

PT170420

Laser sensors • Diffuse reflection sensors with background suppression

Sensor laser, diffuse reflection sensor, 50x50x15mm, Sn: 25-300, 10-30V DC, 2x PNP NC/NO, M12 plug connector 4-pin, IP67, zinc diecast+glass, 0.8kHz, laser diode, red light, dot, manual setting



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	0.6 ms
Number of switching outputs	2
Display	LED display
Resolution	0.1 mm
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	200 mA
Setting procedure	Manual adjustment
Short-circuit protection	Yes
Laser power	1 mW
No-load current	35 mA
Number of pins	4
Switching distance	25 - 300 mm
Switching frequency	800 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.6 ms
Absolute repeat accuracy	0.1 mm
Operating voltage (DC)	10 - 30 V
Interference suppression	Yes

Mechanical features

Design	Cuboid
Width	15.4 mm
Height	50 mm
Length	50 mm
Degree of protection (IP)	IP67
Active area material of sensor	glass
Housing material	Zinc die-cast
Ambient temperature	-10 - 50 °C

Optical features

Laser class	Class 2
Light source	Laser diode, red light
Light beam form	Point
Wavelength of the sensor	650 nm
focus	80 mm
Light spot diameter at focal point	0.05 mm

Other features

Operational mode	Background suppression
Reference medium / object	Material with 90% reflectivity

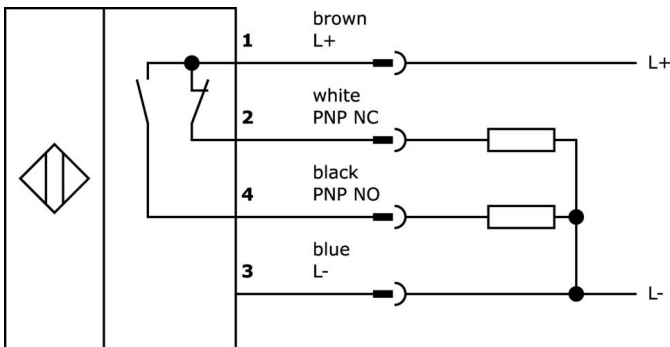
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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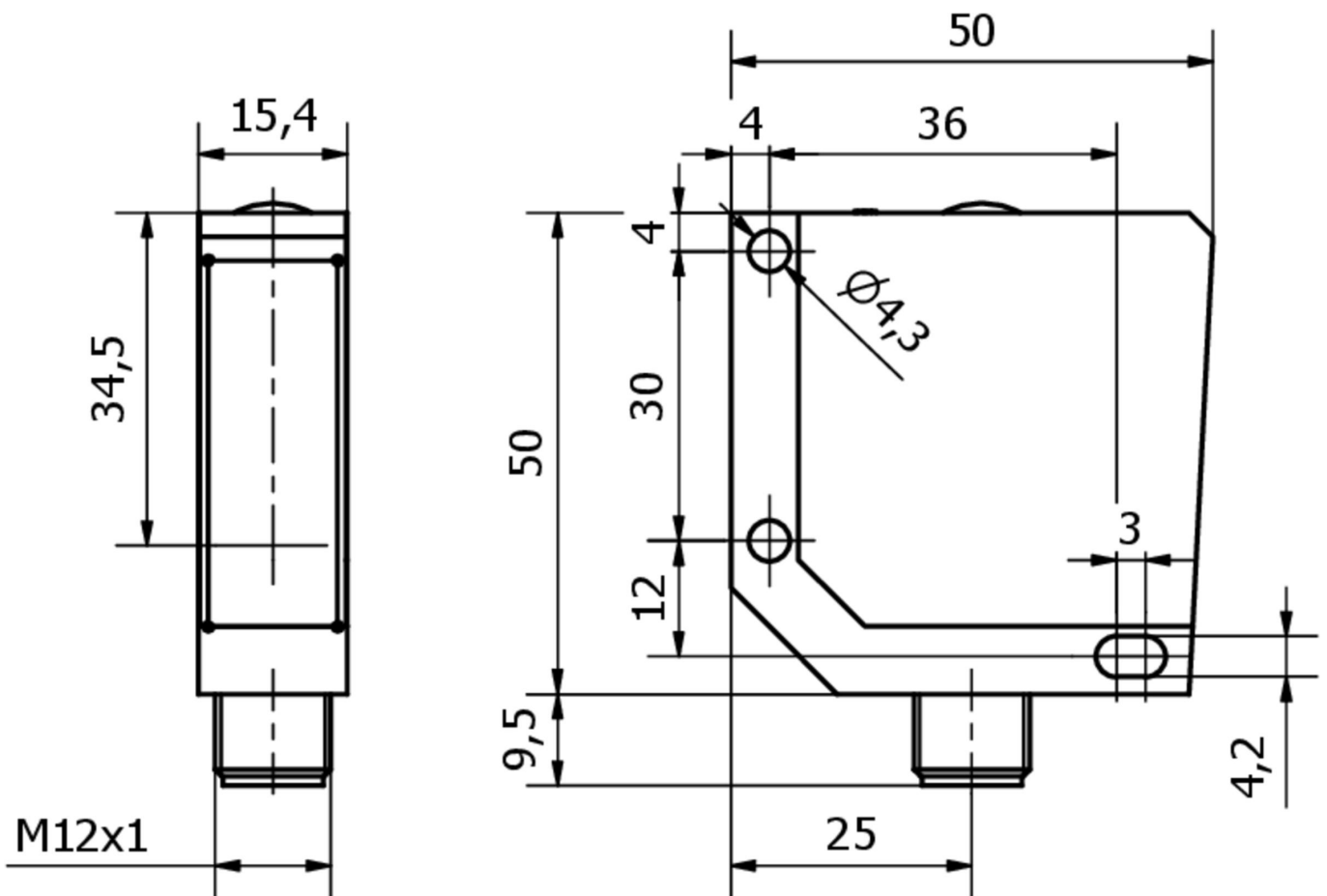
More

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	125 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

VK003020



Cable socket, angular, self-assembly, screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 socket 4-pin, IP67, PBT

VK003024



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Female (socket) 4pin, IP67, PBT

VK030F23



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm², PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK030F26



Connection cable, 0.3m, M12 socket 4-pin straight, M12 connector 4-pin straight, 4x0.34mm², PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK200421



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silic...

VK500421



Connection cable, 5m, M12 Female (socket) 4pin Angular, Free conductor end 4pin, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, ...

VK205321



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicon...

VK205325



Connection cable, 2m, M12 Female (socket) 4pin Straight, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silico...

VK200321



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, 250V, -40-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

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.