

## OT080176

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

Sensor Optical, diffuse reflection sensor, M8x1 41long, Sn: 7-30, 10-30V diagnostic coverage, 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	1.11ms
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	100mA
Setting procedure	Potentiometer
Short-circuit protection	Yes
No-load current	15mA
Number of pins	3
Reaction time	1.11ms
Residual ripple	5%
Switching distance	7 - 30mm
Switching frequency	450Hz
Voltage drop	0.7V
Scanning function	Light switching
Reverse polarity protection	Yes
Operating voltage (DC)	10 - 30V

**Mechanical features**

Design	Cylinder, screw-thread
Diameter	8mm
Thread length	21.2mm
Thread pitch	1mm
Length	41.3mm
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	670nm

**Other features**

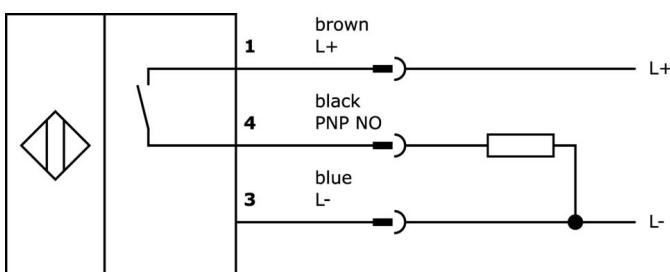
Reference medium / object	Material with 90% reflectivity
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**Classification**

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**

**Installation**

Mounting / installation may only be carried out by a qualified electrician!

**Disposal****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.

For suitable connection and mounting accessories, please refer to our website [www.ipf-electronic.com](http://www.ipf-electronic.com).

**Dimensional drawing**