

OTQ80103

Optical sensors • Diffuse reflection sensors with intensity differentiation

sensor optical, diffuse-reflection sensor, 25x12x8,2mm, Sn: 45-115, 12-24V DC, 1x PNP NO (NO), Cable 2m PUR (Polyurethane), IP67, Plastic ABS+Plastic, 1kHz, Polarity free red light, Point, Manual adjustment

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	0.5 ms
Number of switching outputs	1
Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Cable
Type of switching output	PNP
Rated switching current	50 mA
Setting procedure	Manual adjustment
Relative hysteresis	15 %
Short-circuit protection	Yes
No-load current	20 mA
Residual ripple	10 %
Switching distance	45 - 115 mm
Switching frequency	1000 Hz
Protection class	III
Voltage drop	1 V
Scanning function	Light switching
Reverse polarity protection	Yes
Decay time	0.5 ms
Operating voltage (DC)	12 - 24 V

Mechanical features

Number of cores	3
Conductor cross-section	0.1 mm ²
Design	Cuboid
Width	8.2 mm
Height	25 mm
Cable length	2 m
Storage temperature	-30 - 70 °C
Length	12.3 mm
Shock resistance	50 g
Degree of protection (IP)	IP67
Vibration resistance	500 Hz
Active area material of sensor	Plastic
Housing material	Plastic (ABS)
Material of cable sheath	Plastic (PUR)
Ambient temperature	-25 - 55 °C
Line diameter	2.5 mm

Optical features

Light source	Polarity free red light
Light exit	axial
Light beam form	Point
Wavelength of the sensor	680 nm

Other features

Feeding technology	Yes
Reference medium / object	Material with 90% reflectivity

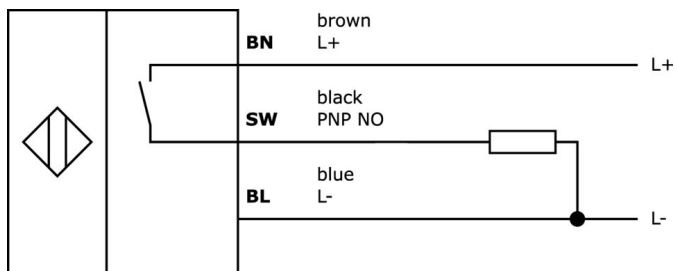
Classification

ETIM 8	EC001821 Light sensor energetic
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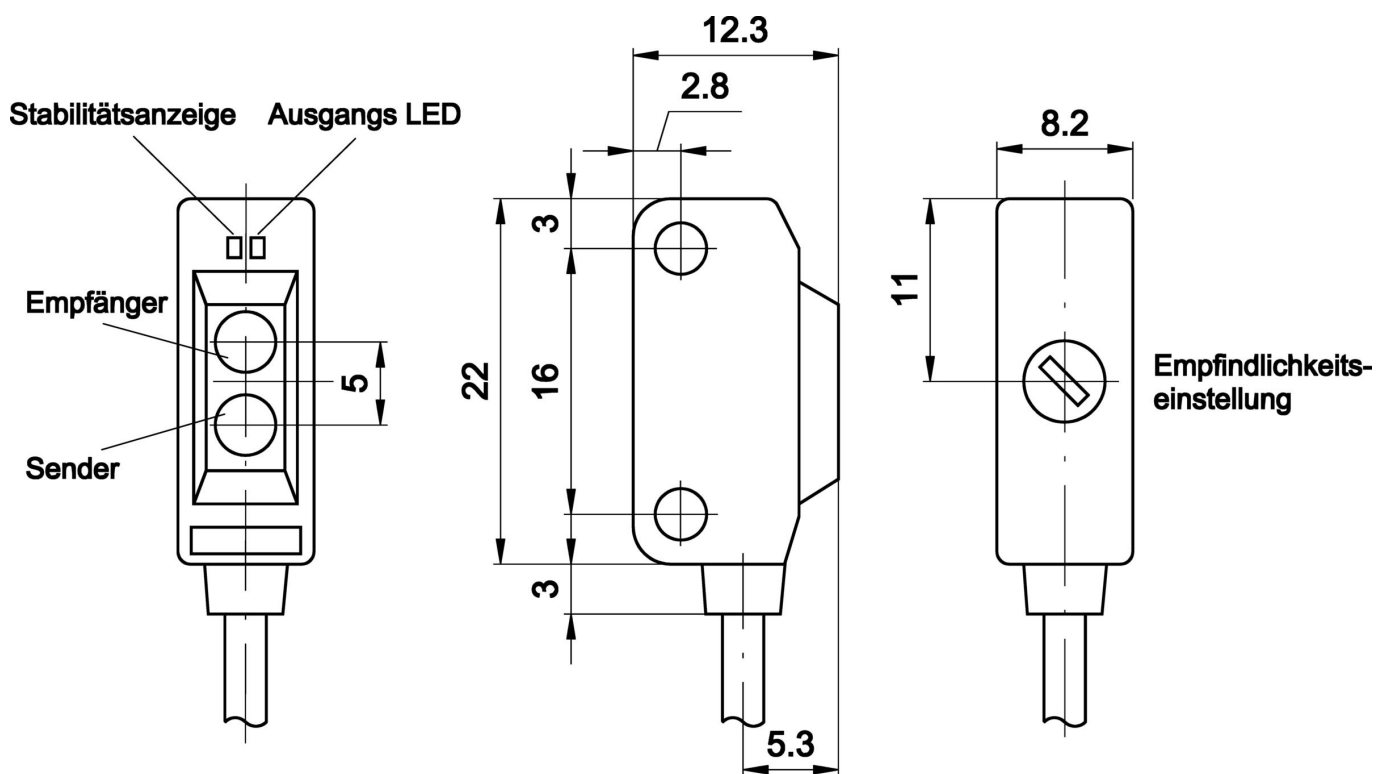
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	30 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

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

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

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

VK003076



Cable connector, Angular, Suitable for self-assembly, Soldering connection, 4A, 60V, -40-85°C, M8 Male (connector) 3pin, IP67, Brass

VK003078



Cable connector, Straight, Suitable for self-assembly, Soldering connection, Ø3.5-5mm, 4A, 60V, -40-85°C, M8 Male (connector) 3pin, IP67, Brass

VY850001



Inverter/signal-inversion/turn-off delay, 85x65x18mm, 0.01-10s, 12-30V DC, 1x NC/NO, Clamp 8pin, IP40, Plastic, Plug-in jumpers

VY850002



Inverter/signal-inversion/turn-off delay, 85x65x18mm, 0.01-10s, 12-30V DC, 1x NC/NO, Clamp 8pin, IP40, Plastic, Plug-in jumpers

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.