

OT590580

Optical sensors • Diffuse reflection sensors with background suppression

Optical sensor, diffuse reflection sensor, 68x68x26mm, with time function, Sn: 200-1000, 12-24V DC, 2x PNP+NPN NC/NO, terminal, IP67, plastic ABS+plastic PC, 0.25kHz, infrared light, point, manual setting

including Screwdriver



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	2 ms
Number of switching outputs	2
Display	LED display
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Clamped terminal connection
Type of switching output	PNP/NPN
Turn-off delay	0,1 - 5 ms
Rated switching current	100 mA
Turn-on delay	0,1 - 5 s
Setting procedure	Manual adjustment
Relative hysteresis	10 %
Short-circuit protection	Yes
No-load current	45 mA
Switching distance	200 - 1000 mm
Switching frequency	250 Hz
Voltage drop	1 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Operating voltage (DC)	12 - 24 V
Dead zone	0 - 100
Time function	Yes

Mechanical features

Design	Cuboid
Width	26 mm
Height	68 mm
Length	68 mm
Shock resistance	50 g
Degree of protection (IP)	IP67
Vibration resistance	55 Hz
Active area material of sensor	Plastic (PC)
Housing material	Plastic (ABS)
Strong vibration / motion	Yes
Ambient temperature	-25 - 55 °C

Optical features

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

Other features

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

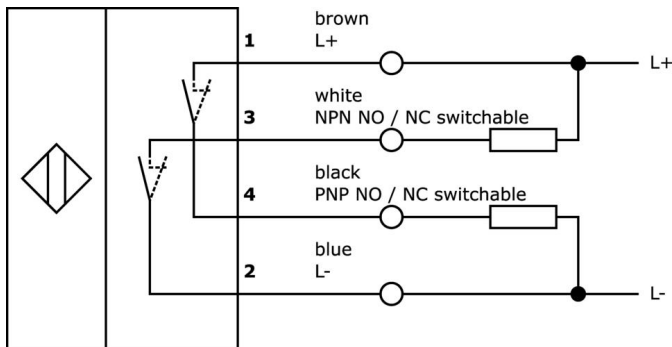
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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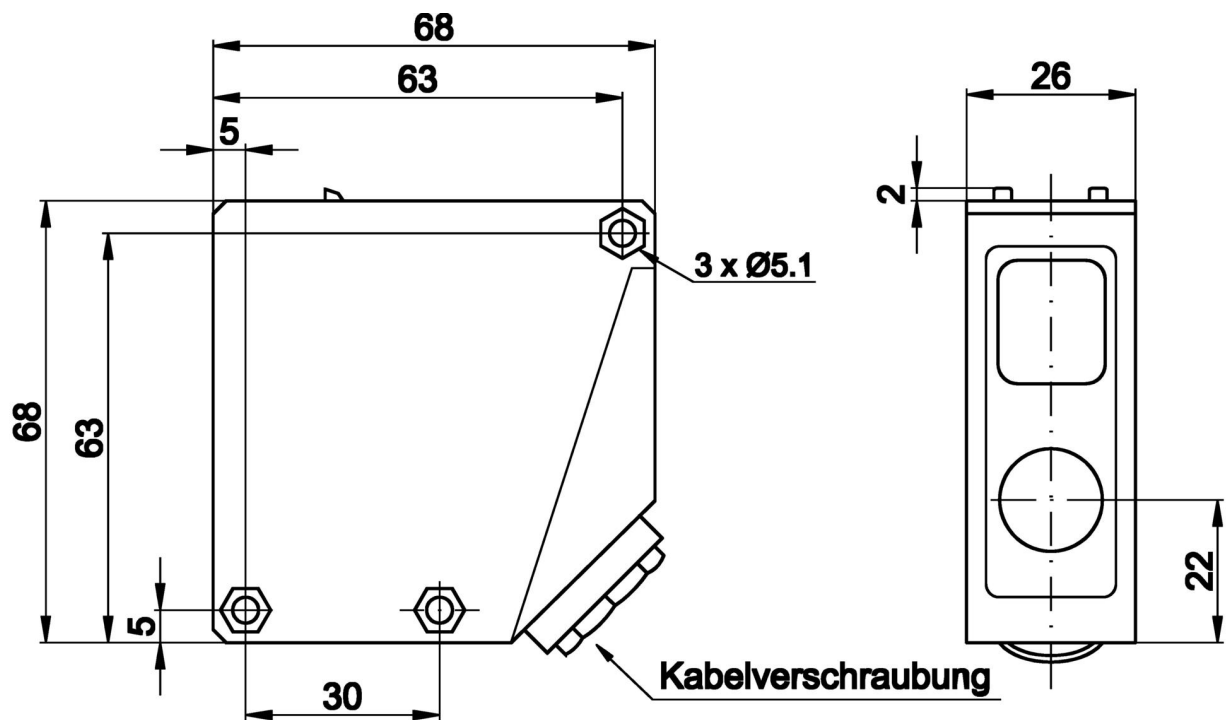
More

IPF Product Group	100 optical sensors
packaging dimensions	160 x 99 x 60 mm
gross weight	120 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



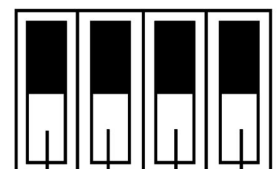
Funktionsreserve grün
Einstellung

Einstellung Anzugsverzögerung
Einstellung Abfallverzögerung

Anzeige Tastweite
Signal orange

DIP-Schalter

DIP-Schalter



Hell / Dunkel

Zeit n.c.

**Vorder- Hintergrund-
ausblendung**

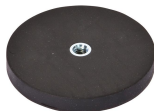
Extract accessories program

AO000293



accessories optical, Infrared spotfinder, Plastic, With LED display, Signal tone

AY000129



Accessories, magnetic, Ø66mm, neodymium-iron-boron, inside thread M6, rubber

AY000144



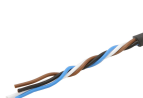
accessories sensor, Adapter plate, 3x30x85mm, Stainless steel 1.4305

AO000038



accessories optical, Mounting angle bracket, M5x0.5 29long, Mounting material for sensor, brackets, Steel, 90°

AV000018



Accessories, cable, 4x0.34mm², PUR (polyurethane), suitable for trailing chain, oils and cooling lubricants, sold by the meter

AV000118



Accessories, cable tail, 4x0.34mm², PUR (polyurethane), shield, suitable for trailing chain, oils and cooling lubricants, sold by the meter

AY000143



accessories sensor, Holder, 56x55x26mm, Aluminum Anodised, ball joint

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.