

# OS120023

## Optical sensors • Through-beam sensors transmitters

Sensor Optical, through-beam sensor Transmitter, M12x1 66lang, Sn: 15m, 15-30V DC, M12 connector 3-pin, IP67, stainl. steel, infrared light

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

Type of electrical connection	Connector M12
No-load current	30 mA
No-load current, transmitter	30 mA
Number of pins	3
Switching distance	0 - 15000 mm
Clock frequency of the transmitter	11.7 kHz
Reverse polarity protection	Yes
Operating voltage (DC)	15 - 30 V

### Mechanical features

Design	Cylinder, screw-thread
Thread length	40 mm
Thread pitch	1 mm
Length	66 mm
Shock resistance	30 g
Degree of protection (IP)	IP67
Vibration resistance	55 Hz
Housing material	Stainless steel
Thread dimension	M12
Ambient temperature	-20 - 60 °C

**Optical features**

Light source	Infrared light
Light beam form	Point
Wavelength of the sensor	880 nm
Angle of beam spread	20 °

**Other features**

Features	with test input
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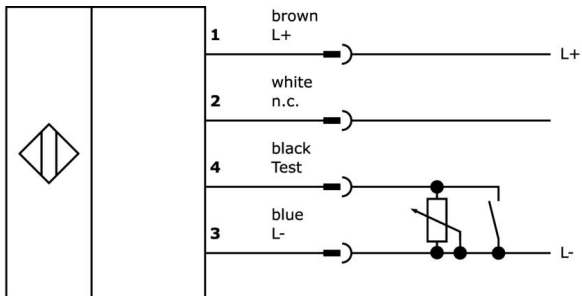
**Classification**

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

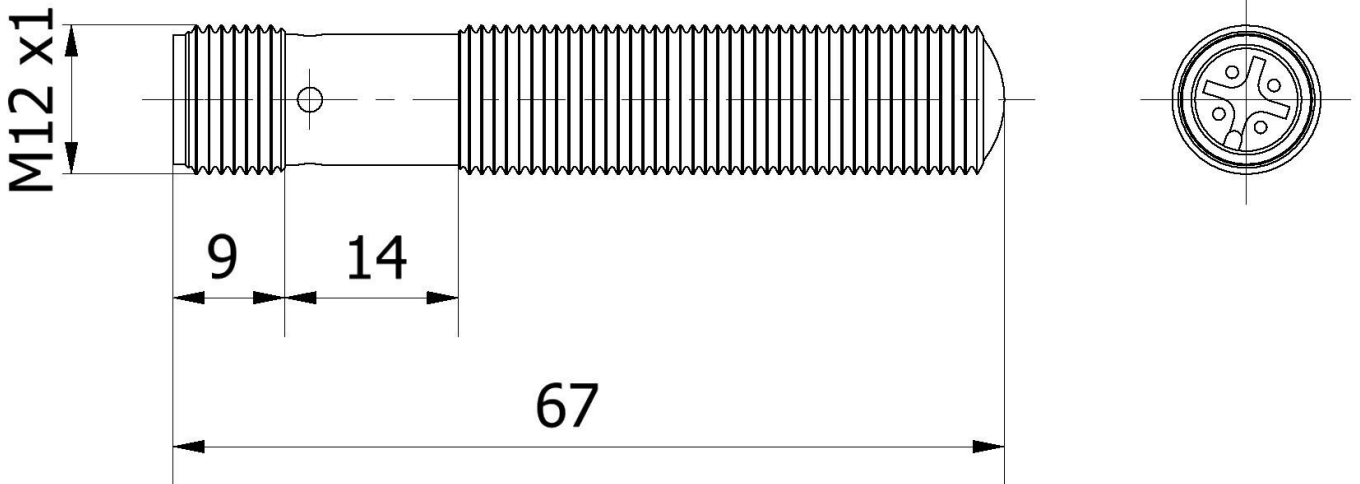
IPF Product Group	101 high performance through-beam sensors and amplifiers
packaging dimensions	123 x 77 x 25 mm
gross weight	40 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



Test input: Transmitter off = 0V Transmitting power adjustable via 10KΩ potentiometer

**Dimensional drawing**



**Extract accessories program**

**AO000293**



accessories optical, Infrared spotfinder, Plastic, With LED display, Signal tone

**VK003021**



Cable socket, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

**VK003025**



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

**VK030F62**



Connection cable, 0.3m, M12 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

**VK060F62**



Connection cable, 0.6m, M12 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

**VK030F21**



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm<sup>2</sup>, 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F25**



Connection cable, 0.3m, M12 socket 4-pin straight, M12 connector 4-pin straight, 4x0.34mm<sup>2</sup>, PUR (polyurethane), 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F23**



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm<sup>2</sup>, 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, 4x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils 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

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**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.