

# OTQ80576

## Optical sensors • Diffuse reflection sensors with background suppression

Sensor Optical, diffuse reflection sensor, 25x16x8mm, Sn: 20-120, 10-30V DC, 1x PNP/ NPN push-pull, IO-Link, M8 plug-in connector 4-pin 0.2m PVC, IP67, plastic ASA+PMMA, 2kHz, red light unpolarized, dot, teach-in



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	0.25 ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally closed (n.o. for PNP) Normally closed (n.c. for NPN) - Adjustable
Type of electrical connection	Connector M8
Type of switching output	Push-pull
Rated switching current	50 mA
Setting procedure	Teach-In
Short-circuit protection	Yes
No-load current	40 mA
Number of pins	4
Switching distance	20 - 120 mm
Switching frequency	2000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.25 ms
Supported communication interface	IO-Link
Operating voltage (DC)	10 - 30 V
Dead zone	0 - 3
Interference suppression	Yes

**Mechanical features**

Number of cores	4
Conductor cross-section	0.08 mm <sup>2</sup>
Design	Cuboid
Width	8 mm
Height	25.1 mm
Cable length	0.2 m
Length	15.8 mm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Plastic ASA
Material of cable sheath	Plastic (PVC)
Ambient temperature	-25 - 50 °C

**Optical features**

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	644 nm

**Other features**

IO-Link version	V1.1
Operational mode	Background suppression
Reference medium / object	Material with 90% reflectivity

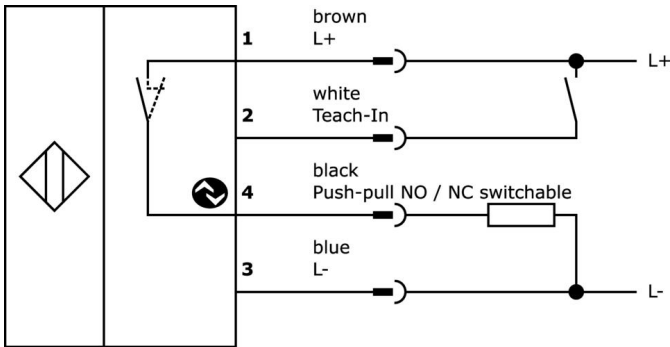
**Classification**

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
--------	---

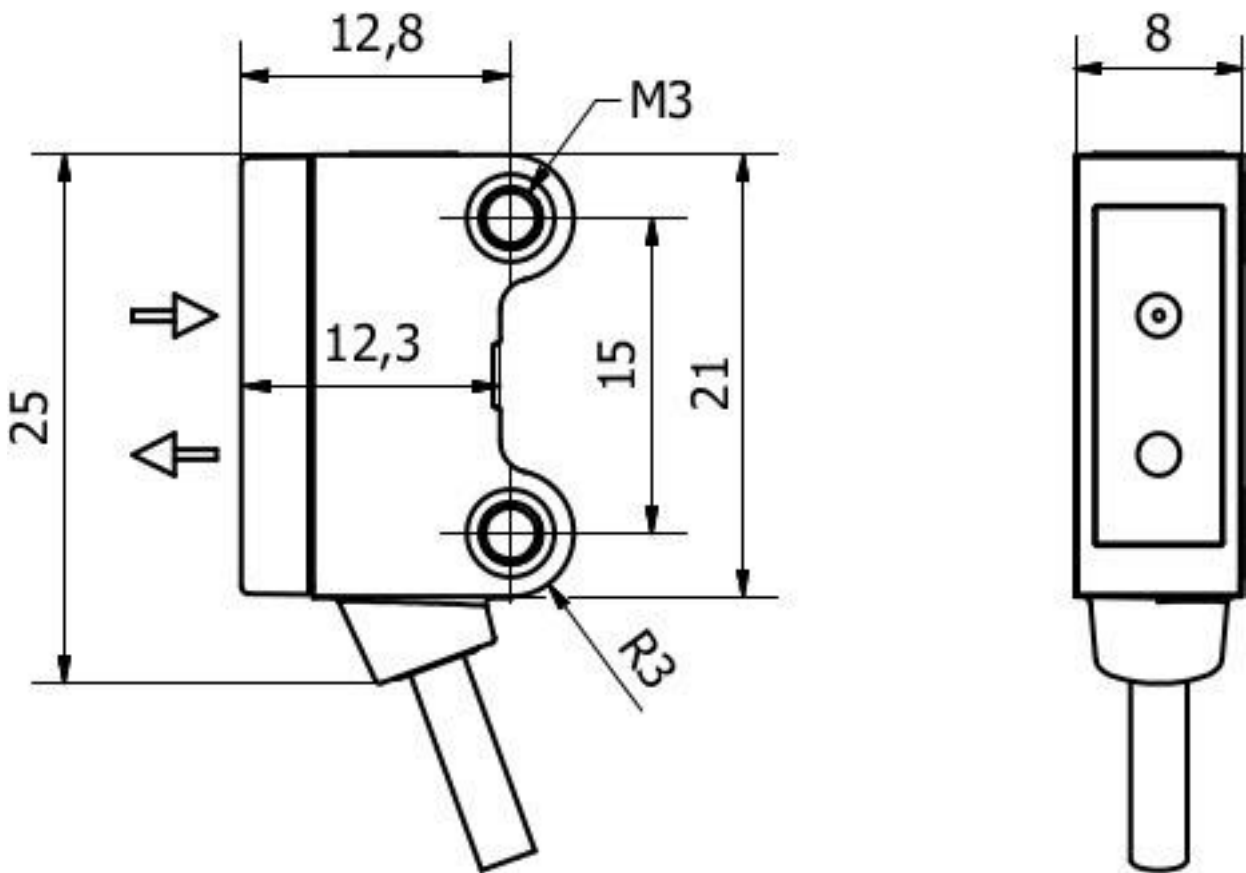
**More**

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	28 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**

**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

**AO000075**



accessories optical, Mounting angle bracket, M3x0.5 12long, Mounting material for sensor, brackets, Steel

**AO000076**



accessories optical, Mounting angle bracket, M3x0.5 13long, Mounting material for sensor, brackets, Steel

**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

**VK200371**



Connection cable, 2m, M8 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.7mm, 30V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**VK200375**



Connection cable, 2m, M8 Female (socket) 4pin Straight, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.7mm, 30V, -30-90°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.

/ Any software, drivers or IODD files that may be required to operate your device can be downloaded free of charge from our homepage: [www.ipf-electronic.com](http://www.ipf-electronic.com)