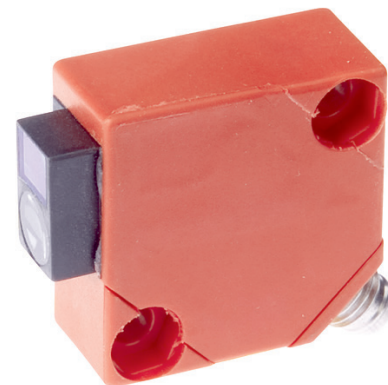


Optical sensors function contactlessly. They detect objects independent of their characteristics (e.g., shape, color, surface structure, material). The basic operating principle is based on the transmission and reception of light. There are three different versions: 1. The through-beam sensor consists 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 / 55 °C
Degree of protection (IP)	IP65
Housing design	Cuboid
Housing material	PBTP
Increased ambient temperatures >70°C	NO
Material of optical surface	Glass
Reflector included in the scope of delivery	NO
Sensor height	30 mm
Sensor length	30 mm
Sensor width	15 mm
Adjustment range (min/max)	15 mm / 150 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	NO
Max. output current	200 mA
Max. switching distance	150 mm
No-load current	25 mA
Number of pins	3
Number of switching outputs	1
Operating voltage (min/max)	10 V / 35 V
Rated switching distance	150 mm
Readiness delay	100 ms
Residual ripple	20 %

Response time	1 ms
Reverse polarity protection	YES
Scanning function	Light switching
Sensing range (min/max)	15 mm / 150 mm
Setting procedure	Manual adjustment
Short-circuit-proof	YES
Switching frequency	500 Hz
Type of electrical connection	Connector M8
Type of switching function	Normally open contact (NO)
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	YES
With LED display (reception)	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

**Functions:** 1 = L+, 3 = L-, 4 = pnp no

Technical drawing of the LED module showing front, top, and side views with dimensions:

- Front View (Left):** Shows a square module with a width of 30 mm and a height of 30 mm. The mounting hole diameter is  $\varnothing M4$ . The distance between the mounting holes is 21 mm. The distance from the bottom edge to the mounting hole center is 5 mm. The distance from the left edge to the mounting hole center is 21 mm. The module is labeled "Pot LED".
- Top View (Right):** Shows the module with a width of 15 mm and a height of 20 mm. The distance from the top edge to the mounting hole center is 8.4 mm.

