

OTQ40270

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, Cable connector M8 4pin 0.2m PVC, IP65, Plastic ASA+PMMA, 1kHz, Polarity free red light, Point



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

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

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

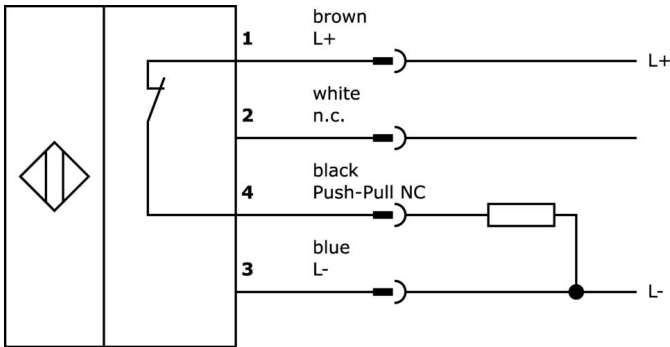
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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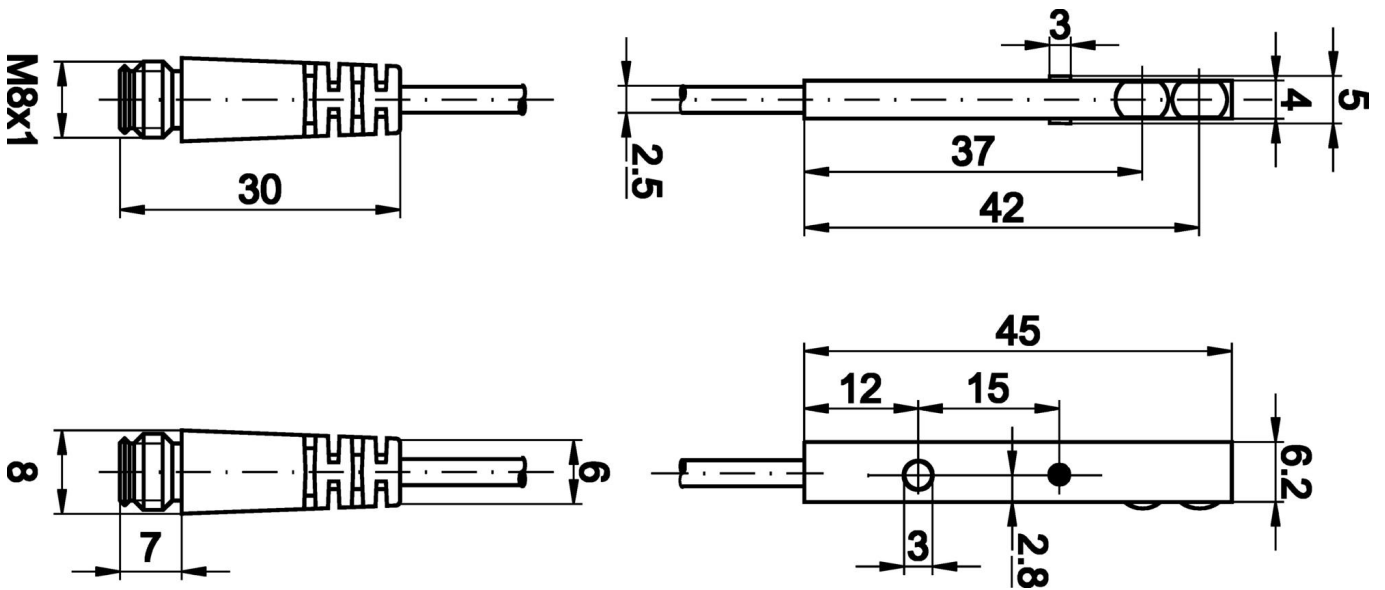
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	25 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

AY000116



accessories sensor, Fixture kit,
Metal, ball joint

AY000162



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

VK030F81



Connection cable, 0.3m, M8
socket 4-pin angular, M12
connector 4-pin straight, 4x0.
34mm², PUR (polyurethane), 60V,
IP67, suitable for trailing chain and
torsion resistant, oils and cooling
lubricants, welding area, silicone-
free

VK030F85



Connection cable, 0.3m, M8
socket 4-pin straight, M12
connector 4-pin straight, 4x0.
34mm², PUR (polyurethane), 60V,
IP67, suitable for trailing chain and
torsion resistant, oils and cooling
lubricants, welding area, silicone-
free

VK030F71



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

VK030F75



Connection cable, 0.3m, M8
socket 4-pin straight, M8
connector 4-pin straight, 4-core,
PUR (polyurethane), 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

AO000154



accessories optical, Adapter,
Aluminum

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.