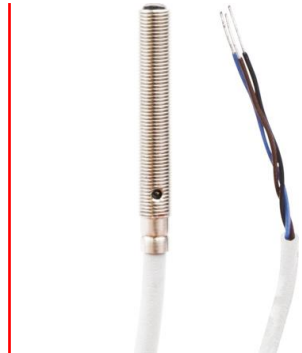


## OT05E347

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

sensor optical, diffuse-reflection sensor, M5x0.5 36long, Sn: 20, 10-30V DC, 1x PNP NO (NO), IO-Link, Cable 2m PUR (Polyurethane), IP67, V2A+PMMA, 1kHz, Infrared light, Point



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	0.5 ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Cable
Type of switching output	PNP
Rated switching current	100 mA
Readiness delay	20 ms
Short-circuit protection	Yes
No-load current	12 mA
Residual ripple	10 %
Switching distance	20 mm
Switching frequency	1000 Hz
Protection class	III
Voltage drop	2 V
Scanning function	Light switching
Reverse polarity protection	Yes
Decay time	0.5 ms
Supported communication interface	IO-Link
Operating voltage (DC)	10 - 30 V

**Mechanical features**

Number of cores	3
Conductor cross-section	0.14 mm <sup>2</sup>
Design	Cylinder, screw-thread
Thread length	30 mm
Thread pitch	0.5 mm
Cable length	2 m
Length	36 mm
Maximum tightening torque	1 Nm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Stainless steel (V2A)
Material of cable sheath	Plastic (PUR)
Thread dimension	M5
Ambient temperature	-25 - 65 °C
Line diameter	3.1 mm

**Optical features**

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

**Other features**

IO-Link version	V1.0.1
Feeding technology	Yes
Reference medium / object	Material with 90% reflectivity

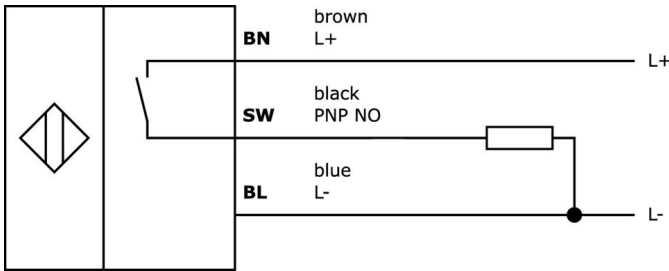
**Classification**

ETIM 8	EC001821 Light sensor energetic
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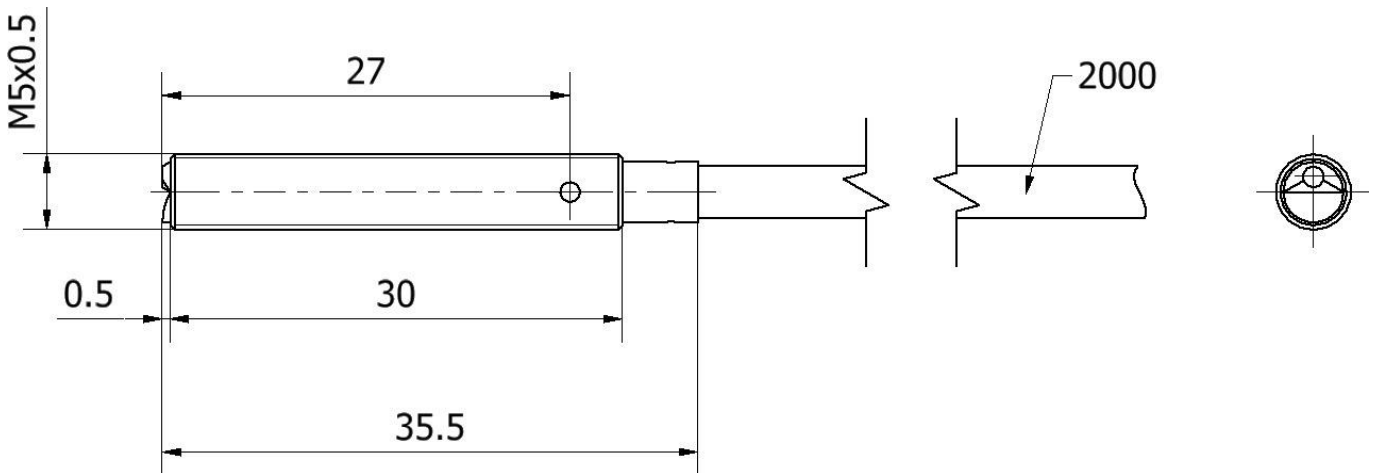
**More**

IPF Product Group	100 optical sensors
packaging dimensions	215 x 180 x 10 mm
gross weight	40 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



**Extract accessories program**

**AY000141**



Plastic sheath, Ø17mm, Inner diameter 10mm, -40-250°C, Glass fiber with silicone rubber, Short-term resistance to weld spatter 1200°C, Tensile strength 400N, Flexible, Flame retardant, yard good

**AY000115**



accessories sensor, Fixture kit, Metal, ball joint

**AY000162**



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

**VK003076**



Cable connector, Angular, Suitable for self-assembly, Soldering connection, 4A, 60V, -40-85°C, M8 Male (connector) 3pin, IP67, Brass

**VK003078**



Cable connector, Straight, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 60V, -40-85°C, M8 Male (connector) 3pin, IP67, Brass

**AY000018**



accessories sensor, Ø5mm, Aluminum, For sensor 5mm, for Wall mounting, Screw mounting

**AY000023**



accessories, Hexagon nut, M5x0.5, Wrench size 7mm, Brass Nickel-plated

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.
- / Any software, drivers or IOOD 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)