Online data sheet

WL100L-F2231

W100 Laser

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WL100L-F2231	6030710

Other models and accessories → www.sick.com/W100_Laser

Detailed technical data

Features

Sensor/detection principle	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.08 m ... 12 m [1]
Sensing range	0.08 m ... 10 m [1]
Type of light	Visible red light
Light source	Laser [2]
Light spot size (distance)	Ø 12 mm (10 m)
Wave length	650 nm
Laser class	1
Adjustment	Potentiometer, 270 °

[1] P250F.
[2] Average service life: 50,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Power consumption	≤ 30 mA [3]
Output type	PNP, Open Collector

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below U_V 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] B = inputs and output reverse-polarity protected.
[8] D = outputs overcurrent and short-circuit protected.

Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Signal voltage PNP HIGH/LOW	U_V - 1,8 V / ca. 0 V
Output current $I_{max.}$	≤ 100 mA
Response time	< 0.25 ms [4]
Switching frequency	± 2,000 Hz [5]
Connection type	Connector M8, 4-pin
Circuit protection	A [6] B [7] D [8]
Weight	10 g
Polarisation filter	✓
Housing material	ABS/PCplastic
Optics material	Plastic, PMMA
Enclosure rating	IP 65
Items supplied	Stainless steel mounting bracket (1.4301/304) BEF-W100-A, Reflector P250F
Ambient operating temperature	–10 °C ... +50 °C
Ambient storage temperature	–40 °C ... +70 °C

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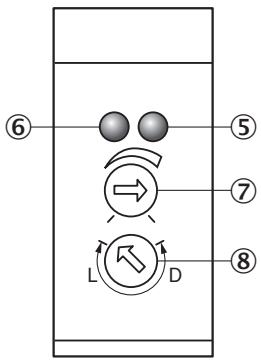
Adjustments possible

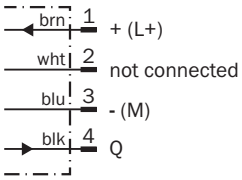
WT100L, WL100L



⑤ Orange LED indicator : switching output active
⑥ LED indicator green: power on
⑦ Sensing range (WT) / sensitivity (WL) adjustment: potentiometer, 270°
⑧ Light/ dark rotary switch: L = light switching, D = dark switching

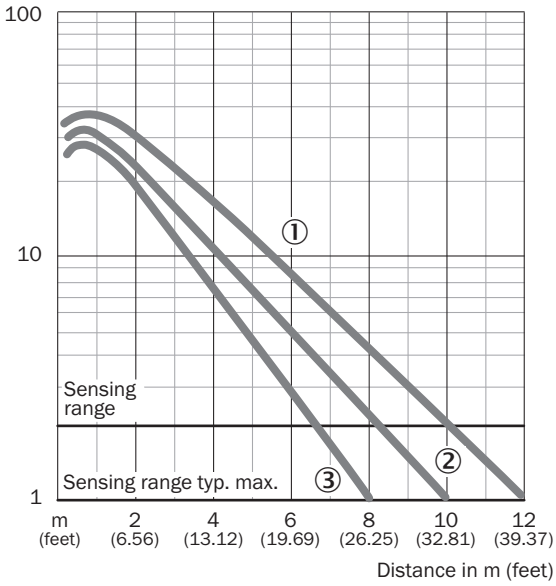
Connection diagram

Cd-066



Characteristic curve

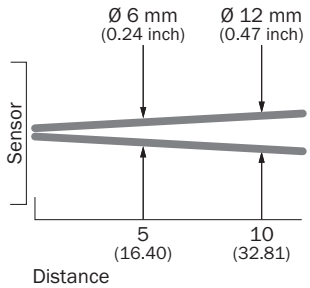
WL100L



① P250F
② PL20F
③ PL10F

Light spot size

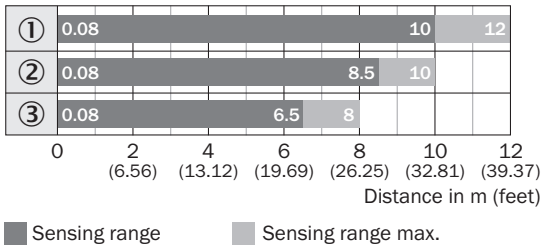
WL100L



All dimensions in m (feet)

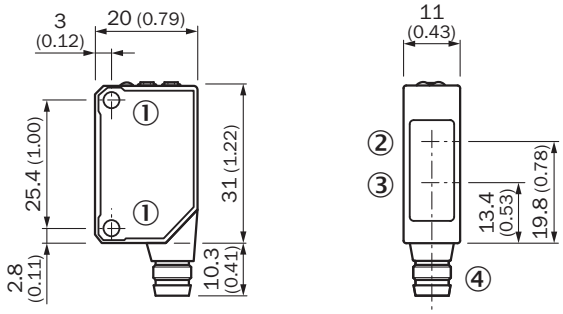
Sensing range diagram

WL100L



Dimensional drawing (Dimensions in mm (inch))

WT100L, WL100L



① Threaded mounting hole M3
② Center of optical axis, receiver
③ Center of optical axis, sender
④ Connection

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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