

OT370505

Optical sensors • Diffuse reflection sensors with background suppression

sensor optical, diffuse-reflection sensor, 36x25x14mm, Sn: 20-100, 10-30V DC, -30-70°C, 2x PNP/NPN Push-pull, Cable 5m, IP67 / IP69k, V4A+PMMA, 1kHz, Polarity free red light, Line, Manual adjustment



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	2
Display	LED display
Type of switching function	Normally open (NO for PNP) Normally closed (NC for NPN) Normally closed (NC for PNP) Normally open (NO for NPN)
Type of electrical connection	Cable
Type of switching output	Push-pull
Rated switching current	100 mA
Readiness delay	300 ms
Setting procedure	Manual adjustment
Short-circuit protection	Yes
No-load current	15 mA
Residual ripple	15 %
Switching distance	20 - 100 mm
Switching frequency	1000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Decay time	0.5 ms
Operating voltage (DC)	10 - 30 V

Mechanical features

Number of cores	4
Design	Cuboid
Width	14 mm
Height	35.5 mm
Cable length	5 m
Storage temperature	-30 - 70 °C
Length	25 mm
Degree of protection (IP)	IP67 / IP69k
Active area material of sensor	Plastic (PMMA)
Housing material	Stainless steel 1.4404
Ambient temperature	-30 - 70 °C
Line diameter	4 mm

Optical features

Light source	Polarity free red light
Light beam form	Line
Wavelength of the sensor	620 nm
Light spot diameter at focal point	6 mm

Other features

Operational mode	Background suppression
Reference medium / object	Material with 90% reflectivity

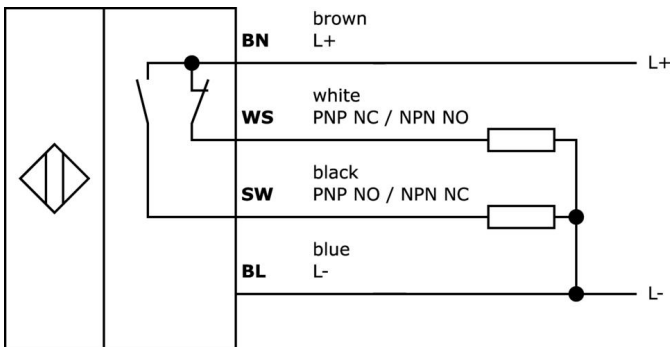
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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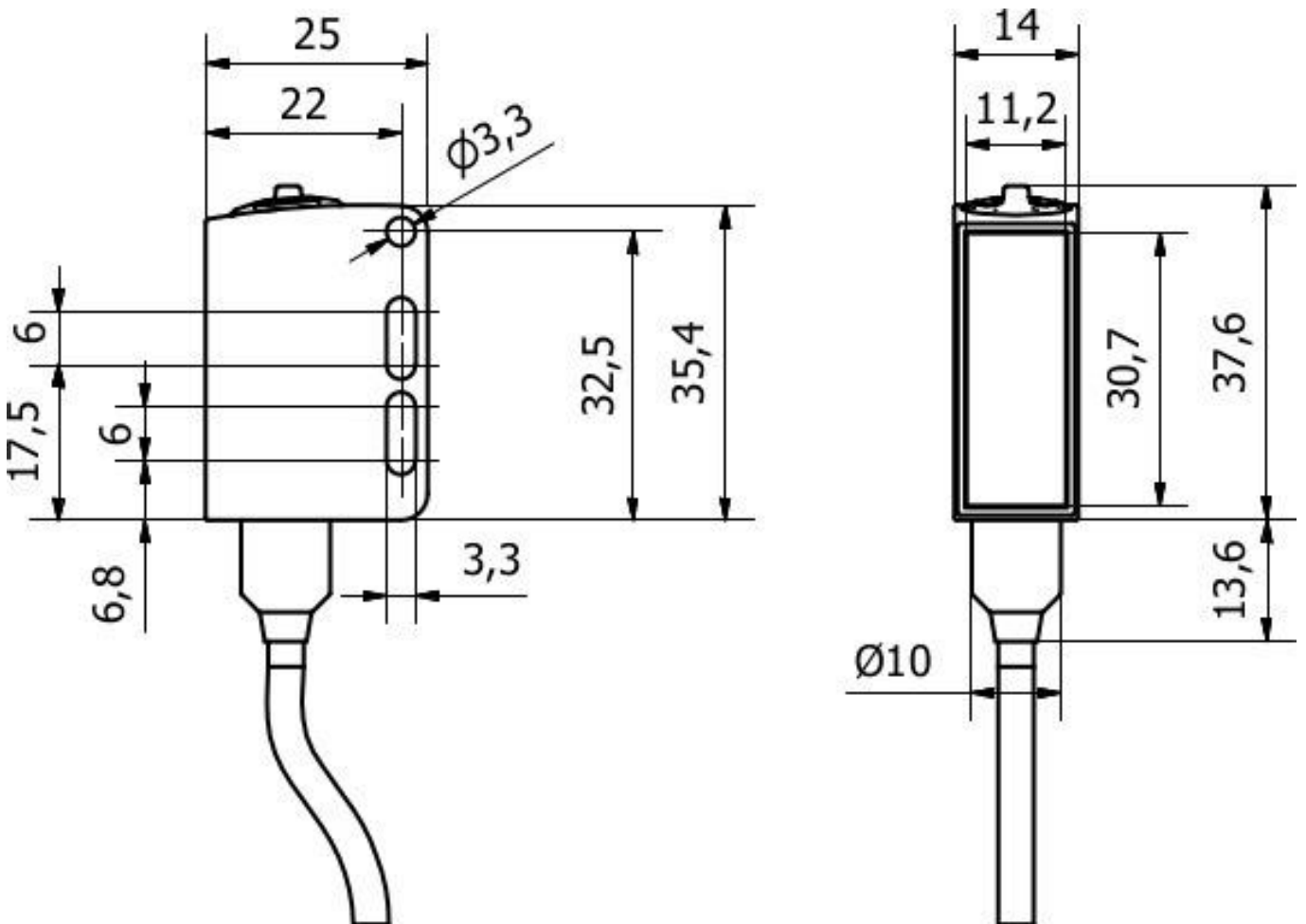
More

IPF Product Group	100 optical sensors
packaging dimensions	176 x 110 x 45 mm
gross weight	205 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program**AY000119**

accessories sensor, Fixture kit,
Metal, ball joint

AY000162

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

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

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.