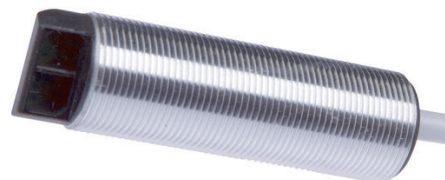


OT180108

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.



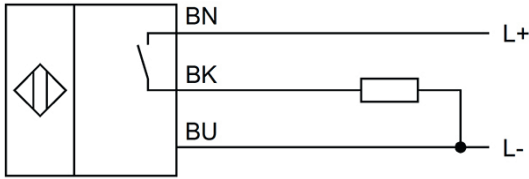
TECHNICAL DATA

Adjustment range	10 mm ... 120 mm
Alarm output	No
Ambient temperature	-25 °C ... 55 °C
Analogue output -10 V ... +10 V	No
Analogue output 0 V ... 10 V	No
Analogue output 0 mA ... 20 mA	No
Analogue output 4 mA ... 20 mA	No
Background suppression	Yes
Cable length	2 m
Decay time	1 ms
Degree of protection (IP)	IP67
Function test	No
Housing coating	Chromium-plated
Housing design	Cylinder, screw-thread
Housing material	Brass
Hysteresis	10 %
Increased ambient temperatures >70°C	No
Interference suppression	No
Light beam form	Point
Light source	Polarity free red light
Material of cable sheath	PVC
Material of optical surface	Glass
Max. output current	200 mA
Max. switching distance	120 mm
No-load current	25 mA
Number of switching outputs	1
Number of wires	3

TECHNICAL DATA

Operating voltage	10 V ... 35 V
Rated switching distance	120 mm
Readiness delay	20 ms
Reflector included in the scope of delivery	No
Response time	1 ms
Reverse polarity protection	Yes
Scanning function	Light switching
Sensing range	10 mm ... 120 mm
Sensor length	61.5 mm
Setting procedure	Manual adjustment
Short-circuit-proof	Yes
Switching frequency	500 Hz
Thread length	53 mm
Thread pitch	1 mm
Thread size, metric	18
Triangulation	Background fade-out
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
Wavelength of the sensor	660 nm
Wire cross section	0.25 mm ²
With LED display	Yes
With LED display (reception)	Yes
With LED display (signal)	Yes
With other analog output	No

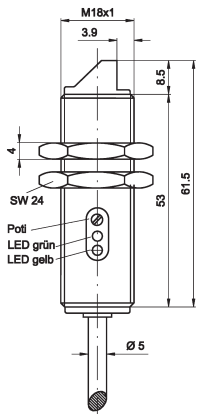
CONNECTION



Colors: BN (brown), BU (blue), BK (black)

Functions: BN = L+, BU = L-, BK = 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.