

## PE080270

### Laser sensors • Through-beam sensors receivers

Sensor laser, through-beam sensor receiver, M8x1 66lang, aperture Ø0.5mm, Sn: 1.5m, 12-32V DC, PNP/NPN push-pull, M8 plug-in connector 3-pin, IP67, brass nickel-plated+glass, red light unpolarized

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

Resolution	0.005 mm
Type of switching function	Normally closed (NC for PNP) Normally open (NO for NPN)
Type of electrical connection	Connector M8
Type of switching output	Push-pull
Rated switching current	100 mA
Short-circuit protection	Yes
No-load current	30 mA
No-load current, receiver	30 mA
Number of pins	3
Switching distance	0 - 1500 mm
Switching frequency	1000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Absolute repeat accuracy	0.005 mm
Operating voltage (DC)	12 - 32 V

**Mechanical features**

Design	Cylinder, screw-thread
Aperture diameter	0.5 mm
Thread length	36 mm
Thread pitch	1 mm
Storage temperature	-20 - 85 °C
Length	66 mm
Surface	nickel-plated
Degree of protection (IP)	IP67
Active area material of sensor	glass
Housing material	Brass
Thread dimension	M8
Ambient temperature	-20 - 50 °C

**Optical features**

Filter	Interference filter
Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	670 nm

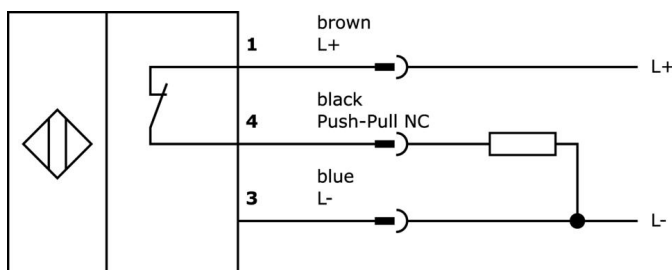
**Classification**

ETIM 8	EC002716 Through-beam photoelectric sensor
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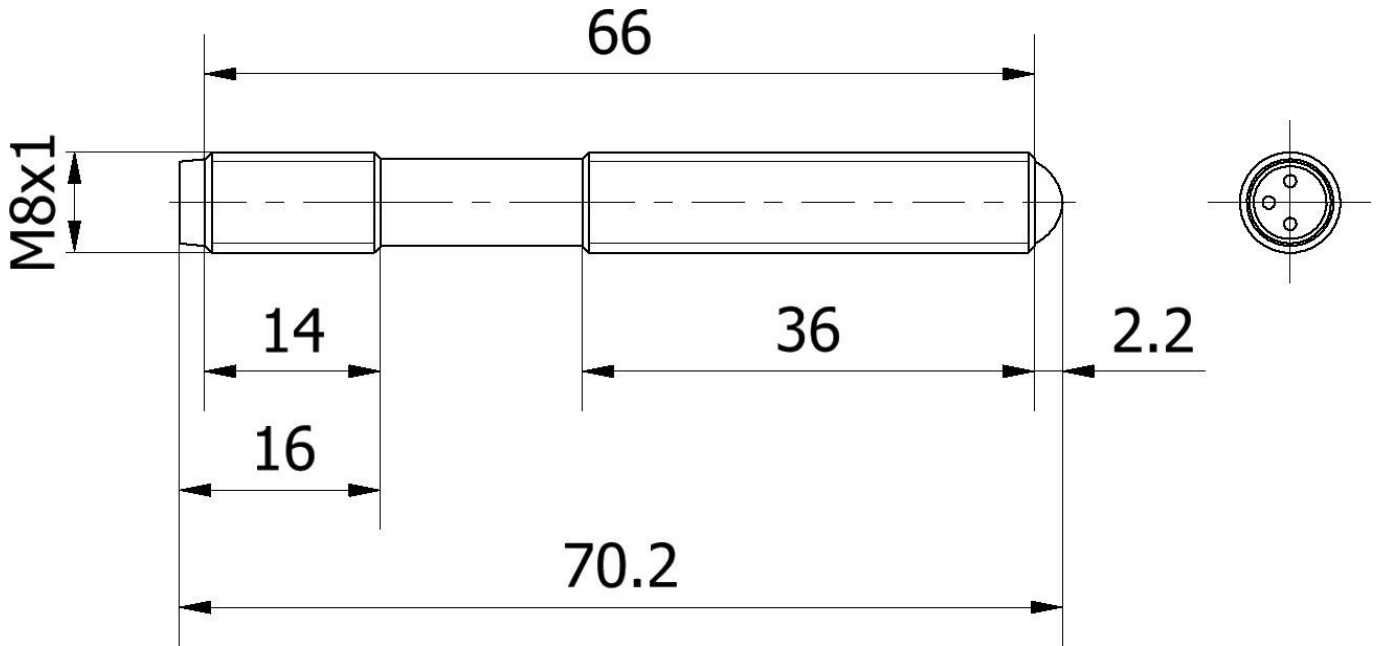
**More**

IPF Product Group	160 laser sensor
packaging dimensions	123 x 77 x 25 mm
gross weight	50 g
Customs tariff number	85365019
WEEE number	40951076
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



**Extract accessories program**

**VK030F70**

Connection cable, 0.3m, M8 socket 3-pin angular, M8 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), 60V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F74**

Connection cable, 0.3m, M8 socket 3-pin straight, M8 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), 60V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F72**

Connection cable, 0.3m, M8 socket 3-pin angular, M8 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK060F72**

Connection cable, 0.6m, M8 socket 3-pin angular, M8 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F82**

Connection cable, 0.3m, M8 socket 3-pin angular, M12 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK060F82**

Connection cable, 0.6m, M8 socket 3-pin angular, M12 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK003070**

Cable socket, Angular, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 60V, -40-85°C, M8 Female (socket) 3pin, IP67, Brass

**VK003074**

Cable socket, Straight, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 60V, -40-85°C, M8 Female (socket) 3pin, IP67, Brass

**VK200271**

Connection cable, 2m, M8 Female (socket) 3pin Angular, Free conductor end, 3x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.3mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silico...

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.