WL100-2N3429
W100-2

PHOTOELECTRIC SENSORS

Ordering information

Type	part no.
WL100-2N3429	6052382

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 … 3 m [1]
Sensing range	0.01 m … 2.5 m [1]
Type of light	Visible red light
Light source	LED [2]
Light spot size (distance)	Ø 140 mm (2 m)
Wave length	632 nm
Adjustment	Potentiometer (Sensitivity)
Special applications	Detecting transparent objects

[1] Reflector PL80A.

[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC … 30 V DC [1]
Ripple	± 10 % [2]
Current consumption	30 mA [3]
Switching output	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Signal voltage NPN HIGH/LOW	Approx. V_S / < 1.8 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	Connector M8, 3-pin
Circuit protection	A [6] B [7] D [8]
Protection class	III
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.

[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] A = V_S connections reverse-polarity protected.

[7] B = output reverse-polarity protected.

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

Safety-related parameters

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$MTTF_D$	954 years
DC_{avg}	0 %

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	✓

Classifications

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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
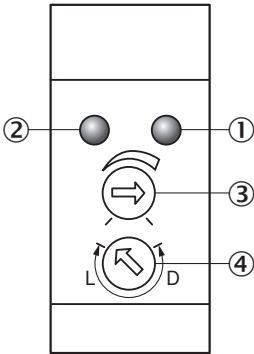
① LED indicator orange: switching output active
② LED indicator green: power on
③ Sensing range adjustment: potentiometer
④ Light/ dark rotary switch: L = light switching, D = dark switching
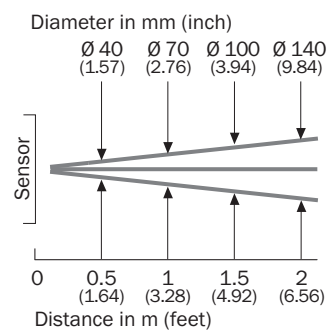
Connection diagram Cd-045
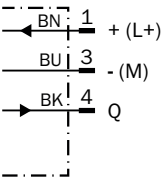
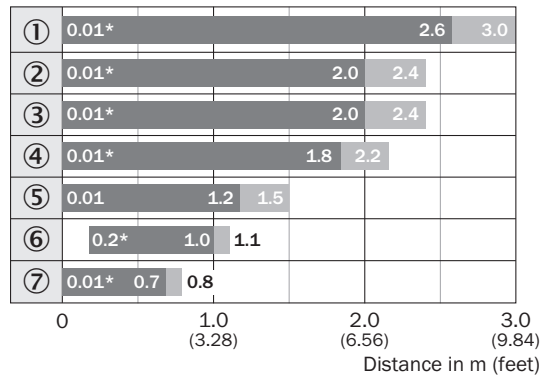## Characteristic curve WL100-2, clear material detection

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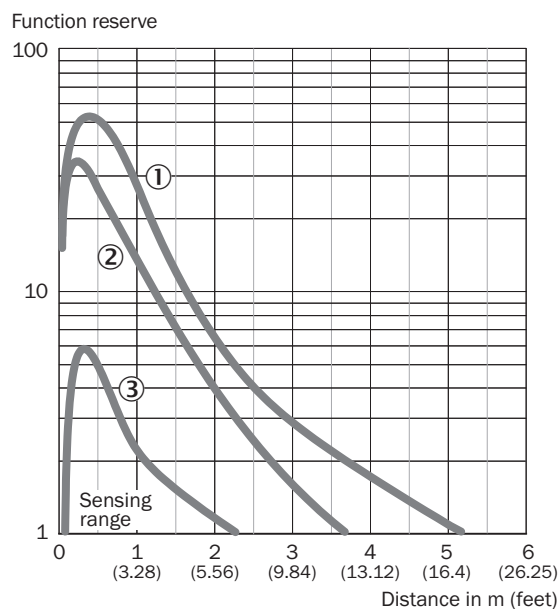
① Reflector PL80A
② Reflector P250
③ Diamond Grade reflective tape, 100 mm x 100 mm

Light spot size

Sensing range diagram WL100, 3 m

①	0.01*		2.6	3.0
②	0.01*	2.0	2.4	
③	0.01*	2.0	2.4	
④	0.01*	1.8	2.2	
⑤	0.01	1.2	1.5	
⑥	0.2*	1.0	1.1	
⑦	0.01*	0.7	0.8	

0   1.0   2.0   3.0
          (3.28)   (6.56)   (9.84)
              Distance in m (feet)

■ 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

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **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
	• **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

Brief description	Type	part no.
reflectors and optics		
• **Description:** Rectangular, screw connection • **Dimensions:** 51 mm 61 mm • **Ambient operating temperature:** −30 °C … +65 °C	P250	5304812
connectors and cables		
• **Connection type head A:** Female connector, M8, 3-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 3-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF8U13-050VA1XLEAX	2095884
• **Connection type head A:** Male connector, M8, 3-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² … 0.5 mm²	STE-0803-G	6037322

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