

OTQ40170

Optical sensors • Diffuse reflection sensors with background suppression

Sensor Optical, diffuse reflection sensor, 45x6.2x4mm, Sn: 30, 11-30V DC, 1x PNP/NPN push-pull, M8 cable connector 4-pin 0.2m PVC, IP65, plastic ASA+PMMA, 1kHz, red light unpolarized, point



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	0.5 ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally open (NO for PNP) Normally closed (NC for NPN)
Type of electrical connection	Cable connector M8
Type of switching output	Push-pull
Turn-off delay	s
Rated switching current	50 mA
No-load current	30 mA
Number of pins	4
Switching distance	30 mm
Switching frequency	1000 Hz
Voltage drop	2 V
Scanning function	Light switching
Decay time	0.5 ms
Operating voltage (DC)	11 - 30 V
ardTEEL_Schutzfunktionen	Reverse polarity protection Short circuit protection

Mechanical features

Number of cores	3
Conductor cross-section	0.1 mm ²
Design	Cuboid
Width	4 mm
Height	44.8 mm
Cable length	0.2 m
Length	6.2 mm
Maximum tightening torque	0.25 Nm
Degree of protection (IP)	IP65
Active area material of sensor	Plastic (PMMA)
Housing material	Plastic ASA
Material of cable sheath	Plastic (PVC)
Ambient temperature	-10 - 50 °C

Optical features

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	660 nm
Light spot diameter at focal point	1 mm

Other features

Range of functions	Störunterdrückung
Reference medium / object	Material with 90% reflectivity

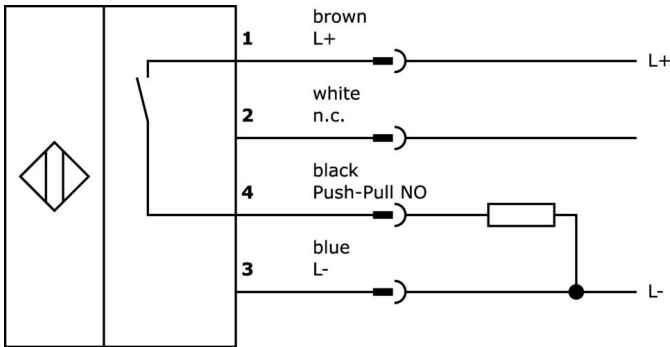
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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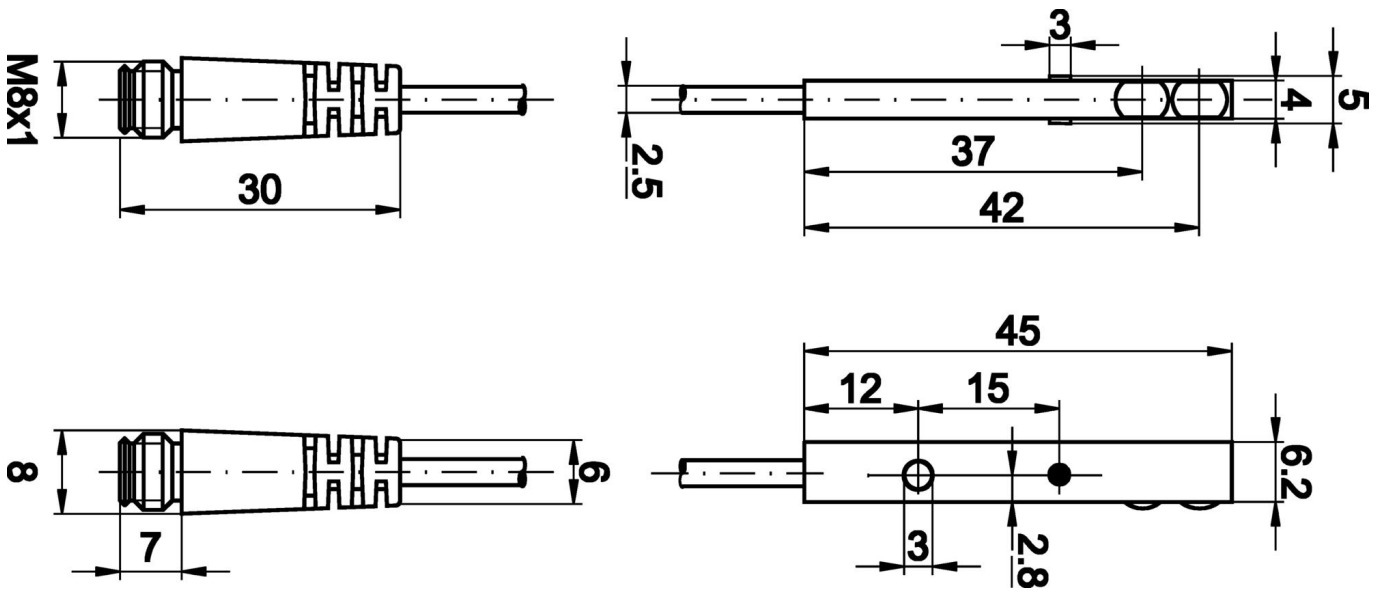
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	20 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AY000141



Plastic sheath, Ø17mm, Inner diameter 10mm, -40-250°C, Glass fiber with silicone rubber, Short-term resistance to weld spatter 1200°C, Tensile strength 400N, Flexible, Flame retardant, yard good

VK200471



Connection cable, 2m, M8 socket 4-pin angular, free cable end, 4x0.34mm², PUR (polyurethane), Ø4.7mm, -30-90°C, IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK500471



Connection cable, 5m, M8 socket 4-pin angular, free cable end 4-pin, 4x0.34mm², PUR (polyurethane), Ø4.7mm, -30-90°C, IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK003071



Cable socket, Angular, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 30V, -40-85°C, M8 Female (socket) 4pin, IP67, Brass

VK003075



Cable socket, Straight, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 30V, -40-85°C, M8 Female (socket) 4pin, IP67, Brass

VK03A247



Connection cable, 0.3m, M8 socket 4-pin straight, M8 connector 3-pin straight, 3-core, PUR (polyurethane), suitable for trailing chain and torsion-resistant, oils and cooling lubricants, welding area, silicone-free

VK03C825



Connection cable, 0.3m, M8 socket 4-pin angular, M8 connector 3-pin straight, 3-core, PUR (polyurethane), suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK030F73



Connection cable, 0.3m, M8 socket 4-pin angular, M8 connector 4-pin straight, 4x0.34mm², PUR (polyurethane) black, 24V, -30-90°C, IP67, TPU, 3A, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding range, silicone-free

VK060F73



Connection cable, 0.6m, M8 socket 4-pin angular, M8 connector 4-pin straight, 4x0.34mm², PUR (polyurethane) black, 24V, -30-90°C, IP67, TPU, 3A, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding range, 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.