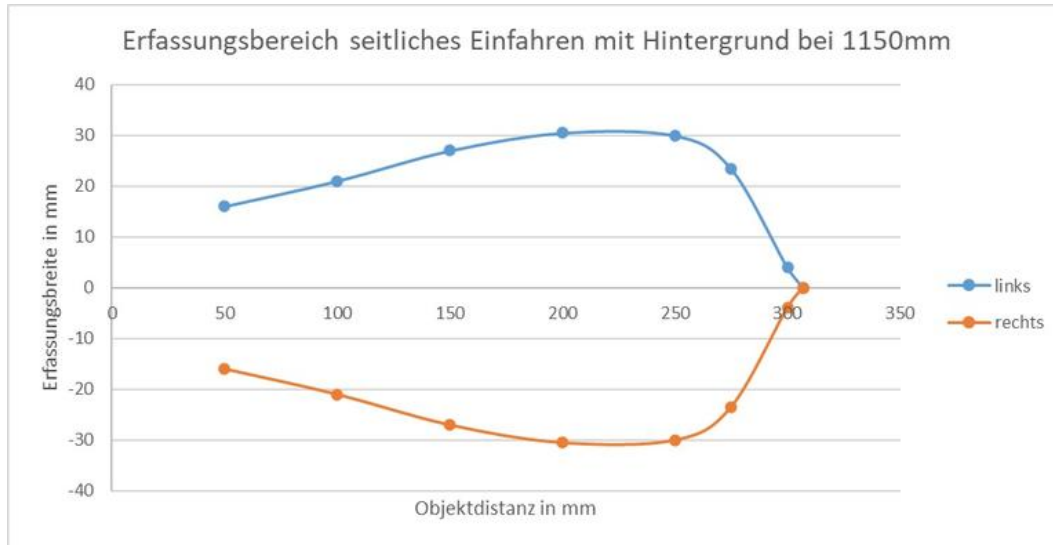
Dimensional drawing



Beam path



Beam path



Extract accessories program

AY000025



accessories, Hexagon nut, M12x1, Wrench size 17mm, Brass Nickel-plated

AY000032



accessories sensor, Ø12mm, Aluminum, For sensor 12mm, for Wall mounting, Screw mounting

AY000162



Accessories, magnetic, Ø43mm, neodymium-iron-boron, inside thread M5, rubber

AY000159



Accessories sensor, mounting tube, Ø12mm 200long, aluminum anodized/anodized

NG400501



DC power supply, 1-phase, 125x114x40mm, 24-28V, 5A, 90-264V AC 50Hz, 90-264V AC 60Hz, 127-370V DC, screw connection, IP20, aluminum, stabilized, pulsed output voltage

VK205321



Connection cable, 2m, M12 socket 4-pin angular, free cable end, 4x0.34mm², PUR (polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, shielded, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK205325



Connection cable, 2m, M12 socket 4-pin straight, free cable end, 4x0.34mm², PUR (polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, shielded, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

AY000115



accessories sensor, Fixture kit, Metal, ball joint

AO000095



accessories optical, Cleaning air nozzle, Metal

You can find further accessories on our homepage



Installation

Mounting / installation may only be carried out by a qualified electrician!



Disposal

WEEE number according to § 6 para. 3 ElektroG: 40951076

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.
- / 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