



WL2S-2F3030S03

W2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL2S-2F3030S03	1103245

Other models and accessories → www.sick.com/W2

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Autocollimation
Dimensions (W x H x D)	7.7 mm x 21.8 mm x 13.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 1.2 m ¹⁾
Sensing range	0 m ... 0.55 m ¹⁾
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 12 mm (250 mm)
Wave length	640 nm
Adjustment	None
Special features	M2.5 threaded bushes

¹⁾ Reflector P250F.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA ³⁾
Switching output	PNP
Switching mode	Dark switching
Output current I_{max}	≤ 50 mA
Response time	< 0.5 ms ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Connection type	Cable with special connector, 3-wire, 100 mm ⁶⁾
Cable material	PUR
Conductor cross section	0.09 mm ²
Cable diameter	Ø 3 mm
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾
Polarisation filter	✓
Housing material	Plastic, ABS/PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-35 °C ... +50 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493

¹⁾ Limit values.

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 = output reverse-polarity protected.

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

Safety-related parameters

MTTF_D	4,863 years
DC_{avg}	0 %

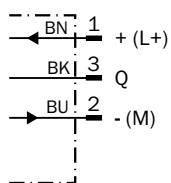
Classifications

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

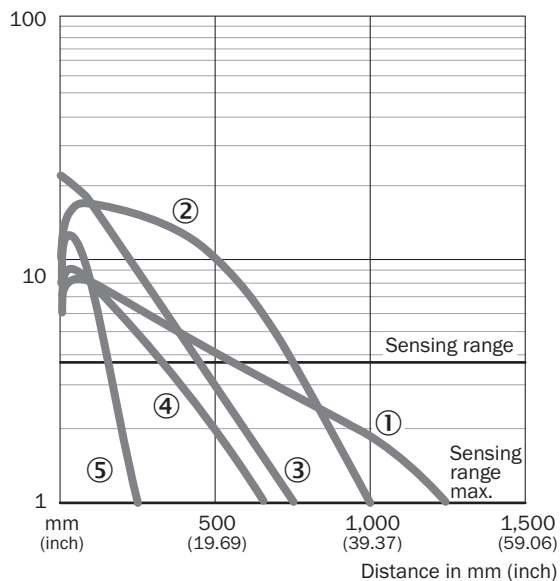
Connection diagram

Cd-344



Characteristic curve

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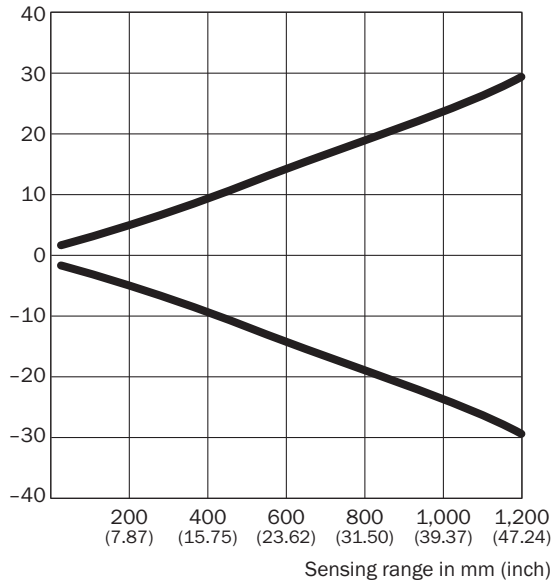


- ① Reflector P250F
- ② Reflector PL20F
- ③ Reflective tape REF-AC1000
- ④ PL10F reflector
- ⑤ Reflector PL8FH

Light spot size

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Spot diameter in mm (inch)

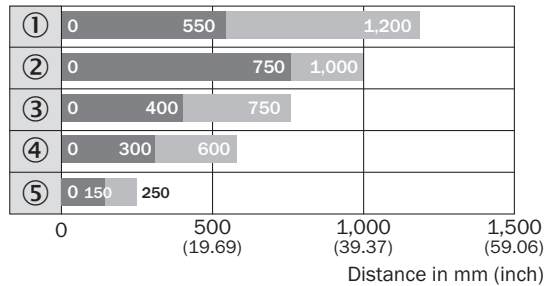


Dimensions in mm (inch)

Sensing range	Spot diameter
20 (0.79)	3.4 (0.13)
100 (3.94)	6.5 (0.26)
250 (9.84)	12.0 (0.47)
500 (19.69)	34.0 (1.34)
1,000 (39.37)	48.0 (1.89)
1,200 (47.24)	60.0 (2.36)

Sensing range diagram

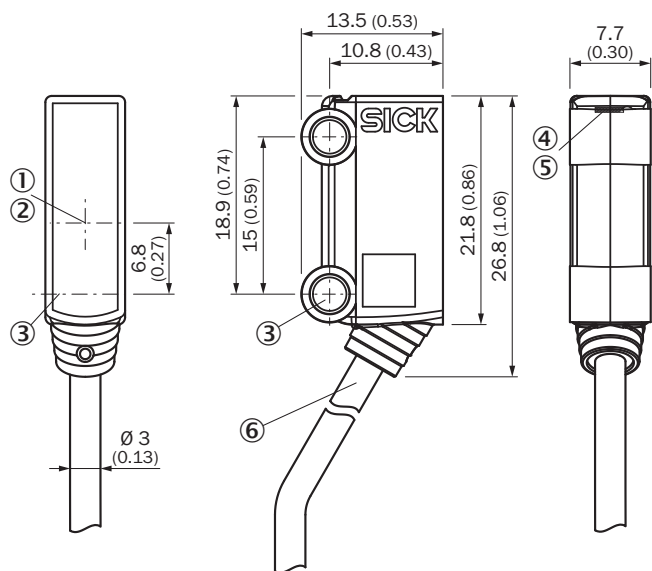
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■ Sensing range ■ Sensing range max.

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Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Middle axis fixing hole $\varnothing 3.2$ mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Cable with special connector 3M, 4-wire

Recommended accessories

Other models and accessories → www.sick.com/W2

	Brief description	Type	Part no.
Reflectors			
	Fine triple reflector, screw connection, suitable for laser sensors, 20 mm x 32 mm, PM-MA/ABS, Screw-on, 2 hole mounting	PL10F	5311210

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