

OT590520

Optical sensors • Diffuse reflection sensors with background suppression

Optical sensor, diffuse reflection sensor, 68x68x26mm, Sn: 200-1000, 12-24V DC, 2x PNP+NPN NC/NO, M12 plug-in connector 4-pin, IP67, plastic ABS+plastic PC, 0.25kHz, infrared light, dot, 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	Connector M12
Type of switching output	PNP/NPN
Rated switching current	100 mA
Setting procedure	Manual adjustment
Relative hysteresis	10 %
Short-circuit protection	Yes
No-load current	45 mA
Number of pins	4
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

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

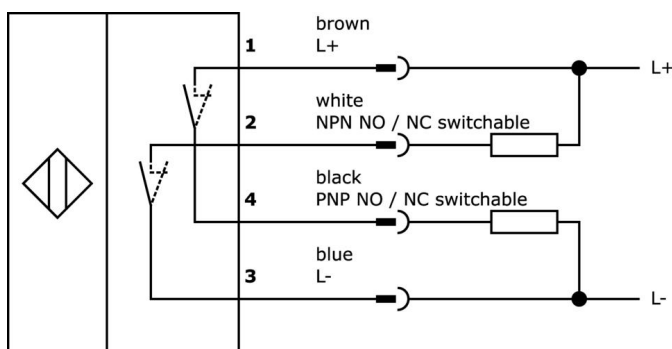
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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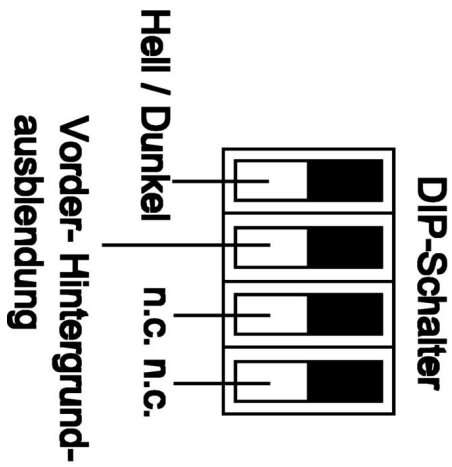
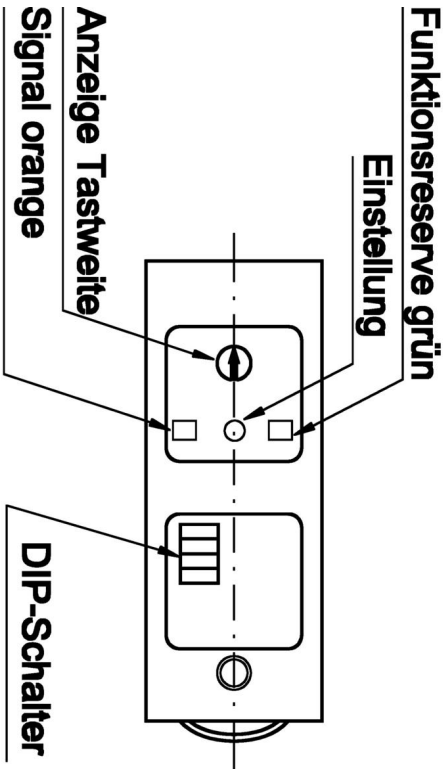
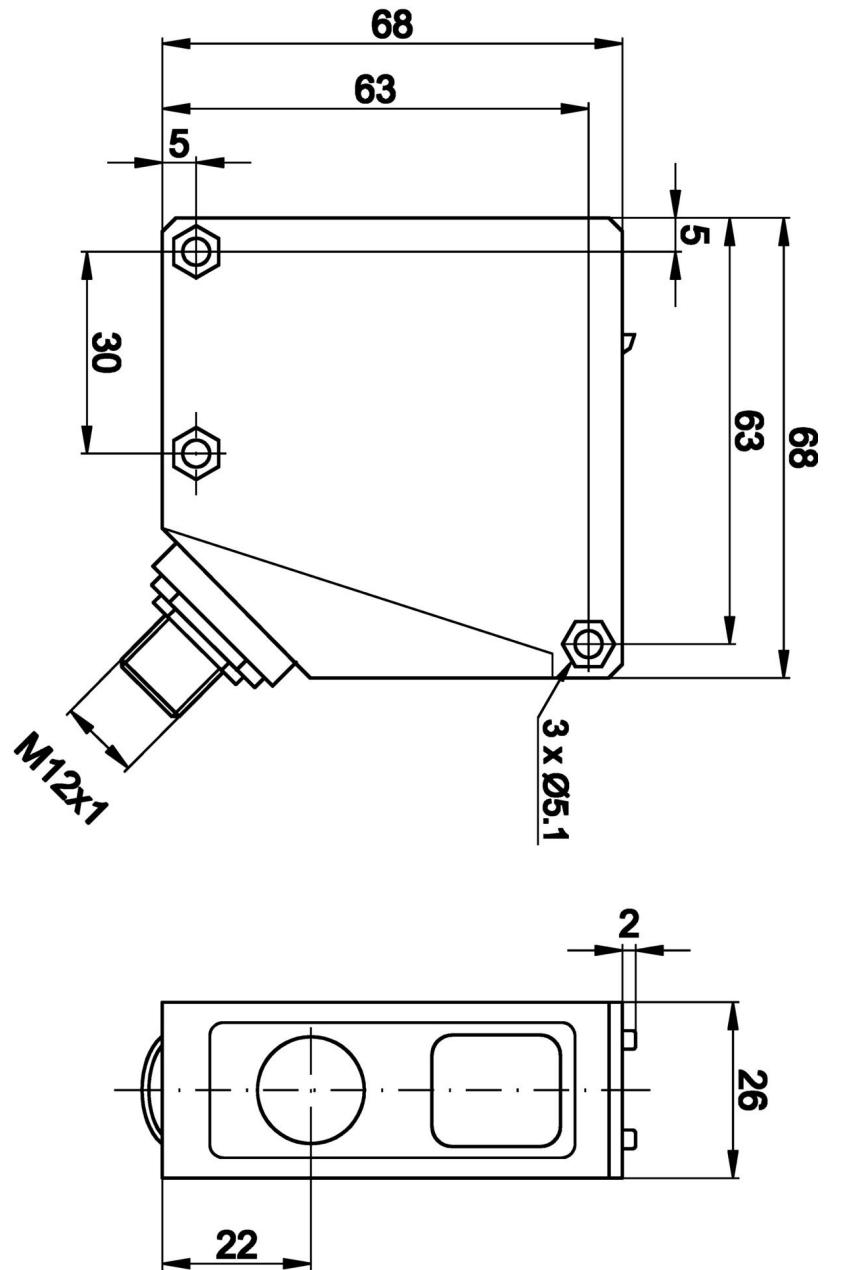
More

IPF Product Group	100 optical sensors
packaging dimensions	160 x 99 x 60 mm
gross weight	140 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

Connection




Dimensional drawing




Extract accessories program

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...

VK003020




Cable socket, angular, self-assembly, screw connection, Ø3-5mm, 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

VL600104




Logic module, 42x122x60mm, AND, 4-gang, 10-30V DC, 4-pin M12 socket on sensor side, 4-pin M12 connector on control side, IP67, plastic

VL600108



Logic module, 42x172x60mm, AND, 8fold, 10-30V DC, sensor side M12 Female (socket) 4pin, control side M12 Male (connector) 4pin, IP67, Plastic

VK030F23




Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm², PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK030F26



Connection cable, 0.3m, M12 socket 4-pin straight, M12 connector 4-pin straight, 4x0.34mm², PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK000041



Adaption, M12 Female (socket) 4pin Straight, M8 Male (connector) 4pin Straight, 24V, -25-85°C, IP67, 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.