

OY310300

Optical sensors • Through-beam sensors

Optical Sensor, Light Barrier, 32x20x12 mm, Sensing Distance: 12 m, 10–30 V DC, PNP, programmable/configurable, 2 m 4-wire cable, IP67, ABS+PMMA plastic, infrared light

including Transmitter and receiver

- / plastic housing
- / compact design
- / Switching output no/nc switchable
- / Cable connection



large range Infrared light

Optical sensors operate contactless. They detect objects regardless of their characteristics (e.g., shape, color, surface texture, material). Their basic operating principle is based on the transmission and reception of light. There are three versions: 1. The through-beam sensor consists of two separate devices—a transmitter and a receiver—that are aligned with each other. When the light beam between the two devices is interrupted, the switching output integrated into the receiver changes its status. 2. In a reflective light barrier, the transmitter and receiver are housed in a single device. The transmitted light beam is reflected toward the receiver by a reflector mounted opposite it. As soon as the light beam is interrupted, the switching output integrated into the device changes its status. 3. In a diffuse reflection sensor, the transmitter and receiver are housed in a single device. The emitted light beam is reflected by the object to be detected. As soon as the receiver detects the reflected light, the switching output integrated into the device changes its status.

Electrical features

Response/decay time	2 ms
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	other
No-load current, receiver	15 mA
No-load current, transmitter	20 mA
Reaction time	2 ms
Residual ripple	10 %
Switching distance	0 - 12000 mm
Switching frequency	250 Hz
Protection class	III
Voltage drop	2 V
Scanning function	Light-/dark-on mode
Decay time	2 ms
Absolute repeat accuracy	0.05 mm
Operating voltage (DC)	10 - 30 V
protection functions	short circuit protection reverse polarity protection

Mechanical features

Number of cores	4
Wire cross section	0,14 mm ²
Design	Cuboid
Width	12 mm
Height	31.5 mm
Cable length	2 m
Storage temperature	-30 - 70 °C
Length	20 mm
Maximum tightening torque	0.5 Nm
Shock resistance	50 g
Degree of protection (IP)	IP67
Vibration resistance	500 Hz
Active area material of sensor	Plastic (PMMA)
Housing material	plastic (ABS)
material of cable sheath	plastic (PVC)
Working distance range	0 - 12000 mm
Ambient temperature	-20 - 55 °C
Line diameter	3.6 mm

Optical features

Light source	Infrared light
Light beam form	Point
Wavelength of the sensor	860 nm

Other features

Version	Light barrier
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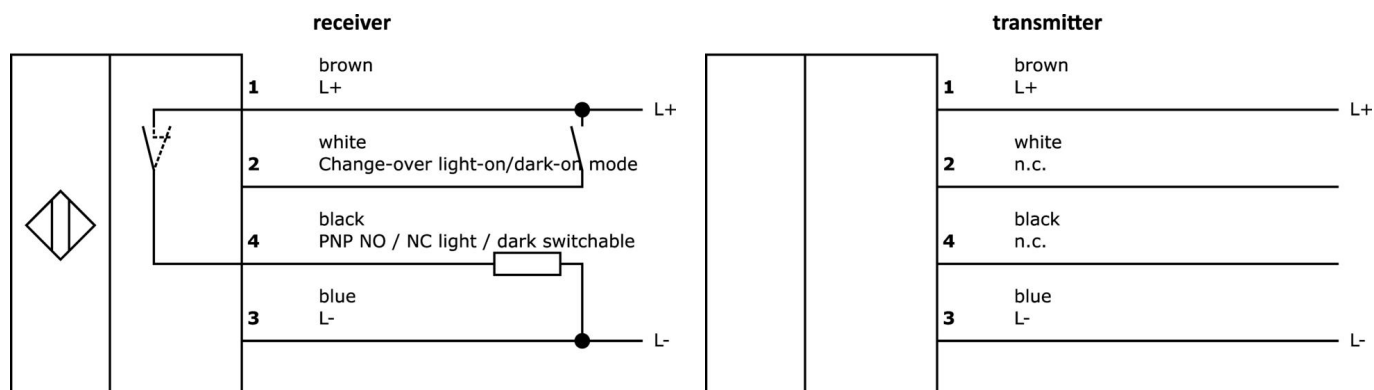
Classification

ETIM 8

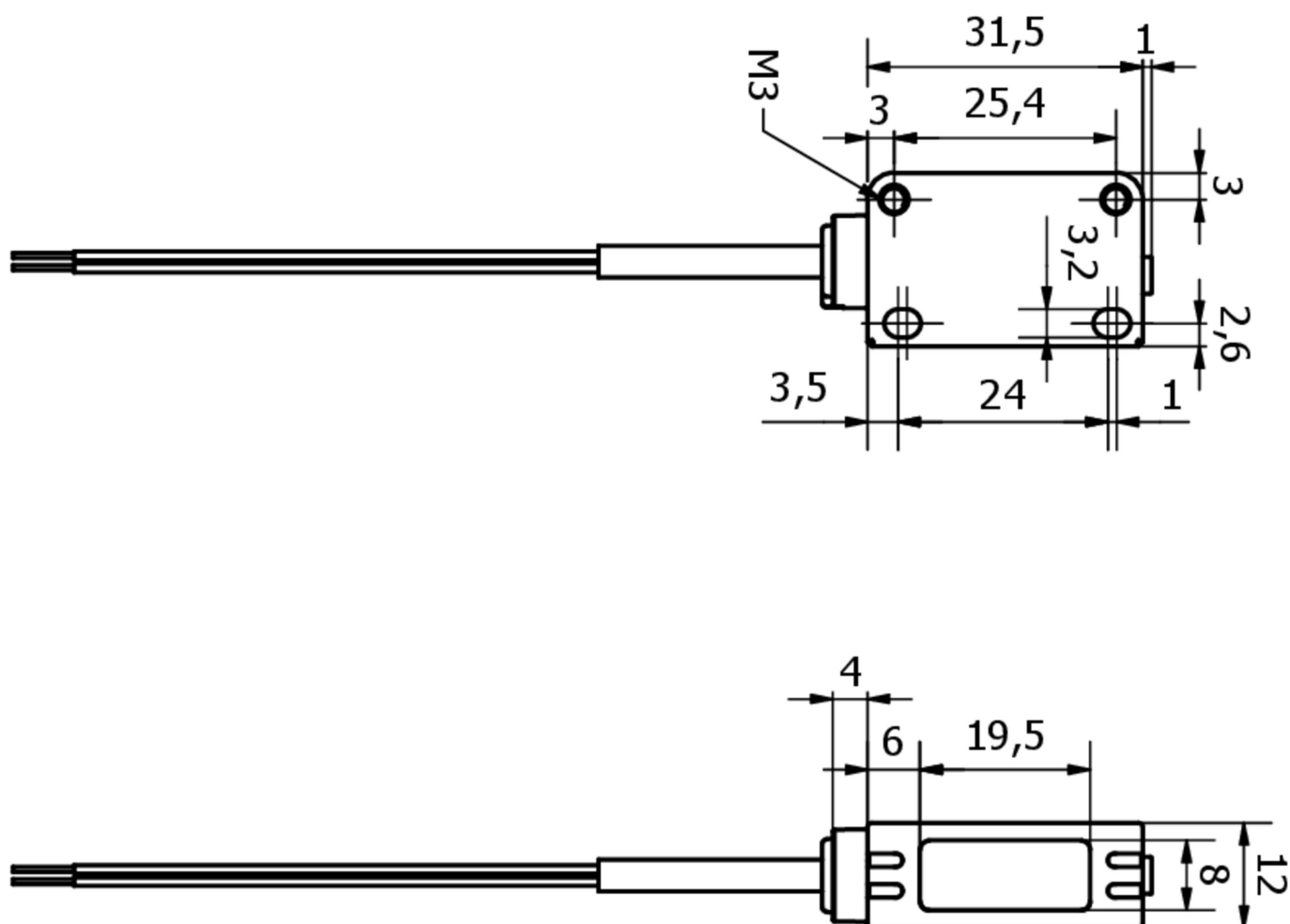
More

IPF Product Group	100 optical sensors
packaging dimensions	220 x 170 x 30 mm
gross weight	93 g
customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



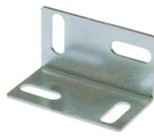
Extract accessories program

AY000118



accessories sensor, Fixture kit,
Metal, ball joint

AO000473



accessories optical, Mounting
angle bracket, 19x19x34mm,
Mounting material for sensor,
brackets, Steel

AO000475



accessories optical, Aperture,
19x32x0,5mm, Metal

AO000476



accessories optical, Aperture,
19x32x1mm, Metal

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

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

VY000004



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

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.