

OT18E285

Optical sensors • Diffuse reflection sensors with background suppression

sensor optical, diffuse-reflection sensor, M18x1 82long, Sn: 50-150, 10-30V DC, 1x PNP Anticoincidence, Connector M12 4pin, IP67, Brass Chrome-plated+PMMA, 0.5kHz, Polarity free red light, Point, Teach-In

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	2
Display	LED display
Type of switching function	Exclusive-OR
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	100 mA
Setting procedure	Teach-In
Short-circuit protection	Yes
No-load current	30 mA
Number of pins	4
Switching distance	50 - 150 mm
Switching frequency	500 Hz
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Operating voltage (DC)	10 - 30 V

Mechanical features

Design	Cylinder, screw-thread
Thread pitch	1 mm
Length	81.5 mm
Surface	Chrome-plated
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Brass
Thread dimension	M18
Ambient temperature	-25 - 55 °C

Optical features

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	630 nm

Other features

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

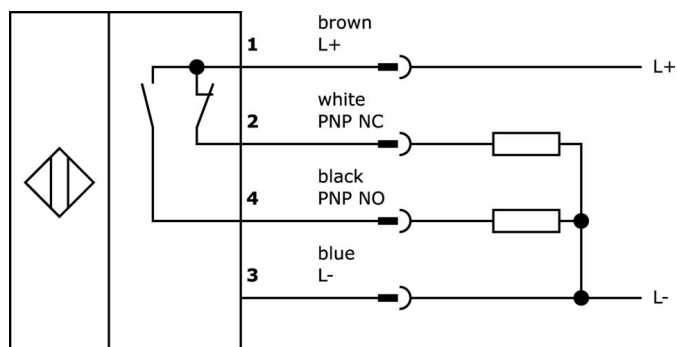
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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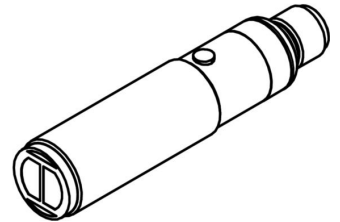
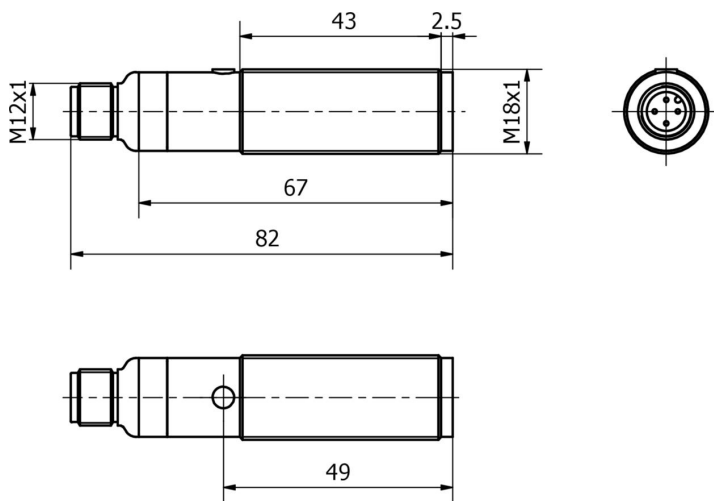
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	75 g
Customs tariff number	85365019
WEEE number	40951076
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AO98A353



accessories optical, Cleaning air
nozzle, M18x1, Metal

AO98E281



accessories optical, Cleaning air
nozzle, M18x1, Metal

AY000014



accessories sensor, Reduction
sleeve, M18, Plastic

VK205321



Connection cable, 2m, M12
Female (socket) 4pin Angular, Free
conductor end, 4x0.34mm², PUR
(Polyurethane), Ø5.5mm, 250V, -
25-90°C, IP67, Shielded, Suitable
for trailing chain and torsion
resistant, Oil and cooling
lubricants, Welding area, Silicon...

VK205325



Connection cable, 2m, M12
Female (socket) 4pin Straight, Free
conductor end, 4x0.34mm², PUR
(Polyurethane), Ø5.5mm, 250V, -
25-90°C, IP67, Shielded, Suitable
for trailing chain and torsion
resistant, Oil and cooling
lubricants, Welding area, Silico...

AY000162



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

AY000159



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

AY000117



accessories sensor, Fixture kit,
Metal, ball joint

VK200321



Connection cable, 2m, M12
Female (socket) 4pin Angular, Free
conductor end, 4x0.34mm², PUR
(Polyurethane), Ø4.7mm, 250V, -
40-90°C, IP67, Suitable for trailing
chain and torsion resistant, Oil 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.