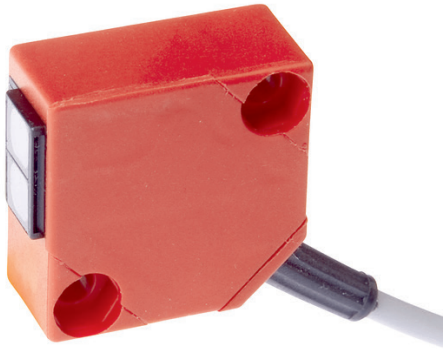
OT150700

OPTICAL SENSORS • DIFFUSE REFLECTION SENSORS WITH INTENSITY DIFFERENCIATION



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 DATA

Ambient temperature (MAX)	55 °C
Ambient temperature (MIN)	-25 °C
Cable length	3 m
Degree of protection (IP)	IP67
Housing design	Cuboid
Housing material	PBTP
Material of cable sheath	PVC
Material of optical surface	Glass
Number of wires	4
Reflector included in the scope of delivery	No
Sensor height	30 mm
Sensor length	30 mm
Sensor width	15 mm
Wire cross section	0.14 mm²
With interchangeable lens	No

ELECTRICAL DATA

Alarm output	Yes
Clock frequency of the transmitter	15 kHz
Decay time	0.5 ms
Equipment protection class	Protection class 3
High repeat accuracy	No
Hysteresis	10 %
Interference suppression	No
Max. output current	200 mA
Max. switching distance	1200 mm
No-load current	20 mA

ELECTRICAL DATA

Number of switching outputs	2
Operating voltage (MAX)	35 V
Operating voltage (MIN)	10 V
Pre-failure message	No
Readiness delay	100 ms
Residual ripple	20 %
Response time	0.5 ms
Reverse polarity protection	Yes
Scanning function	Light switching
Sensing range (MAX)	1200 mm
Sensing range (MIN)	0 mm
Setting procedure	Manual adjustment
Short-circuit-proof	Yes
Suitable for safety functions	No
Switching frequency	1000 Hz
Type of alarm output	PNP
Type of electrical connection	Cable
Type of switching function	Normally open contact (NO)
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With communication interface, RS-232	No
With LED display	Yes
With monitoring function of downstream devices	No
With other analog output	No
With restart lock	No
With time function	No

OPTICAL DATA

Light beam form	Point
Light exit	Axial
Light source	Infrared light
Line scanner	No
Small light beam diameter	No
Wavelength of the sensor	880 nm

OTHER DATA

Feeding technology	Yes
For gloss queries	No
Is line scan camera	No

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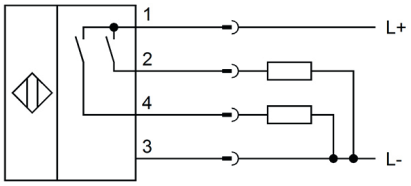
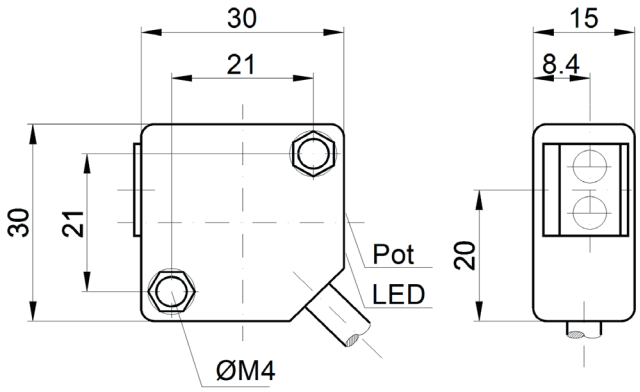
CONNECTION



Colors: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)
Functions: 1 = L+, 2 = alarm, 3 = L-, 4 = PNP NO

DIMENSIONAL DRAWING



INSTALLATION

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

DISPOSAL

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.