

## OT080176

### Optical sensors • Diffuse reflection sensors with background suppression

Sensor Optical, diffuse reflection sensor, M8x1 41long, Sn: 7-30, 10-30V DC, 1x PNP NO, M8 plug-in connector 3-pin, IP67, stainl. steel+PMMA, 450Hz, red light unpolarized, dot

including Nut, Toothed washer

- / Stainless steel housing
- / Setting by potentiometer
- / short design



### visible red light Point Source LED

Optical sensors operate without contact. They detect objects, regardless of their nature (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmission and reception of light. Three variants are distinguished: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. When the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. in the case of 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. With the diffuse reflection sensor, the transmitter and receiver are located 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	1.11 ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Connector M8
Type of switching output	PNP
Rated switching current	100 mA
Setting procedure	Potentiometer
Short-circuit protection	Yes
No-load current	15 mA
Number of pins	3
Reaction time	1.11 ms
Residual ripple	5 %
Switching distance	7 - 30 mm
Switching frequency	450 Hz
Voltage drop	0.7 V
Scanning function	Light switching
Reverse polarity protection	Yes
Operating voltage (DC)	10 - 30 V

**Mechanical features**

Design	Cylinder, screw-thread
Diameter	8 mm
Thread length	21.2 mm
Thread pitch	1 mm
Length	41.3 mm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Stainless steel 1.4305
Thread dimension	M8
Ambient temperature	-5 - 55 °C

**Optical features**

Light source	Polarity free red light
Light exit	axial
Light beam form	Point
Wavelength of the sensor	670 nm

**Other features**

Reference medium / object	Material with 90% reflectivity
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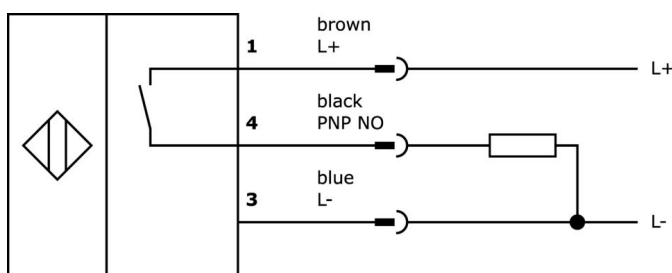
**Classification**

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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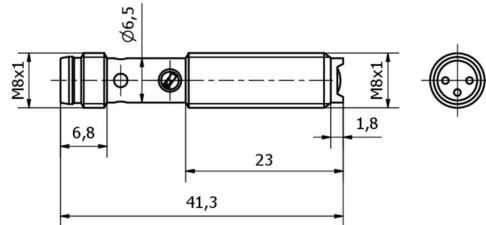
**More**

IPF Product Group	100 optical sensors
packaging dimensions	160 x 100 x 10.5 mm
gross weight	17 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes
MTTF value	76 year(s)

**Connection**



**Dimensional drawing**



**Extract accessories program**

**AY000162**



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

**AY000159**



accessories sensor, Mounting pipe, Ø12mm 200long, Aluminum Anodised

**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

**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

**VK030F80**



Connection cable, 0.3m, M8 socket 3-pin angular, M12 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

**VK030F84**



Connection cable, 0.3m, M8 socket 3-pin straight, M12 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

**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

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.