



WL100-2P4439

W100-2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
WL100-2P4439	6052362

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

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

Illustration may differ



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 $T_U = +25^\circ\text{C}$.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
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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.

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	≤ 0.5 ms ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ D ⁸⁾
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.

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

MTTF_D	954 years
DC_{avg}	0 %

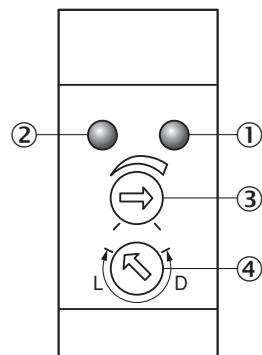
Certificates

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

Classifications

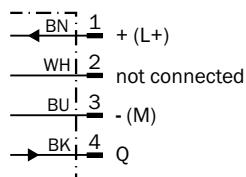
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC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

Adjustments W100-2



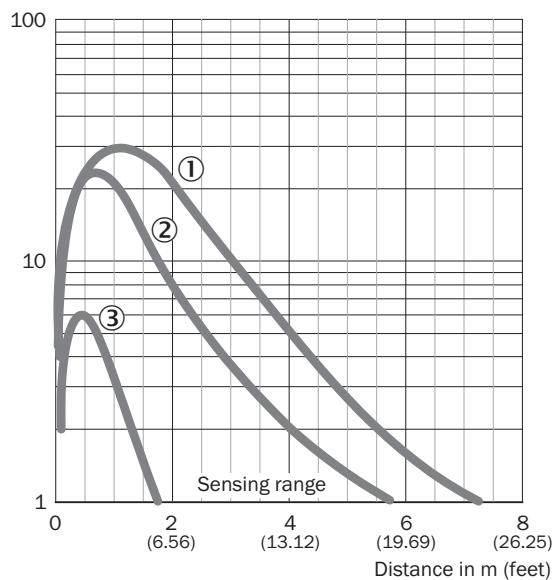
- ① LED indicator orange: switching output active
- ② LED indicator green: power on
- ③ Sensing range adjustment: potentiometer
- ④ Light/ dark rotary switch: L = light switching, D = dark switching

Connection diagram Cd-067



Characteristic curve WL100-2

Function reserve

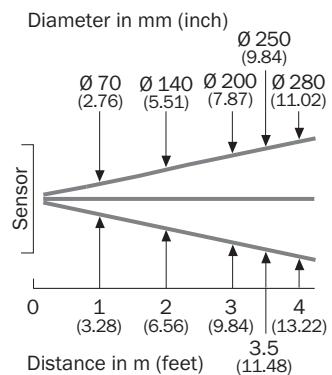


① Reflector PL80A

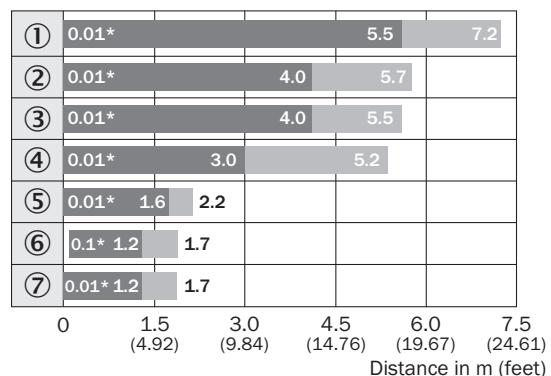
② Reflector P250

③ Diamond Grade reflective tape, 100 mm x 100 mm

Light spot size



Sensing range diagram WL100-2

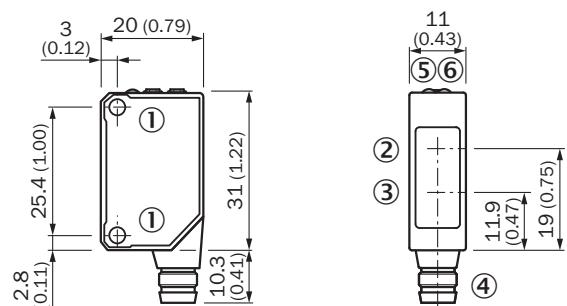


■ Sensing range ■ Sensing range max.

*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 WT100, WL100



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	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">Description: Mounting bracket for wall mountingMaterial: Stainless steelDetails: Stainless steelItems supplied: Mounting hardware includedSuitable 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
	<ul style="list-style-type: none">Description: Mounting bracket for floor mountingMaterial: SteelDetails: Steel, zinc coatedItems supplied: Mounting hardware includedSuitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM	BEF-W100-B	5311521
	<ul style="list-style-type: none">Description: Universal mounting bracket for reflectorsDimensions (W x H x L): 85 mm x 90 mm x 35 mmMaterial: SteelDetails: Steel, zinc coatedSuitable for: C110A, P250, PL20, PL30A, PL40A, PL80A	BEF-WN-REFX	2064574
reflectors and optics			
	<ul style="list-style-type: none">Description: Rectangular, screw connectionDimensions: 51 mm x 61 mmAmbient operating temperature: -30 °C ... +65 °C	P250	5304812
connectors and cables			
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 4-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 5 m, 4-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YF8U14-050VA3XLEAX	2095889
	<ul style="list-style-type: none">Connection type head A: Male connector, M8, 4-pin, straight, A-codedDescription: UnshieldedConnection systems: Screw-type terminalsPermitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323

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