

OT230320

Optical sensors • Diffuse reflection sensors with background suppression

Sensor Optical, diffuse reflection sensor, 50x50x23mm, Sn: 3-1200, 10-30V DC, PNP, NC/NO, M12 plug-in connector 4-pin, IP67, plastic ABS+plastic PMMA, red light, dot, manual setting



Optical sensors work contactless. They detect objects, regardless of their properties (e.g. shape, color, surface structure, material). The basic mode of operation is based on the transmitter and receiver of light. There are three different versions: 1. the through-beam sensor consists of two separate devices, a transmitter and a receiver, which are aligned with each other. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. in the reflex light barrier, the transmitter and receiver are located in one device. The transmitted light beam is reflected onto the receiver by a reflector to be mounted opposite. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. 3. the diffuse reflection sensor has a transmitter and receiver in one device. The transmitted light beam is reflected by the object 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	0.83 ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally closed contact/normally open contact
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	100 mA
Readiness delay	300 ms
Setting procedure	Manual adjustment
Short-circuit protection	Yes
No-load current	30 mA
Number of pins	4
Switching distance	3 - 1200 mm
Switching frequency	600 Hz
Protection class	II
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Operating voltage (DC)	10 - 30 V
Dead zone	0 - 3

Mechanical features

Design	Cuboid
Width	23 mm
Height	50 mm
Storage temperature	-20 - 80 °C
Length	50 mm
Degree of protection (IP)	IP67 / IP69k
Active area material of sensor	Plastic (PMMA)
Housing material	Plastic (ABS)
Ambient temperature	-20 - 60 °C

Optical features

Light source	Polarity free red light
Light beam form	Point
Triangulation	Background suppression
Wavelength of the sensor	640 nm

Other features

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

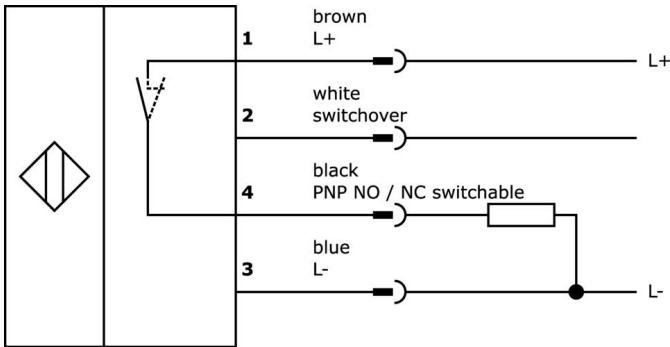
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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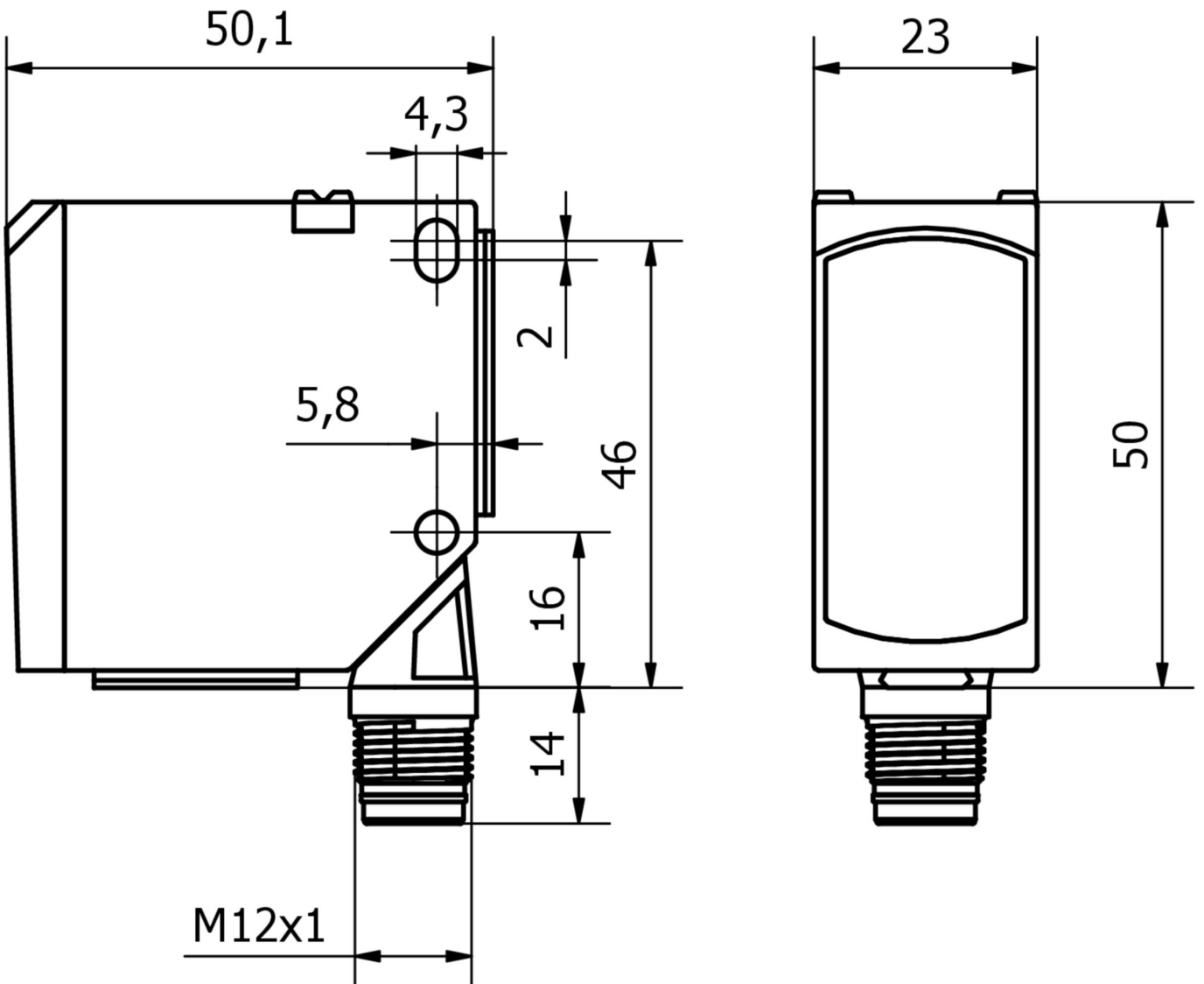
More

IPF Product Group	100 optical sensors
packaging dimensions	91 x 60 x 30 mm
gross weight	53 g
Customs tariff number	85365019
WEEE number	40951076
ATEX-compliant	No
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AV000084



accessories, Mounting angle bracket, 50x30x84mm, Angle, Steel

AY000119



accessories sensor, Fixture kit, Metal, ball joint

AY98A607



accessories sensor, Teflon cap, Ø16mm 16long, inner thread 12, Polytetrafluorethylene (PTFE)

NG400501



DC power supply, 1-phase, 125x114x40mm, 24-28V, 5A, 90-264V AC 50Hz, 90-264V AC 60Hz, 127-370V DC, screw connection, IP20, aluminum, stabilized, pulsed output voltage

VK000041



Adaption, M12 Female (socket) 4pin Straight, M8 Male (connector) 4pin Straight, 24V, -25-85°C, IP67, Oil and cooling lubricants, Welding area

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

VK200325



Connection cable, 2m, M12 Female (socket) 4pin Straight, 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

VK200421



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silic...

VK500421



Connection cable, 5m, M12 Female (socket) 4pin Angular, Free conductor end 4pin, 4x0.34mm², PUR (Polyurethane), Ø4.7mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, ...

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.