

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.

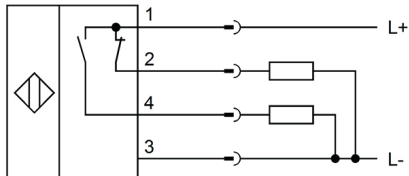

TECHNICAL DATA

Ambient temperature (min/max)	-25 °C / 65 °C
Degree of protection (IP)	IP67
Housing design	Cuboid
Housing material	Zinc die-cast
Increased ambient temperatures >70°C	NO
Material of optical surface	PMMA
Reflector included in the scope of delivery	NO
Sensor height	50 mm
Sensor length	50 mm
Sensor width	15.4 mm
Adjustment range (min/max)	20 mm / 450 mm
Alarm output	NO
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
Decay time	1 ms
Function test	NO
Interference suppression	YES
Max. output current	200 mA
Max. switching distance	450 mm
No-load current	41 mA
Number of pins	4
Number of switching outputs	2
Operating voltage (min/max)	10 V / 30 V
Rated switching distance	450 mm
Response time	1 ms
Reverse polarity protection	YES

TECHNICAL DATA

Scanning function	Light-/dark switching
Sensing range (min/max)	20 mm / 450 mm
Setting procedure	Manual adjustment
Short-circuit-proof	YES
Switching frequency	500 Hz
Type of electrical connection	Connector M12
Type of switching function	Anticoincidence
Type of switching output	PNP
Voltage drop	1.8 V
Voltage type	DC
With LED display	YES
With LED display (signal)	YES
With other analog output	NO
Background suppression	YES
Light beam form	Point
Light source	Polarity free red light
Triangulation	Background fade-out
Wavelength of the sensor	660 nm

CONNECTION



Colors: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)

Functions: 1 = L+, 2 = pnp/nc, 3 = L-, 4 = pnp no

DIMENSIONAL DRAWING

