

PR160470

Laser sensors • Retro-reflective sensors

Sensor laser, reflex, 48x35x12mm, laser diode, red light, dot, Sn: 5500, 10-30V DC, PNP exclusive-OR, M8 connector, IP67, zinc diecast+glass, With polarizing filter



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	0.1 ms
Display	LED display
Type of switching function	Exclusive-OR
Type of electrical connection	Connector M8
Type of switching output	PNP
Rated switching current	100 mA
Short-circuit protection	Yes
Laser power	1 mW
No-load current	40 mA
Switching distance	0 - 5000 mm
Switching frequency	5000 Hz
Voltage drop	1.8 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.1 ms
Absolute repeat accuracy	0.1 mm
Operating voltage (DC)	10 - 30 V
With polarizing filter	Yes
Interference suppression	Yes

Mechanical features

Design	Cuboid
Width	12.4 mm
Height	48 mm
Length	35 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
Min. object size	3 mm
Wavelength of the sensor	650 nm
focus	400 mm

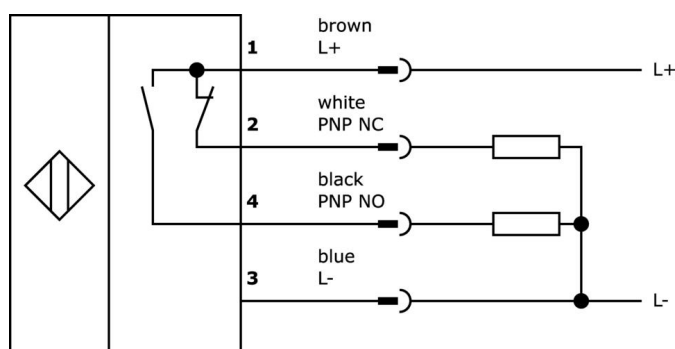
Classification

ETIM 8	EC002717 Retro-reflective sensor
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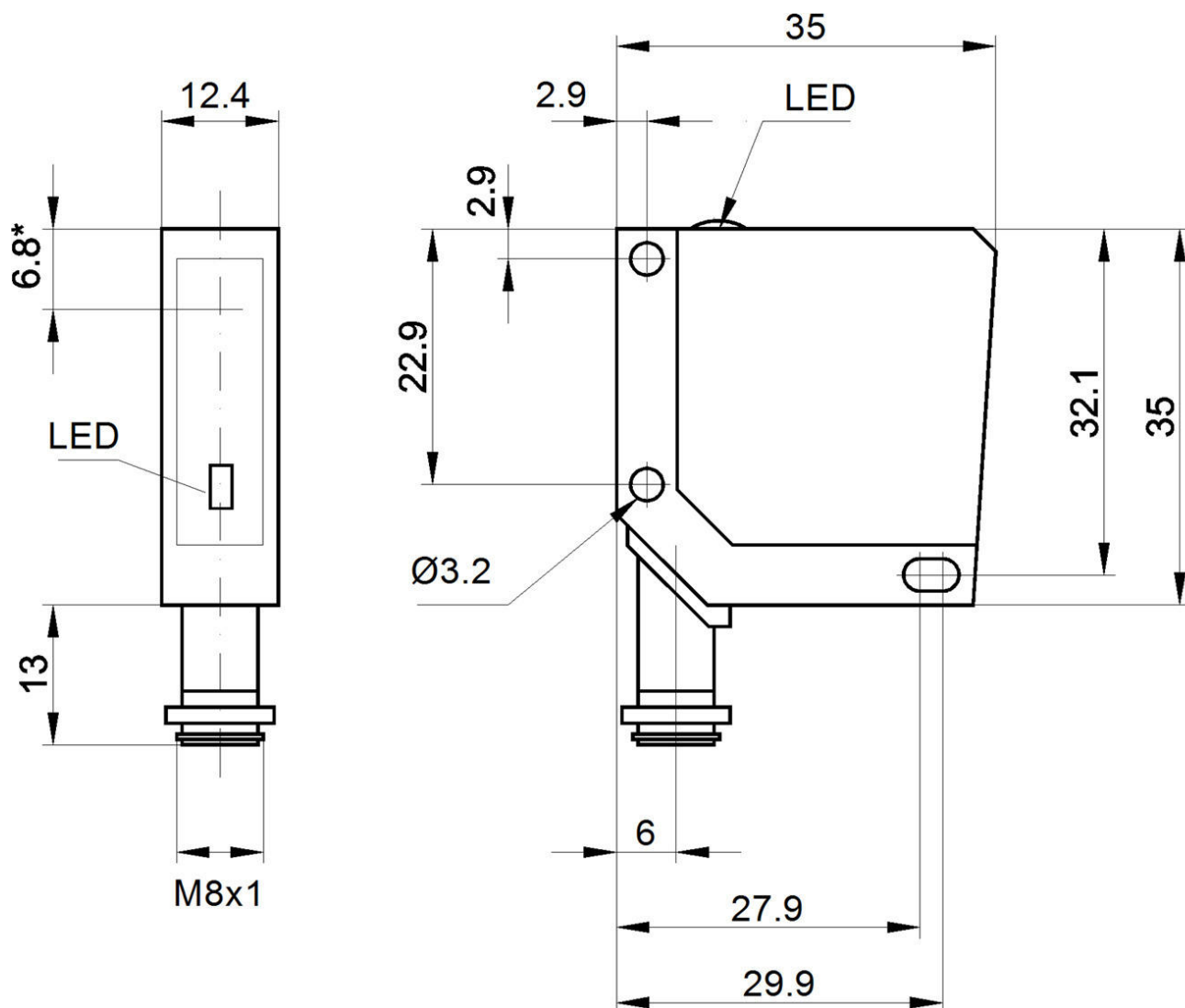
More

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	60 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection

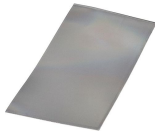


Dimensional drawing



Extract accessories program

AP000027



accessories laser, reflector,
100x50mm, Self-adhesive, -40-
70°C, Plastic+Plastic, Polarized,
Punchable and cuttable

AP000035



accessories laser, reflector,
6x59x20mm, Screw hole, 2xØ4.
5mm, -40-70°C, IP67,
PMMA+PMMA, Polarized,
Microprisms

VK200471



Connection cable, 2m, M8 socket
4-pin angular, free cable end, 4x0.
34mm², PUR (polyurethane), Ø4.
7mm, -30-90°C, IP67, LED, suitable
for trailing chain and torsion
resistant, oils and cooling
lubricants, welding area, silicone-
free

VK500471



Connection cable, 5m, M8 socket
4-pin angular, free cable end 4-
pin, 4x0.34mm², PUR
(polyurethane), Ø4.7mm, -30-
90°C, IP67, LED, suitable for
trailing chain and torsion resistant,
oils and cooling lubricants,
welding area, silicone-free

VK003071



Cable socket, Angular, Suitable for
self-assembly, Soldering
connection, Ø3.5-5mm, 4A, 30V, -
40-85°C, M8 Female (socket) 4pin,
IP67, Brass

VK003075



Cable socket, Straight, Suitable for
self-assembly, Soldering
connection, Ø3.5-5mm, 4A, 30V, -
40-85°C, M8 Female (socket) 4pin,
IP67, Brass

VK03A247



Connection cable, 0.3m, M8
socket 4-pin straight, M8
connector 3-pin straight, 3-core,
PUR (polyurethane), suitable for
trailing chain and torsion-
resistant, oils and cooling
lubricants, welding area, silicone-
free

VK03C825



Connection cable, 0.3m, M8
socket 4-pin angular, M8
connector 3-pin straight, 3-core,
PUR (polyurethane), suitable for
trailing chain and torsion resistant,
oils and cooling lubricants,
welding area, silicone-free

AY000118



accessories sensor, Fixture kit,
Metal, ball joint

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.