

## OT120120

### Optical sensors • Diffuse reflection sensors with intensity differentiation

sensor optical, diffuse-reflection sensor, M12x1 80long, Sn: 30-200, 10-30V DC, 1x PNP NO (NO), Connector M12 4pin, IP65, Brass Nickel-plated+Plastic, 0.5kHz, Infrared light, Point, Manual adjustment

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

Response/decay time	1 ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	200 mA
Setting procedure	Manual adjustment
Short-circuit protection	Yes
No-load current	42 mA
Number of pins	4
Switching distance	30 - 200 mm
Switching frequency	500 Hz
Protection class	III
Voltage drop	1.8 V
Scanning function	Light switching
Reverse polarity protection	Yes
Decay time	1 ms
Operating voltage (DC)	10 - 30 V
Interference suppression	Yes

**Mechanical features**

Design	Cylinder, screw-thread
Thread length	42 mm
Thread pitch	1 mm
Length	80 mm
Surface	nickel-plated
Degree of protection (IP)	IP65
Active area material of sensor	Plastic
Housing material	Brass
Thread dimension	M12
Ambient temperature	-25 - 65 °C

**Optical features**

Light source	Infrared light
Light exit	axial
Light beam form	Point
Wavelength of the sensor	880 nm

**Other features**

Feeding technology	Yes
Reference medium / object	Material with 90% reflectivity

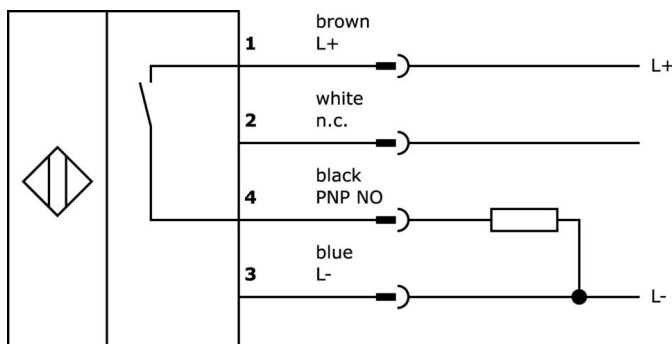
**Classification**

ETIM 8	EC001821 Light sensor energetic
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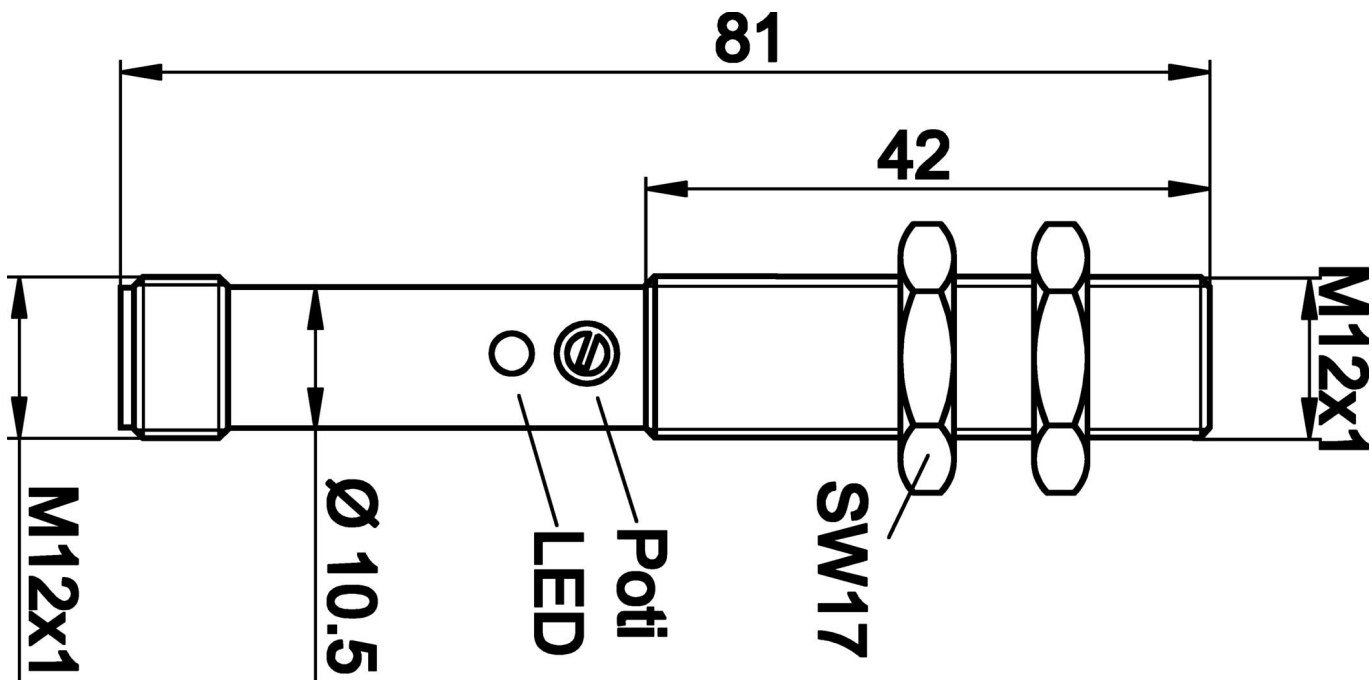
**More**

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	40 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



**Extract accessories program**

**AY000070**



Tool, Flat-tip screwdriver, 1.6x0.4mm, Grip design 1-component

**AY000154**



Tool, Screwdriver set, Internal hexagon 0.7mm, Internal hexagon 0.9mm, Internal hexagon 1.3mm, Internal hexagon 1.5mm, Internal hexagon 2mm, Slot 1.5mm, Slot 2mm, Slot 2.5mm, Chromium steel

**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

**VK030F60**



Connection cable, 0.3m, M12 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

**VK030F64**



Connection cable, 0.3m, M12 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

**VK003020**



Cable socket, angular, self-assembly, screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 socket 4-pin, IP67, PBT

**VK003024**



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Female (socket) 4pin, 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

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

**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.