



# WL24-2V530S06

W24-2 Ex

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
WL24-2V530S06	1027613

Other models and accessories → [www.sick.com/W24-2\\_Ex](http://www.sick.com/W24-2_Ex)

Illustration may differ



### Detailed technical data

#### Features

<b>Sensor/ detection principle</b>	Photoelectric retro-reflective sensor
<b>Dimensions (W x H x D)</b>	38 mm x 154.5 mm x 77 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	0 m ... 22 m <sup>1)</sup>
<b>Sensing range</b>	0 m ... 15 m <sup>1)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 250 mm (15 m)
<b>Adjustment</b>	Potentiometer
<b>Alarm output</b>	✓
<b>Special applications</b>	Explosive areas

<sup>1)</sup> Reflector PL80A.

<sup>2)</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>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Power consumption</b>	50 mA <sup>3)</sup>
<b>Switching output</b>	NPN

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

<sup>2)</sup> May not exceed or fall below U<sub>V</sub> tolerances.

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

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

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

<sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>7)</sup> C = interference suppression.

<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

<sup>9)</sup> Reference voltage: 50 V DC.

	PNP
<b>Switching mode</b>	Light/dark switching Light/dark switching
<b>Switching mode selector</b>	Selectable via PNP/NPN selector, selectable via light/dark selector
<b>Output current <math>I_{\max}</math></b>	100 mA
<b>Response time</b>	$\leq 500 \mu\text{s}$ <sup>4)</sup>
<b>Switching frequency</b>	1,000 Hz <sup>5)</sup>
<b>Connection type</b>	Male connector M12, 5-pin
<b>Circuit protection</b>	A <sup>6)</sup> C <sup>7)</sup> D <sup>8)</sup>
<b>Protection class</b>	II <sup>9)</sup>
<b>Weight</b>	800 g
<b>Polarisation filter</b>	✓
<b>Special device</b>	✓
<b>Housing material</b>	Metal, Zinc diecast
<b>Enclosure rating</b>	IP67
<b>Test input sender off</b>	TE to 0 V
<b>Certificate (IECEX)</b>	IECEX PTB 14.0031
<b>ATEX marking</b>	EX II 3G EX nA op is IIB T4 Gc X EX II 3D EX tc IIIB T135 °C Dc IP67 X According to directive 2014/34/EX/EU
<b>Ex area category</b>	3D, 3G
<b>Ambient operating temperature</b>	-20 °C ... +50 °C
<b>Ambient storage temperature</b>	-40 °C ... +75 °C

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

<sup>2)</sup> May not exceed or fall below  $U_V$  tolerances.

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

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

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

<sup>6)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>7)</sup> C = interference suppression.

<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

<sup>9)</sup> Reference voltage: 50 V DC.

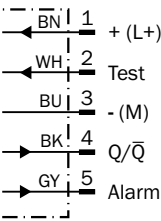
## Classifications

<b>ECI@ss 5.0</b>	27270902
<b>ECI@ss 5.1.4</b>	27270902
<b>ECI@ss 6.0</b>	27270902
<b>ECI@ss 6.2</b>	27270902
<b>ECI@ss 7.0</b>	27270902
<b>ECI@ss 8.0</b>	27270902
<b>ECI@ss 8.1</b>	27270902
<b>ECI@ss 9.0</b>	27270902
<b>ETIM 5.0</b>	EC002717

<b>ETIM 6.0</b>	EC002717
<b>UNSPSC 16.0901</b>	39121528

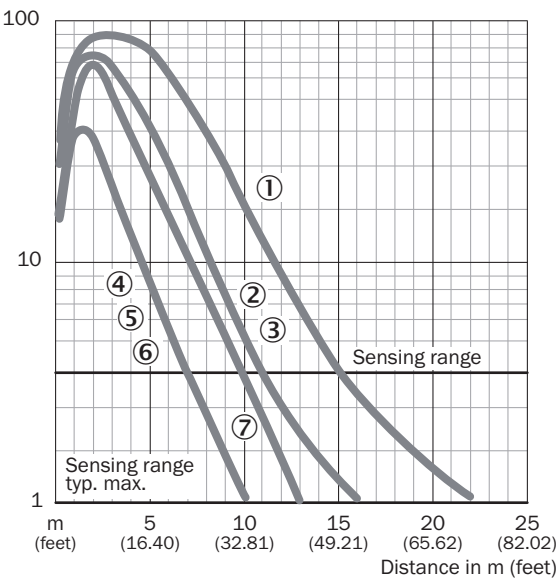
Connection diagram

Cd-150



Characteristic curve

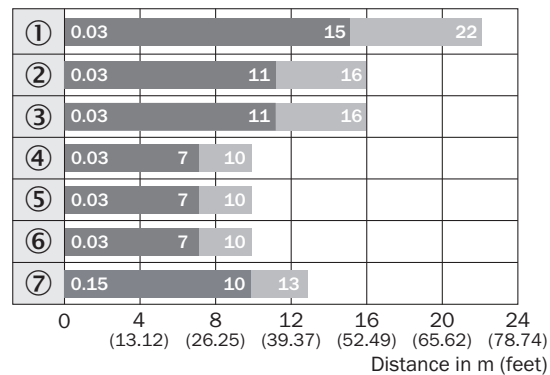
WL24-2



- ① Reflector PL80A
- ② Reflector PL50A
- ③ Reflector PL40A
- ④ Reflector PL30A
- ⑤ Reflector PL20A
- ⑥ Reflective tape Diamond Grade
- ⑦ Reflector C110A

## Sensing range diagram

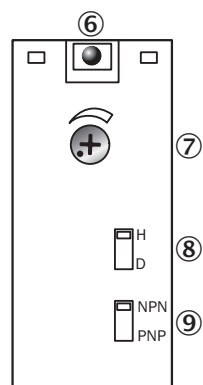
WL24-2



■ Sensing range      ■ Sensing range max.

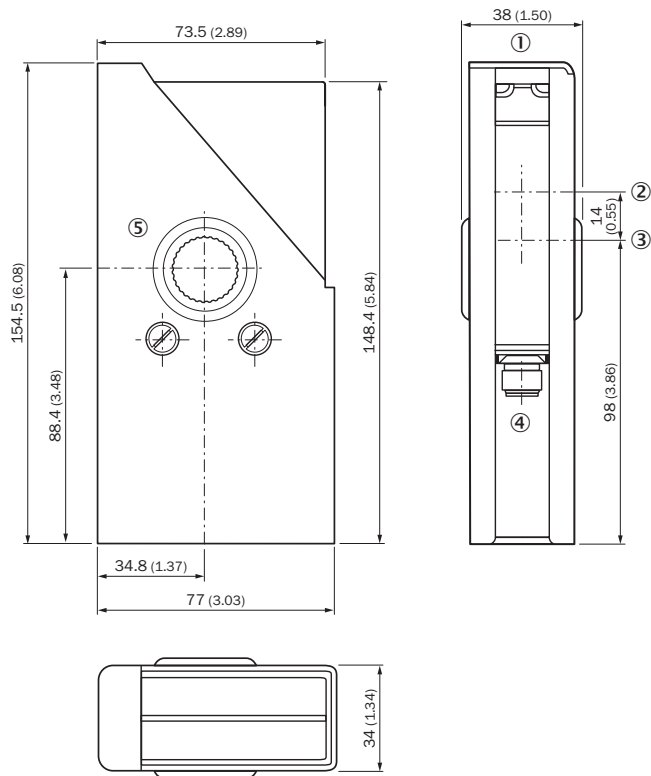
- ① Reflector PL80A
- ② Reflector PL50A
- ③ Reflector PL40A
- ④ Reflector PL30A
- ⑤ Reflector PL20A
- ⑥ Reflective tape Diamond Grade
- ⑦ Reflector C110A

## Adjustments possible



- ⑥ LED signal strength indicator
- ⑦ Sensitivity control
- ⑧ Light/dark selector
- ⑨ NPN/PNP changeover switch





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



- ① LED signal strength indicator
- ② Center of optical axis, sender
- ③ Center of optical axis, receiver
- ④ Connection
- ⑤ Fixing hole for clamb holder

### Recommended accessories

Other models and accessories → [www.sick.com/W24-2\\_Ex](http://www.sick.com/W24-2_Ex)

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N03 for universal clamp bracket, zinc coated, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N03	2051609
	Plate N04 for universal clamp, steel, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N04	2051610
Mounting brackets and plates			
	Mounting bracket, large, stainless steel, without mounting hardware for the sensor	BEF-WG-W24	4026324
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574

## 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)