

OT180128

Optical sensors • Diffuse reflection sensors with background suppression

Optical sensor, diffuse reflection sensor, M18x1 75long, Sn: 10-120, 10-35V DC, 1x PNP NO, M12 plug connector 3-pin, IP67, chrome-plated brass+glass, 0.5kHz, red light unpolarized, point lateral, manual setting

including Nut, Toothed washer



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
Readiness delay	20 ms
Setting procedure	Manual adjustment
Relative hysteresis	10 %
Short-circuit protection	Yes
No-load current	25 mA
Number of pins	3
Switching distance	10 - 120 mm
Switching frequency	500 Hz
Voltage drop	2 V
Scanning function	Light switching
Reverse polarity protection	Yes
Decay time	1 ms
Operating voltage (DC)	10 - 35 V

Mechanical features

Design	Cylinder, screw-thread
Thread length	45 mm
Thread pitch	1 mm
Length	75 mm
Maximum tightening torque	20 Nm
Surface	Chrome-plated
Degree of protection (IP)	IP67
Active area material of sensor	glass
Housing material	Brass
Thread dimension	M18
Ambient temperature	-25 - 55 °C

Optical features

Light source	Polarity free red light
Light exit	Lateral
Light beam form	Point
Wavelength of the sensor	660 nm

Other features

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

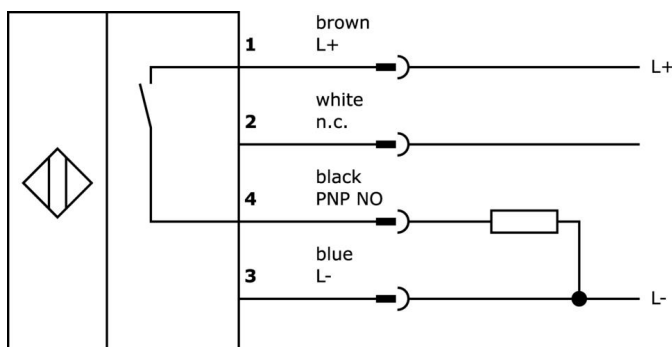
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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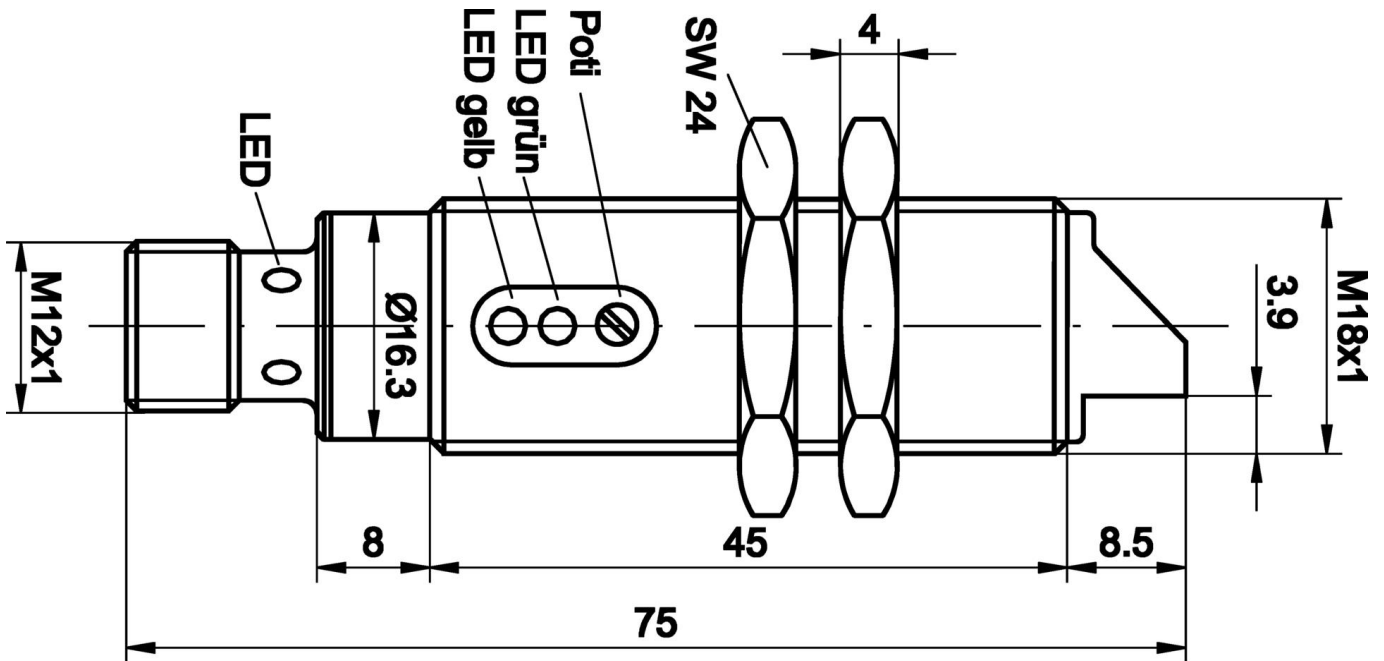
More

IPF Product Group	100 optical sensors
packaging dimensions	205 x 185 x 20 mm
gross weight	67 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

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

VK200021



Connection cable, 2m, M12 Female (socket) 3pin Angular, Free conductor end, 3x0.34mm², PUR (Polyurethane), Ø4.3mm, 250V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

VK200025



Connection cable, 2m, M12 Female (socket) 3pin Straight, Free conductor end, 3x0.34mm², PUR (Polyurethane), Ø4.3mm, 250V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

AY000117



accessories sensor, Fixture kit, Metal, ball joint

AY000162



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

VK200221



Connection cable, 2m, M12 Female (socket) 3pin Angular, Free conductor end, 3x0.34mm², PUR (Polyurethane), Ø4.3mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silic...

VK200225



Connection cable, 2m, M12 Female (socket) 3pin Straight, Free conductor end, 3x0.34mm², PUR (Polyurethane), Ø4.3mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silic...

AY000159



accessories sensor, Mounting pipe, Ø12mm 200long, Aluminum Anodised

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.