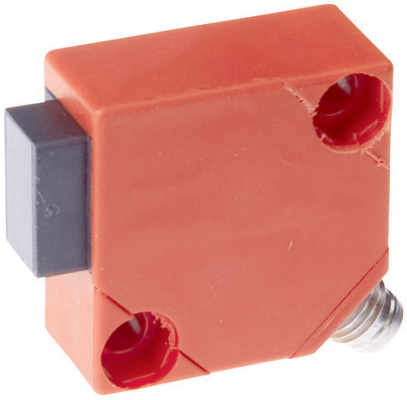
OR150175

OPTICAL SENSORS • RETRO-REFLECTIVE SENSORS

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.



MECHANICAL FEATURES

Ambient temperature	-25 °C ... 55 °C
Degree of protection (IP)	IP65
Housing design	Cuboid
Housing material	PBTP
Increased ambient temperatures >70°C	-
Material of optical surface	Glass
Reflector included in the scope of delivery	-
Sensor height	30 mm
Sensor length	30 mm
Sensor width	15 mm

ELECTRICAL FEATURES

Alarm output	-
Clock frequency of the transmitter	15 kHz
Decay time	0.5 ms
Function test	-
Interference suppression	-
Max. output current	200 mA
Max. switching distance	2000 mm
No-load current	15 mA
Number of pins	3
Operating voltage	10 V ... 35 V
Rated switching distance	2000 mm
Readiness delay	100 ms
Residual ripple	20 %
Response time	0.5 ms
Reverse polarity protection	+
Scanning function	Dark switching
Setting procedure	Manual adjustment
Short-circuit protection	+
Switching frequency	1000 Hz
Type of electrical connection	Connector M8
Type of input voltage	DC

ELECTRICAL FEATURES

Type of switching function	Normally open contact (NO)
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	+
With polarizing filter	+
With time function	-

OPTICAL FEATURES

Light source	Polarized red light
Min. reflector distance	200 mm
Wavelength of the sensor	660 nm
Light beam form	Point
For transparent objects	-

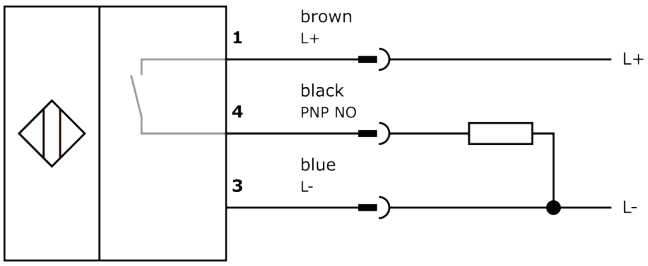
Other

Packaging dimensions	185.0mm x 1.4000000000000001mm x 210mm
Shipping weight	0.03kg
Tariff code	85365019

Classification

ipf product group	100
eClass 8.0	27270902
eClass 9.0	27270902
eClass 9.1	27270902
ETIM-5.0	EC002717
ETIM-6.0	EC002717
ETIM-7.0	EC002717

Connection



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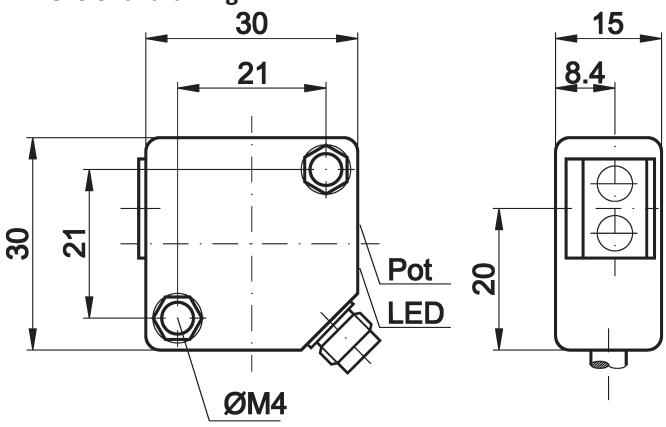
Dimensional drawing



Installation

Mounting / installation may only be carried out by a qualified electrician!

Disposal

Software

Please download the software or driver required for operating your new device on our homepage: www.ipf.de

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.
LED lighting systems can generate intensive UV radiation, which can damage your eyes in case of improper use. The manufacturer cannot be held responsible for damages that result from improper use or connection.