OT322300

OPTICAL SENSORS • DIFFUSE REFLECTION SENSORS WITH BACKGROUND SUPPRESSION

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	-25 °C ... 55 °C
Cable length	2 m
Degree of protection (IP)	IP67
Housing design	Cuboid
Housing material	Zinc die-cast
Material of cable sheath	PVC
Material of optical surface	Polycarbonate
Number of wires	4
Reflector included in the scope of delivery	No
Sensor height	32 mm
Sensor length	32 mm
Sensor width	13 mm
Shock resistance	100 g
Storage temperature	55 °C
Storage temperature	-25 °C
Strong vibration / motion	Yes
Vibration resistance	55 Hz
Wire cross section	0.34 mm²

ELECTRICAL DATA

Adjustment range	30 mm ... 30 mm
Analogue output 0 mA ... 20 mA	No
Analogue output 0 V ... 10 V	No
Analogue output -10 V ... +10 V	No
Analogue output 4 mA ... 20 mA	No
Decay time	2 ms
Hysteresis	10 %

ELECTRICAL DATA

IO-Link compatible	No
Max. output current	100 mA
Max. switching distance	30 mm
No-load current	30 mA
Number of switching outputs	1
Operating voltage	12 V ... 24 V
Rated switching distance	40 mm
Response time	2 ms
Scanning function	Light-/dark-on mode
Sensing range	20 mm ... 40 mm
Setting procedure	Manual adjustment
Switching frequency	250 Hz
Type of electrical connection	Cable
Type of switching function	Programmable/configurable
Type of switching output	PNP
Voltage drop	1.8 V
Voltage type	DC
With LED display	Yes
With LED display (functional reserve)	Yes
With LED display (signal)	Yes
With other analog output	No

OPTICAL DATA

Background suppression	Yes
Light beam form	Point
Light source	Infrared light
Triangulation	Background suppression
Wavelength of the sensor	890 nm

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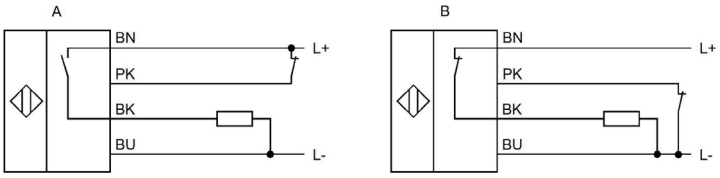
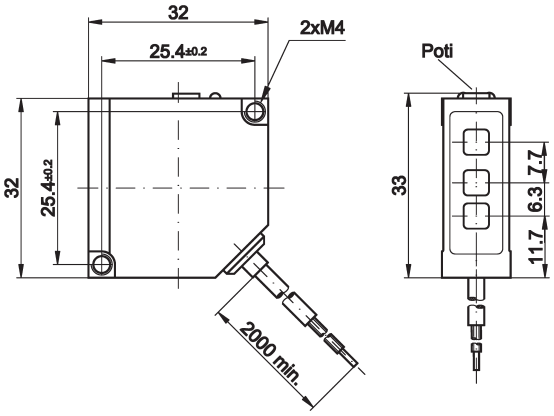
CONNECTION



Colors: A: BN (brown), PK (pink), BU (blue), BK (black)
B: BN (brown), PK (pink), BU (blue), BK (black)**Functions:** A: BN = L+, PK = programming, BU = L-, BK = PNP NO
B: BN = L+, PK = programming, BU = L-, BK = PNP NC

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!