

WL2S-2F3130

W2

**MINIATURE PHOTOELECTRIC SENSORS** 





### Ordering information

Туре	Part no.
WL2S-2F3130	1064593

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

Illustration may differ



### 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 <sup>1)</sup>
Sensing range	0 m 0.55 m <sup>1)</sup>
Type of light	Visible red light
Light source	PinPoint LED <sup>2)</sup>
Light spot size (distance)	Ø 12 mm (250 mm)
Wave length	640 nm
Adjustment	None

<sup>&</sup>lt;sup>1)</sup> Reflector P250F.

 $<sup>^{2)}</sup>$  Average service life: 100,000 h at TU = +25 °C.

### Mechanics/electronics

Supply voltage U <sub>B</sub>	10 V DC 30 V DC <sup>1)</sup>
Ripple	$<$ 5 $V_{pp}^{2)}$
Current consumption	20 mA <sup>3)</sup>
Switching output	PNP
Switching mode	Dark switching
Output current I <sub>max.</sub>	≤ 50 mA
Response time	< 0.5 ms <sup>4)</sup>
Switching frequency	1,000 Hz <sup>5)</sup>
Connection type	Cable with connector M8, 3-pin, 200 mm <sup>6)</sup>
Cable material	PVC
Conductor cross section	0.09 mm <sup>2</sup>
Cable diameter	Ø 3 mm
Circuit protection	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</sup>
Polarisation filter	<b>√</b>
Housing material	Plastic, ABS/PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-25 °C +50 °C
Ambient temperature, storage	-40 °C +75 °C
UL File No.	NRKH.E181493

<sup>1)</sup> Limit values.

# Safety-related parameters

MTTF <sub>D</sub>	4,863 years
DC <sub>avg</sub>	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

 $<sup>^{2)}\,\</sup>mathrm{May}$  not exceed or fall below  $\mathrm{U}_{\mathrm{V}}$  tolerances.

<sup>3)</sup> Without load.

<sup>&</sup>lt;sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

 $<sup>^{6)}</sup>$  Do not bend below 0  $^{\circ}\text{C}.$ 

 $<sup>^{7)}</sup>$  A = V<sub>S</sub> connections reverse-polarity protected.

<sup>8)</sup> B = output reverse-polarity protected.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

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### MINIATURE PHOTOELECTRIC SENSORS

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

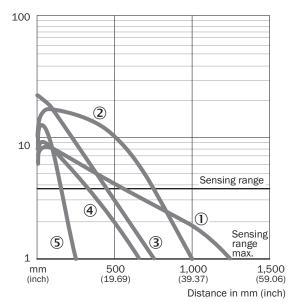
# Connection diagram

#### Cd-045



#### Characteristic curve

#### WL2S-2

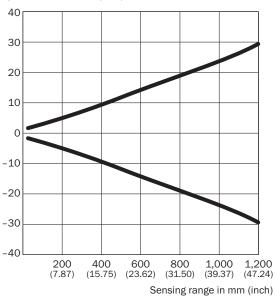


- ① Reflector P250F
- ② Reflector PL20F
- ③ Reflective tape REF-AC1000
- PL10F reflector
- ⑤ Reflector PL8FH

### Light spot size

### WL2S-2

#### Spot diameter in mm (inch)

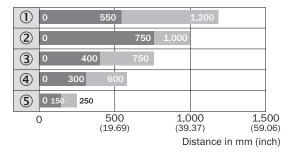


#### Dimensions in mm (inch)

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

### Sensing range diagram

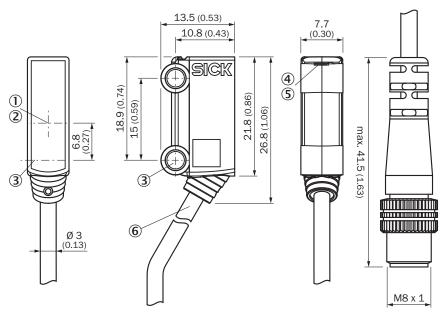
#### WL2S-2



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

### Dimensional drawing (Dimensions in mm (inch))

### WL2S-2



- ① Optical axis, receiver
- ② Optical axis, sender
- 3 Middle axis fixing hole Ø 3.2 mm
- 4 LED indicator green: Supply voltage active
- (5) LED indicator yellow: Status of received light beam
- 6 Connection

### Recommended accessories

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

	Brief description	Туре	Part no.
Plug connectors and cables			
40	<ul> <li>Connection type head A: Female connector, M8, 3-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 5 m, 3-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals</li> </ul>	YF8U13- 050VA1XLEAX	2095884
	<ul> <li>Connection type head A: Male connector, M8, 3-pin, straight</li> <li>Description: Unshielded</li> <li>Connection systems: Screw-type terminals</li> <li>Permitted cross-section: 0.14 mm² 0.5 mm²</li> </ul>	STE-0803-G	6037322
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

# 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:**

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