

PT740021

LASER SENSORS •

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 (MAX)	50 °C
Ambient temperature (MIN)	-10 °C
Degree of protection (IP)	IP67
Housing design	Cuboid
Housing material	Aluminium
Material of optical surface	Glass
Sensor height	85 mm
Sensor length	55 mm
Sensor width	26 mm
Storage temperature (MAX)	75 °C
Storage temperature (MIN)	-25 °C

ELECTRICAL DATA

Absolute linearity deviation	0.1 mm
Absolute repeat accuracy	20 µm
Alarm output	Yes
Decay time	1.3 ms
Equipment protection class	Protection class 3
Linearity deviation	0.1 mm
Linearity deviation	0.1 mm
Max. output current	100 mA
Measuring method for optical distance measurement	Triangulation
Measuring range length (MAX)	500 mm
Measuring range length (MIN)	100 mm
No-load current	120 mA
Number of pins	8
Number of switching outputs	1

ELECTRICAL DATA

Operating voltage (MAX)	28
Operating voltage (MIN)	15
Response time	1.3 ms
Response/decay time	1.3 ms
Reverse polarity protection	Yes
Scanning principle	Push button
Setting procedure	Parameterization
Short-circuit-proof	Yes
Supply voltage (MAX)	28 V
Supply voltage (MIN)	15 V
Type of alarm output	PNP/NPN
Type of analog output	0 V ... 10 V / 4 mA ... 20 mA
Type of electrical connection	Connector M12
Type of plug-in contact, communication interface	Male (plug)
Type of plug-in contact, communication interface	Male (plug)
Voltage type	DC
With LED display	Yes

OPTICAL DATA

Laser protection class	Class 2
Light section sensors	Yes
Light source	Laser diode, red light
Resolution	20 µm
Wavelength of the sensor	660 nm

OTHER DATA

Relative linearity deviation	0.02 %
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