



# WS/WE14-2P410S01

W14

**SMALL PHOTOELECTRIC SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
WS/WE14-2P410S01	1044850

Other models and accessories → [www.sick.com/W14](http://www.sick.com/W14)

## Detailed technical data

### Features

<b>Functional principle</b>	Through-beam photoelectric sensor
<b>Dimensions (W x H x D)</b>	17.6 mm x 75.5 mm x 33.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	0 m ... 20 m
<b>Sensing range</b>	0 m ... 15 m
<b>Type of light</b>	Infrared light
<b>Light source</b>	LED <sup>1)</sup>
<b>Light spot size (distance)</b>	Ø 950 mm (15 m)
<b>Wave length</b>	645 nm
<b>Adjustment</b>	Potentiometer, 1 turn

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Power consumption, sender</b>	45 mA <sup>2)</sup>
<b>Power consumption, receiver</b>	35 mA <sup>2)</sup>
<b>Switching output</b>	PNP
<b>Output function</b>	Complementary

<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A.

<sup>2)</sup> Without load.

<sup>3)</sup> Signal transit time with resistive load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>6)</sup> C = interference suppression.

<sup>7)</sup> D = outputs overcurrent and short-circuit protected.

<b>Switching mode</b>	Light/dark switching
<b>Output current I<sub>max</sub></b>	≤ 100 mA
<b>Response time</b>	≤ 0.5 ms <sup>3)</sup>
<b>Switching frequency</b>	1,000 Hz <sup>4)</sup>
<b>Connection type</b>	Male connector M12, 4-pin
<b>Circuit protection</b>	A <sup>5)</sup> C <sup>6)</sup> D <sup>7)</sup>
<b>Weight</b>	40 g
<b>Special device</b>	✓
<b>Housing material</b>	Plastic, ABS
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-40 °C ... +60 °C
<b>Ambient temperature, storage</b>	-40 °C ... +75 °C
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493
<b>Part number of individual components</b>	2044165 WS14-2D410S01 2044169 WE14-2P410S01

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) Without load.

3) Signal transit time with resistive load.

4) With light/dark ratio 1:1.

5) A = V<sub>S</sub> connections reverse-polarity protected.

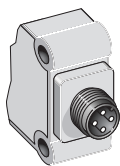
6) C = interference suppression.

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

## Classifications

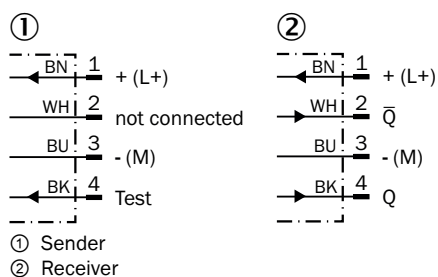
<b>eCl@ss 5.0</b>	27270901
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<b>eCl@ss 7.0</b>	27270901
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<b>eCl@ss 8.1</b>	27270901
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<b>ETIM 5.0</b>	EC002716
<b>ETIM 6.0</b>	EC002716
<b>ETIM 7.0</b>	EC002716
<b>ETIM 8.0</b>	EC002716
<b>UNSPSC 16.0901</b>	39121528

### Connection type

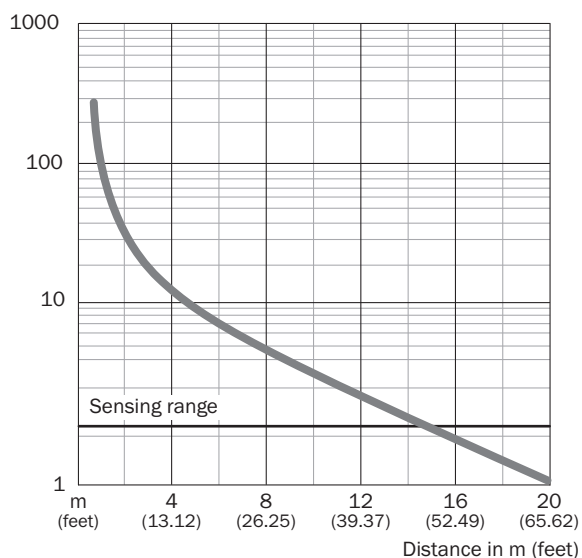


### Connection diagram

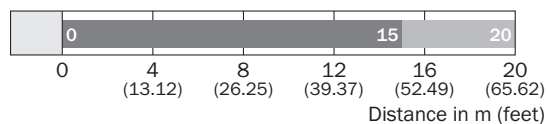
Cd-072



### Characteristic curve

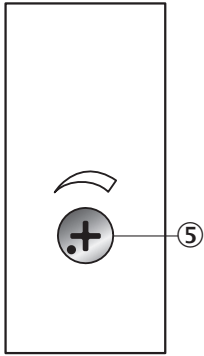


### Sensing range diagram



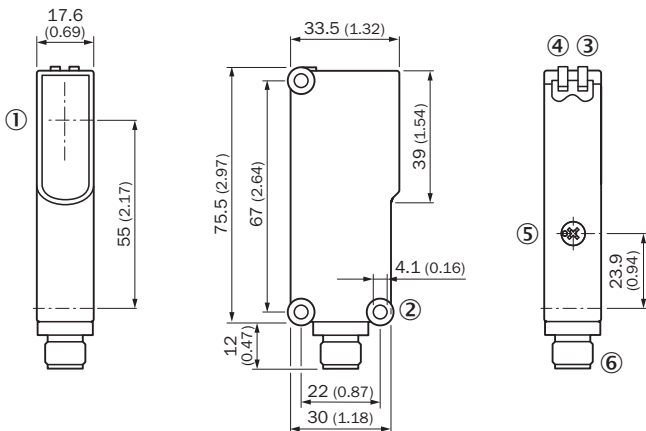
■ Sensing range      ■ Sensing range typ. max.

## Adjustments



⑤ Sensitivity control: potentiometer 270°



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



- ① Center of optical axis
- ② Mounting hole  $\varnothing$  4.1 mm
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: Supply voltage active
- ⑤ Sensitivity control, potentiometer 270° on WE
- ⑥ 4-pin M12 male connector or 2 m cable or 6-pin cubic connector

## Recommended accessories

Other models and accessories → [www.sick.com/W14](http://www.sick.com/W14)

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

## 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](http://www.sick.com)