

WL100-2P1409S34

W100-2

PHOTOELECTRIC SENSORS







Ordering information

Туре	part no.
WL100-2P1409S34	6052405

Included in delivery: P250 (1), BEF-W100-A (1)

Other models and accessories → www.sick.com/W100-2

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor	
Functional principle detail	With minimum distance to reflector (dual lens system)	
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm	
Housing design (light emission)	Rectangular	
Sensing range max.	0.01 m 7.2 m ¹⁾	
Sensing range	0.01 m 5.5 m ¹⁾	
Type of light	Visible red light	
Light source	LED ²⁾	
Light spot size (distance)	Ø 280 mm (4 m)	
Wave length	632 nm	
Adjustment	Potentiometer (Sensitivity)	

¹⁾ Reflector PL80A.

 $^{^{2)}}$ Average service life: 100,000 h at $\rm T_U$ = +25 $^{\circ}\rm C.$

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	30 mA ³⁾
Switching output	PNP
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	\leq 0.5 ms $^{4)}$
Switching frequency	1,000 Hz ⁵⁾
Connection type	Cable with M8 male connector, 4-pin, 300 mm ⁶⁾
Cable material	Plastic, PVC
Conductor cross section	0.18 mm ²
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾
Protection class	III
Polarisation filter	√
Housing material	Plastic, ABS/PC/POM
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Mounting bracket BEF-W100-A, Reflector P250
Ambient operating temperature	-25 °C +55 °C
Ambient temperature, storage	-40 °C +70 °C

¹⁾ Limit values.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cRUus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

²⁾ May not fall below or exceed 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.

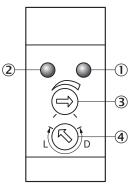
⁸⁾ B = output reverse-polarity protected.

⁹⁾ D = outputs overcurrent and short-circuit protected.

Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

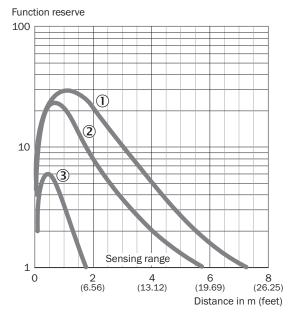
Adjustments W100-2



- ① LED indicator orange: switching output active
- ② LED indicator green: power on
- $\ensuremath{\mathfrak{G}}\xspace{-0.05cm} \textbf{Sensing range adjustment: potentiometer}$
- ④ Light/ dark rotary switch: L = light switching, D = dark switching

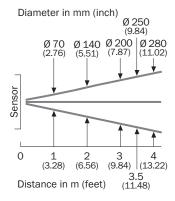
Connection diagram Cd-067

Characteristic curve WL100-2



- ① Reflector PL80A
- ② Reflector P250
- 3 Diamond Grade reflective tape, 100 mm x 100 mm

Light spot size



Sensing range diagram WL100-2

1	0.01*			5.5	7.2	
2	0.01*		4.0	5.7		
3	0.01*		4.0	5.5		
4	0.01*	3.0		5.2		
(5)	0.01* 1.	6 2.2				
6	0.1* 1.2	1.7				
7	0.01* 1.2	1.7				
(.76) (19	.0 7.5 .67) (24.6	61

Sensing range

Sensing range max.

*Close-up range at maximum sensitivity

① Reflector PL80A

② Reflector P250

3 Reflector PL50A, PL40A

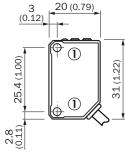
4 Reflector PL30A, PL31A

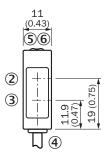
⑤ Reflector PL20A

6 Reflective tape Diamond Grade

⑦ P45

Dimensional drawing





Dimensions in mm (inch)

- ① Threaded mounting hole M3
- ② Center of optical axis, receiver
- 3 Center of optical axis, sender
- 4 Connection
- ⑤ LED indicator orange: switching output active
- 6 LED indicator green: power on

Recommended accessories

Other models and accessories → www.sick.com/W100-2

	Brief description	Туре	part no.
connectors ar	nd cables		
0	 Connection type head A: Female connector, M8, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF8U14-050VA3XLEAX	2095889
	 Connection type head A: Male connector, M8, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² 0.5 mm² 	STE-0804-G	6037323
Mounting syst	rems		
0000	 Description: Mounting bracket for wall mounting Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S 	BEF-W100-A	5311520
	 Description: Mounting bracket for floor mounting Material: Steel Details: Steel, zinc coated Items supplied: Mounting hardware included Suitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM 	BEF-W100-B	5311521
0 0 A 00	 Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A 	BEF-WN-REFX	2064574
reflectors and	optics		
	 Description: Rectangular, screw connection Dimensions: 51 mm 61 mm Ambient operating temperature: -30 °C +65 °C 	P250	5304812

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