

PR170420

LASER SENSORS • RETRO-REFLECTIVE LIGHT BARRIERS

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 | -10 °C ... 50 °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 | Glass |
| Number of wires | 4 |
| Reflector included in the scope of delivery | No |
| Sensor height | 50 mm |
| Sensor length | 50 mm |
| Sensor width | 15.4 mm |

ELECTRICAL DATA

| | |
|------------------------------------------|---------------------|
| Decay time | 0.1 ms |
| IO-Link compatible | No |
| Laser power | 0.4 mW |
| Max. output current | 200 mA |
| Max. switching distance | 11000 mm |
| No-load current | 70 mA |
| Operating voltage | 10 V ... 30 V |
| Rated control supply voltage U_s at DC | 10 V ... 30 V |
| Rated switching distance | 11000 mm |
| Relative repeat accuracy | 1.5 mm |
| Response time | 0.1 ms |
| Reverse polarity protection | Yes |
| Scanning function | Light-/dark-on mode |

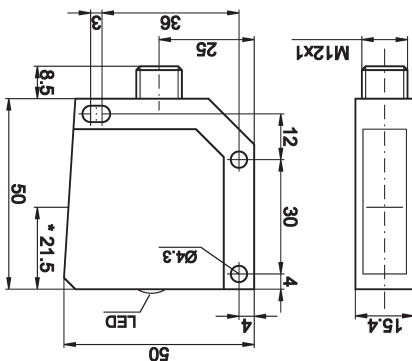
ELECTRICAL DATA

| | |
|--------------------------------------------|-----------------|
| Short-circuit-proof | Yes |
| Type of electrical connection | Connector M12 |
| Type of input voltage | DC |
| Type of switching function | Anticoincidence |
| Type of switching output | PNP |
| Voltage drop | 2 V |
| Voltage type | DC |
| With communication interface, analog | No |
| With communication interface, AS-Interface | No |
| With communication interface, CANOpen | No |
| With communication interface, DeviceNet | No |
| With communication interface, Ethernet | No |
| With communication interface, INTERBUS | No |
| With communication interface, PROFIBUS | No |
| With communication interface, RS-232 | No |
| With communication interface, RS-422 | No |
| With communication interface, RS-485 | No |
| With communication interface, SSD | No |
| With communication interface, SSI | No |
| With LED display | Yes |
| With polarizing filter | Yes |
| With time function | No |

OPTICAL DATA

| | |
|--------------------------|------------------------|
| Laser class | 1 |
| Laser focus distance | 400 mm |
| Laser protection class | Class 1 |
| Light beam form | Point |
| Light source | Laser diode, red light |
| Resolution | 5 mm |
| Wavelength of the sensor | 650 nm |

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!