Photoelectric proximity sensor with a small laser light spot and a large sensing range

Product description

The WT27L-2 Laser photoelectric sensor is ideal for precisely detecting small objects from long distances. These sensors feature crosstalk immunity, background suppression and a laser light source.

At a glance

- 2 mm diameter light spot at a distance of 400 mm
- Precise adjustable background suppression
- Visible red laser LED
- Sensing range adjustment via potentiometer
- UL approval

Your benefits

- Precise detection of very small parts up to a distance of 400 mm due to 2 mm light spot
- Highly visible red laser provides quick and easy alignment
- Durable design provides high resistance to vibration

Additional information

→ **www.mysick.com/en/W27-2_Laser**

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.

Detailed technical data

Features

Sensor principle	Photoelectric proximity sensor
Detection principle	Background suppression
Dimensions (W x H x D)	24.6 mm x 80 mm x 53.5 mm
Housing design (light emission)	Rectangular
Sensing range max. [1]	100 mm ... 800 mm
Sensing range	100 mm ... 800 mm
Type of light	Visible red light
Light source [2]	Laser
Light spot size (distance)	Ø 2 mm (400 mm)
Laser class [3]	1/2 (depending on type)
Adjustment	Potentiometer

[1] Object with 90 % reflectance (referred to standard white, DIN 5033)

[2] Average service life 50,000 h at T_A = +25 °C.

[3] (EN 60825-1), low power. Eyes normally protected by averting reaction and eyelid closing reflex.

Mechanics/electronics

Supply voltage [1]	10 V DC ... 30 V DC
Ripple [2]	≤ 5 %
Power consumption [3]	≤ 35 mA
Output type	PNP/NPN (depending on type)
Output function	Complementary
Switching mode	Light/dark-switching
Output current $I_{max.}$	≤ 100 mA
Response time	< 25 ms [4] < 500 µs [4] (depending on type)
Switching frequency [5]	
Response time: < 25 ms	50 Hz
Response time: < 500 µs	1,000 Hz
Connection type	Male connector
Circuit protection	A [6], C [7], D [8]
Protection class [9]	II
Weight	100 g
Housing material	ABS
Enclosure rating	IP 67
Ambient operating temperature	–10 °C ... +45 °C
Ambient storage temperature	–10 °C ... +75 °C

[1] Limit values, operation in short-circuit protected network max. 8 A.

[2] May not exceed or fall short of V_S tolerances.

[3] Without load.

[4] Signal transit time with resistive load.

[5] With light/dark ratio 1:1.

[6] A = V_S connections reverse-polarity protected.

[7] C = interference suppression.

[8] D = outputs overcurrent and short-circuit protected.

[9] Reference voltage: 50 V DC.

H

Ordering information

Other models available at www.mysick.com/en/W27-2_Laser

WT27-2 Laser

- **Sensor principle:** photoelectric proximity sensor
- **Light spot size (distance):** Ø 2 mm (400 mm)
- **Connection:** Connector M12, 4-pin

Sensing range max. [1]	Laser class	Response time [2]	Switching frequency [3]	Output type	Connection diagram	Type	Part no.
100 mm ... 800 mm	1	< 25 ms	50 Hz	PNP	Cd-083	WT27K-2F430	1059239
	2	< 500 µs	1,000 Hz	PNP	Cd-083	WT27L-2F430	1016019
				NPN	Cd-083	WT27L-2N430	1026165

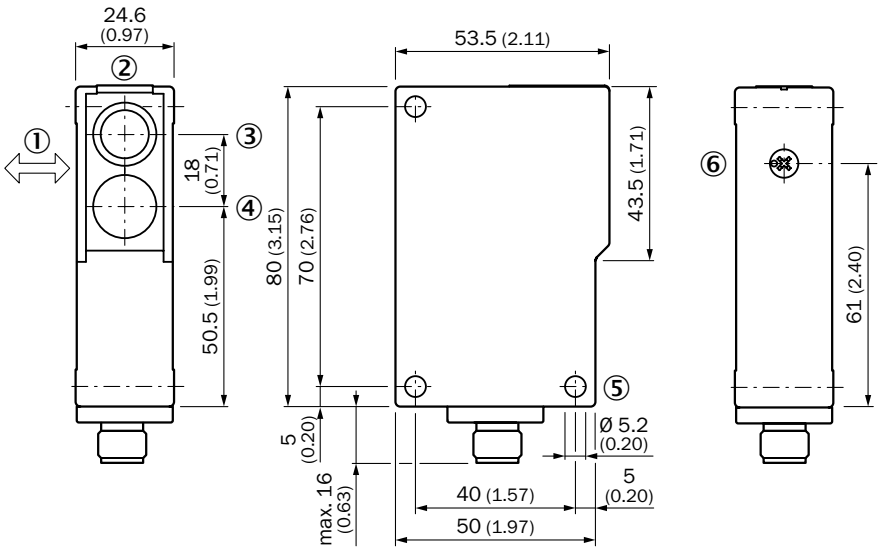
[1] Object with 90 % reflectance (referred to standard white, DIN 5033)

[2] Signal transit time with resistive load.

[3] With light/dark ratio 1:1.

Dimensional drawings

Dimensions in mm (inch)



① Standard direction
② LED signal strength indicator
③ Optical axis sender
④ Optical axis, receiver
⑤ Mounting hole, Ø 5.2 mm
⑥ Sensing range adjustment: potentiometer

Adjustments

Potentiometer