

## OR120106

### Optical sensors • Retro-reflective sensors

sensor optical, reflective, M12x1 50long, Polarized red light, Point, Sn: 1500, 10-35V DC, PNP NO (NO), Cable 2m PVC, IP67, Brass Chrome-plated+Glass, With polarizing filter

including 2x Nut, 2x Toothed washer



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

Response/decay time	0.5ms
Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Cable
Type of switching output	PNP
Rated switching current	200mA
Readiness delay	20ms
Short-circuit protection	Yes
No-load current	15mA
Line diameter	5mm
Residual ripple	20%
Switching distance	0 - 1500mm
Switching frequency	1000Hz
Voltage drop	2V
Clock frequency of the transmitter	15kHz
Scanning function	Dark switching
Reverse polarity protection	Yes
Decay time	0.5ms
Operating voltage (DC)	10 - 35V
With polarizing filter	Yes

**Mechanical features**

Number of cores	3
Conductor cross-section	0.34mm <sup>2</sup>
Design	Cylinder, screw-thread
Diameter	12mm
Thread length	50mm
Thread pitch	1mm
Cable length	2m
Length	50mm
Maximum tightening torque	10Nm
Surface	Chrome-plated
Degree of protection (IP)	IP67
Active area material of sensor	glass
Housing material	Brass
Material of cable sheath	Plastic (PVC)
Thread dimension	M12
Ambient temperature	-25 - 55°C

**Optical features**

Light source	Polarized red light
Light beam form	Point
Wavelength of the sensor	660nm

**Other features**

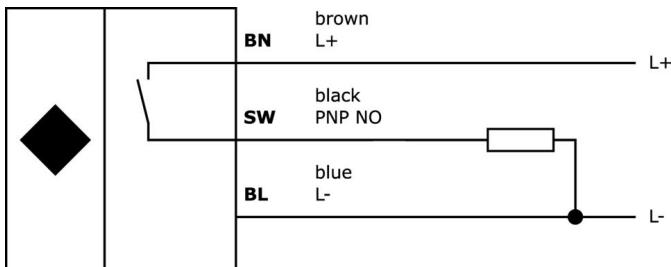
Reference medium / object	AO000007
Ambient temperature	-25 - 55°C

**Classification**

ETIM 8	EC002717 Retro-reflective sensor
--------	----------------------------------

**More**

IPF Product Group	100 optical sensors
packaging dimensions	200 x 150 x 20 mm
gross weight	110 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

**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**