

OTQ90100

Optical sensors • Diffuse reflection sensors with background suppression

sensor optical, diffuse-reflection sensor, 21x11x9,2mm, Sn: 2-60, 10-30V DC, 1x PNP Programmable/configurable, Cable 2m PVC, IP65, PMMA+PMMA, 1kHz, Polarity free red light, Point, Teach-In

including Holder



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	Programmable/configurable
Type of electrical connection	Cable
Type of switching output	PNP
Rated switching current	100 mA
Setting procedure	Teach-In
Short-circuit protection	Yes
No-load current	25 mA
Switching distance	2 - 60 mm
Switching frequency	1000 Hz
Voltage drop	1.8 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.5 ms
Operating voltage (DC)	10 - 30 V
Interference suppression	Yes

Mechanical features

Number of cores	4
Conductor cross-section	0.1 mm ²
Design	Cuboid
Width	9.2 mm
Height	21.4 mm
Cable length	2 m
Length	10.8 mm
Maximum tightening torque	0.2 Nm
Degree of protection (IP)	IP65
Active area material of sensor	Plastic (PMMA)
Housing material	PMMA
Material of cable sheath	Plastic (PVC)
Ambient temperature	-20 - 50 °C
Line diameter	2.5 mm

Optical features

Light source	Polarity free red light
Light beam form	Point
Wavelength of the sensor	660 nm

Other features

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

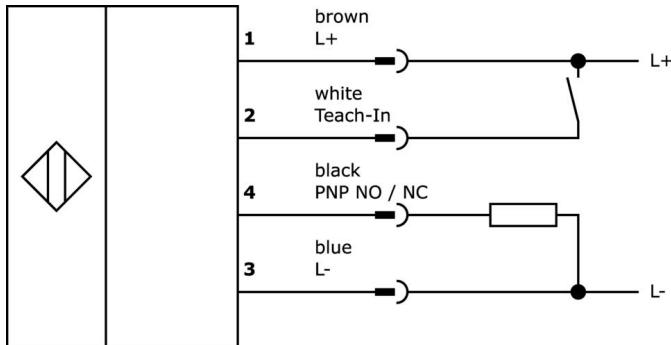
Classification

ETIM 8	EC002719 Photoelectric proximity switch with background suppression
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More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	43 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Extract accessories program

VY000004



DC power supply, sensor tester, 120x26x72mm, 18V, 0.04A, Spring clamp connection 4pin, IP20, Plastic

VK003079



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

VK003179



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

AO000092



accessories optical, Fixture kit, Nickel-plated brass

AY000116



accessories sensor, Fixture kit, Metal, ball joint

AY000162



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

VL250100



Logic module, 49x80x26mm, AND, 4fold, 10-35V DC, sensor side Clamp, control side Clamp, IP40, Plastic

VL250120



Logic module, 49x80x26mm, OR, 4fold, 10-35V DC, sensor side Clamp, control side Clamp, IP40, Plastic

NG530002



DC power supply, single-phase, 99x114x22mm, 24V, 0.1A, Number of relay outputs 2, 100-264V AC 50Hz, 100-264V AC 60Hz, Screw connection, IP20, Plastic, Stabilized, Output voltage, pulsed

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.