WL8G-P1131S02

W8G

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WL8G-P1131S02 | W8G
PHOTOELECTRIC SENSORS

Illustration may differ

CE

Ordering information

Type	Part no.
WL8G-P1131S02	1051347

Other models and accessories ➜ www.sick.com/W8G

Detailed technical data

Features

Sensor/detection principle	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m … 3 m [1]
Sensing range	0 m … 1.7 m [1]
Type of light	Visible red light
Light source	LED [2]
Light spot size (distance)	Ø 70 mm (2 m)
Wave length	650 nm
Adjustment	Potentiometer, 270°
Special features	Cable with connector M8, 3-pin

[1] Reflector PL80A.
[2] Average service life: 100,000 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]

[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] Do not bend below 0 °C.
[7] A = V_S connections reverse-polarity protected.
[8] B = inputs and output reverse-polarity protected.
[9] D = outputs overcurrent and short-circuit protected.

Output type	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Signal voltage PNP HIGH/LOW	Approx. V_S – 1.8 V / 0 V
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Attenuation along light beam	≤ 20 %
Connection type	Cable with connector M8, 3-pin, 600 mm [6]
Cable material	PVC
Circuit protection	A [7] B [8] D [9]
Weight	50 g
Polarisation filter	✓
Special device	✓
Housing material	Plastic, ABS, Plastic, PMMA
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Stainless steel mounting bracket (1.4305, 303) BEF-W170, Reflector P250F
Special feature	Detecting transparent objects
Ambient operating temperature	–25 °C ... +55 °C
Ambient storage temperature	–40 °C ... +70 °C

[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] Do not bend below 0 °C.

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

[8] B = inputs and output reverse-polarity protected.

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

Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717

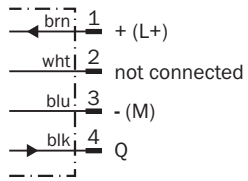| UNSPSC 16.0901	39121528

Adjustments possible
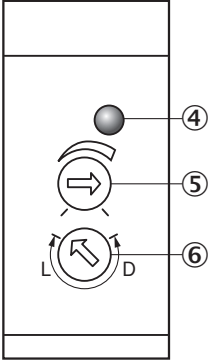
④ Orange LED indicator : switching output active
⑤ Sensitivity control
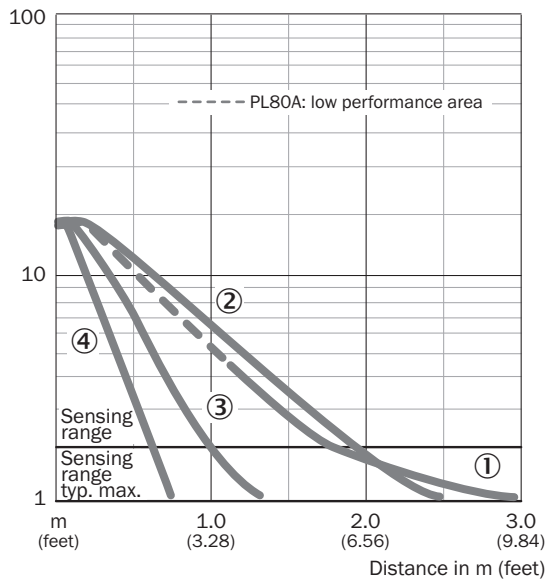⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Connection diagram

Cd-066

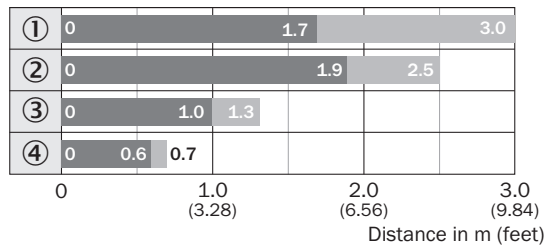|		
brn	1	+ (L+)
wht	2	not connected
blu	3	- (M)
blk	4	Q

Characteristic curve

WL8G

① Reflector PL80A
② Reflector P250F
③ Reflector PL20F
④ PL10F reflector

Sensing range diagram

WL8G

■ Sensing range   ■ Sensing range typ. max.

① Reflector PL80A
② Reflector P250F
③ Reflector PL20F
④ PL10F reflector

Dimensional drawing (Dimensions in mm (inch))
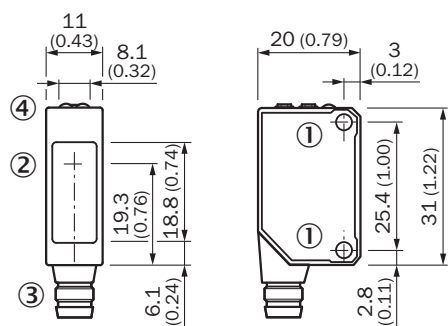
① Threaded mounting hole M3, max. tightening torque: 0.6 Nm
② Center of optical axis
③ Connection
④ Orange LED indicator : switching output active

Recommended accessories

Other models and accessories ➜ www.sick.com/W8G

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N08	2051607
Device protection (mechanical)			
	Safety bracket for floor mounting, Stainless steel 1.4571, mounting hardware included	BEF-SW-W4S	2051497
Mounting brackets and plates			
	Mounting bracket for wall mounting, Stainless steel, mounting hardware included	BEF-W100-A	5311520
	Mounting bracket for floor mounting, steel, zinc coated, mounting hardware included	BEF-W100-B	5311521
Reflectors			
	Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865
	Fine triple reflector, screw connection, suitable for laser sensors, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250F	5308843
	Fine triple reflector, screw connection, suitable for laser sensors, 18 mm x 18 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL10F	5311210
	Fine triple reflector, screw connection, suitable for laser sensors, 38 mm x 16 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL20F	5308844

	Brief description	Type	Part no.
	Fine triple reflector, screw connection, suitable for laser sensors, 56 mm x 28 mm, PM-MA/ABS, Screw-on, 2 hole mounting	PL30F	5326523
	Fine triple reflector, screw connection, suitable for laser sensors, 76 mm x 45 mm, PM-MA/ABS, Screw-on, 2 hole mounting	PL81-1F	5325060
	Suitable for laser sensors, self-adhesive, cut, see alignment note, 56.3 mm x 56.3 mm, self-adhesive	REF-AC1000-56	4063030
	Fine triple reflector, chemically resistant, screw connection, 18 mm x 18 mm, Plastic, Screw-on, 2 hole mounting	PL10F CHEM	5321636
	Chemically resistant, screw connection, suitable for laser sensors, 16 mm x 38 mm, Plastic, Screw-on, 2 hole mounting	PL20F-CHEM	5326089
	Stainless steel reflector, hygienic design, chemically resistant, enclosure rating IP69K, D12 adapter shaft, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), D12-adapter shaft	PLH25-D12	2063404
	Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, M12-adapter thread, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), M12-adapter thread	PLH25-M12	2063403
	Stainless steel reflector, washdown design, chemically resistant, IP 69K enclosure rating, screw connection, 14 mm x 14 mm, Stainless steel V4A (1.4404, 316L), Screw-on, 2 hole mounting	PLV14-A	2063405

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.