

# OR189420

## Optical sensors • Retro-reflective sensors

Sensor Optical, reflex, M18x1 37long, red light polarized, point, Sn: 30-5500, 10-30V DC, PNP exclusive-OR, M12-connector 4-pin, IP67, stainless steel+PMMA, With polarizing filter

including Nut, Toothed washer

- / Stainless steel housing**
- / Polarizing filter**
- / IO-Link**
- / Suppression of mutual interference**



**short design**  
**large detection range**

Optical sensors work contactless. They detect objects, regardless of their properties (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmitter and receiver of light. There are three different versions: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. in 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. 3. the diffuse reflection sensor has a transmitter and receiver 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	0.34 ms
Display	LED display
Type of switching function	Exclusive-OR
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	200 mA
No-load current	15 mA
Number of pins	4
Reaction time	0.34 ms
Residual ripple	10 %
Switching distance	30 - 5500 mm
Switching frequency	1450 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.34 ms
Supported communication interface	IO-Link
Operating voltage (DC)	10 - 30 V
With polarizing filter	Yes

**Mechanical features**

Design	Cylinder, screw-thread
Thread length	24 mm
Thread pitch	1 mm
Length	37 mm
Maximum tightening torque	20 Nm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Stainless steel 1.4301
Thread dimension	M18
Ambient temperature	-25 - 65 °C

**Optical features**

Light source	Polarized red light
Light beam form	Point
Wavelength of the sensor	630 nm
Light spot diameter at the start of the measuring range	0 mm
Light spot diameter at the end of the measuring range	110 mm

**Other features**

IO-Link version	V1.0.1
Reference medium / object	AO000007

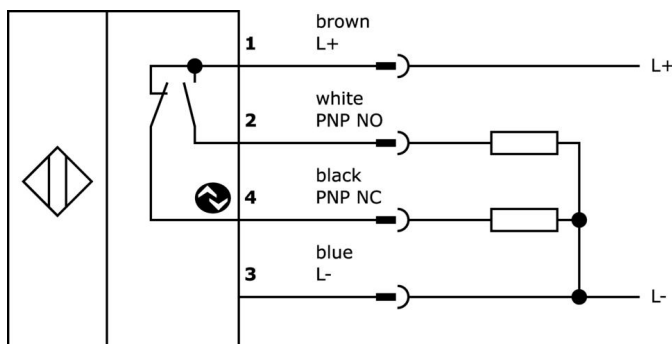
**Classification**

ETIM 8	
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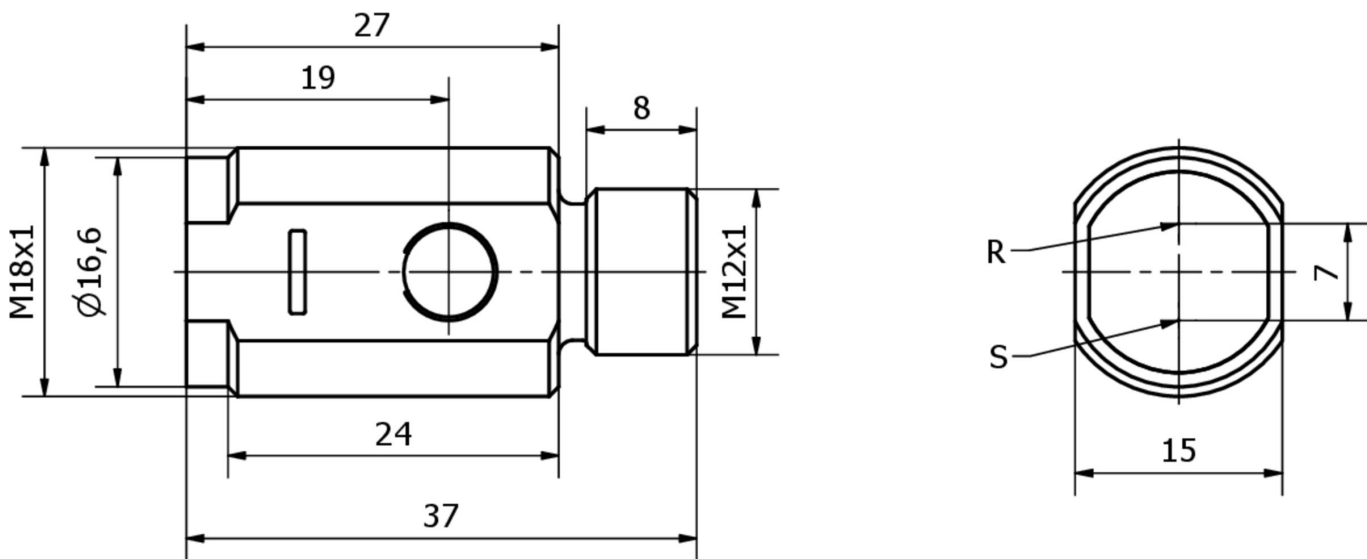
**More**

IPF Product Group	100 optical sensors
packaging dimensions	210 x 185 x 20 mm
gross weight	43 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes
MTTF value	652 year(s)

**Connection**



**Dimensional drawing**



**Extract accessories program**

**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

**VK205321**



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane),  $\varnothing 5.5$ mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicon...

**VK205325**



Connection cable, 2m, M12 Female (socket) 4pin Straight, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane),  $\varnothing 5.5$ mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silico...

**VK003020**



Cable socket, angular, self-assembly, screw connection,  $\varnothing 3-6$ . 5mm, 4A, 240V, -25-90°C, M12 socket 4-pin, IP67, PBT

**VK003024**



Cable socket, Straight, Suitable for self-assembly, Screw connection,  $\varnothing 3-6.5$ mm, 4A, 240V, -25-90°C, M12 Female (socket) 4pin, IP67, PBT

**AY000162**



Accessories, magnetic,  $\varnothing 43$ mm, neodymium-iron-boron, inside thread M5, rubber

**AY000159**



accessories sensor, Mounting pipe,  $\varnothing 12$ mm 200long, Aluminum Anodised

**VK200321**



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane),  $\varnothing 4.7$ mm, 250V, -40-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil 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.
- /** Any software, drivers or IODD files that may be required to operate your device can be downloaded free of charge from our homepage: [www.ipf-electronic.com](http://www.ipf-electronic.com)