

# OYQ80300

## Optical sensors • Through-beam sensors

sensor optical, Light barrier, 19x10x8,2mm, Sn: 2m, 12-24V DC, PNP Programmable/configurable, Cable 2m PUR (Polyurethane), IP67, Plastic ABS+Plastic, Polarity free red light

including Screwdriver, Transmitter and receiver



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
Display	LED display
Type of switching function	Programmable/configurable
Type of electrical connection	Cable
Type of switching output	PNP
Rated switching current	50 mA
Setting procedure	Manual adjustment
Short-circuit protection	Yes
No-load current, receiver	15 mA
No-load current, transmitter	10 mA
Residual ripple	10 %
Switching distance	0 - 2000 mm
Switching frequency	1000 Hz
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	0.5 ms
Absolute repeat accuracy	0.05 mm
Operating voltage (DC)	12 - 24 V

**Mechanical features**

Number of cores	3
Conductor cross-section	0.1 mm <sup>2</sup>
Design	Cuboid
Width	8.2 mm
Height	19 mm
Cable length	2 m
Storage temperature	-30 - 70 °C
Length	10.5 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)
Working distance range	0 - 2000 mm
Ambient temperature	-25 - 55 °C
Line diameter	2.5 mm

**Optical features**

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

**Other features**

Version	Light barrier
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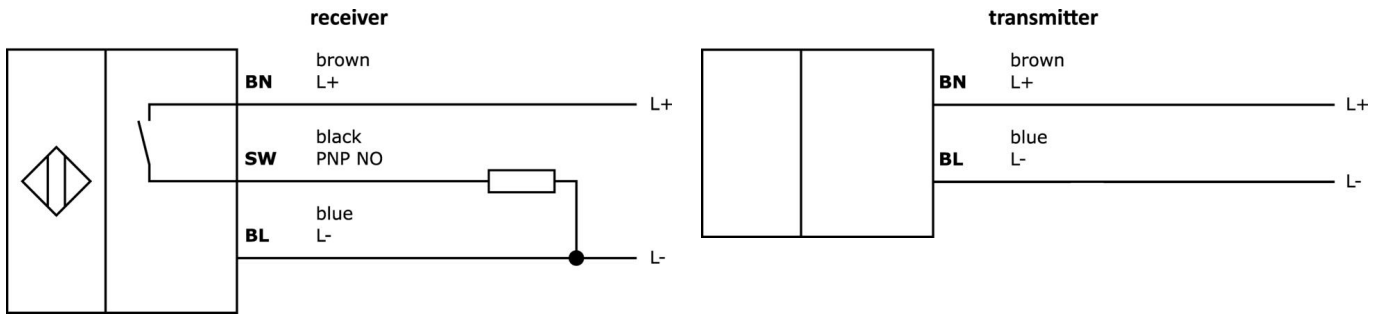
**Classification**

ETIM 8	EC002716 Through-beam photoelectric sensor
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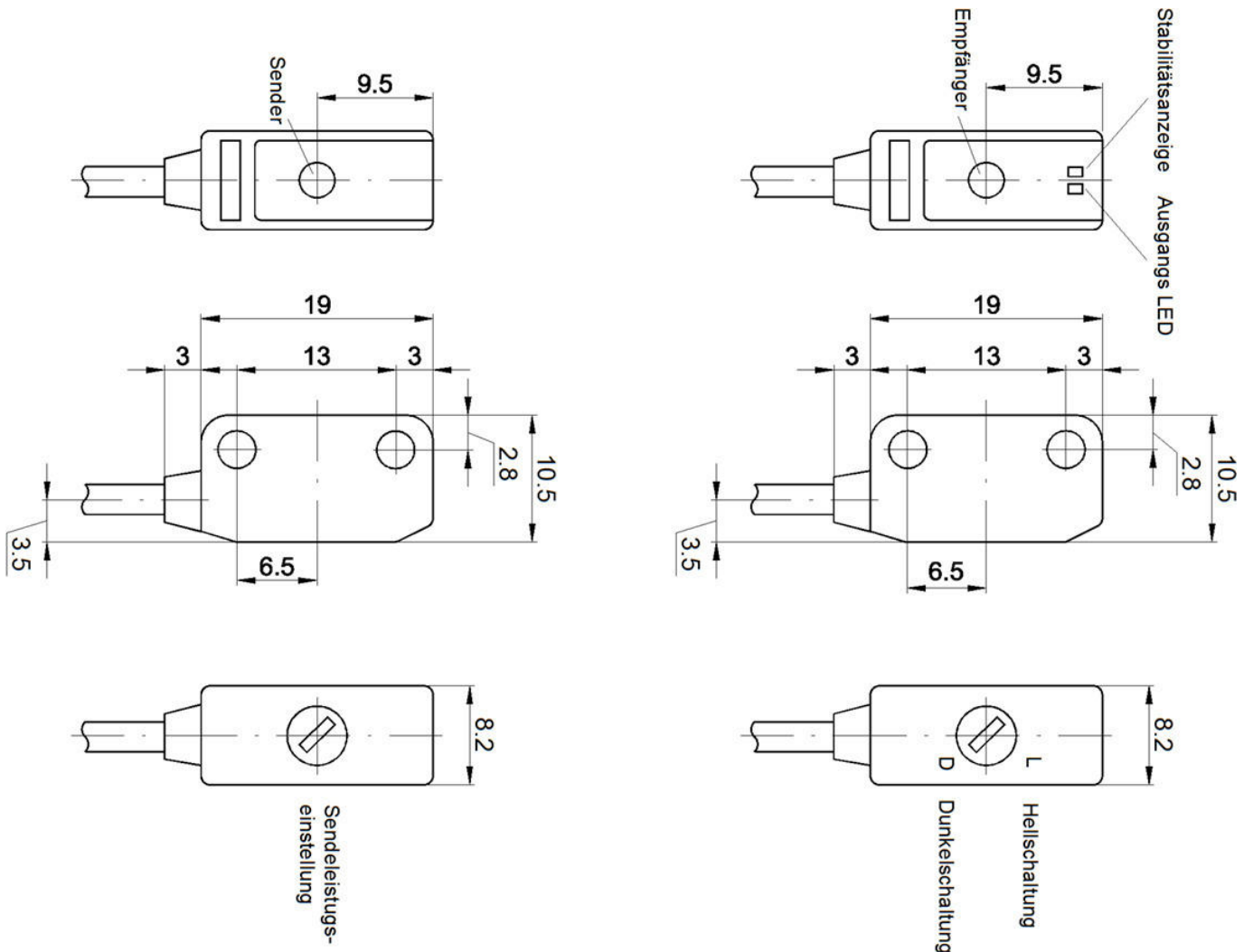
**More**

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	50 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**

**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

**VK003026**



Cable connector, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Male (connector) 4pin, IP67, PBT

**VK003028**



Cable connector, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Male (connector) 4pin, IP67, PBT

**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

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.