



# WT12L-2B550A02

W12-2 Laser

**SMALL PHOTOELECTRIC SENSORS**

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
WT12L-2B550A02	1022048

Other models and accessories → [www.sick.com/W12-2\\_Laser](http://www.sick.com/W12-2_Laser)

Illustration may differ



### Detailed technical data

#### Features

<b>Sensor/ detection principle</b>	Photoelectric proximity sensor, Background suppression
<b>Dimensions (W x H x D)</b>	15 mm x 49 mm x 41.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	50 mm ... 290 mm <sup>1)</sup>
<b>Focus</b>	100 mm
<b>Type of light</b>	Visible red light
<b>Light source</b>	Laser <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 0.3 mm (180 mm)
<b>Wave length</b>	650 nm
<b>Laser class</b>	2 (EN 60825-1:2014, IEC 60825-1:2007) <sup>3)</sup>
<b>Adjustment</b>	Potentiometer
<b>Special applications</b>	Detecting small objects, Detection of objects moving at high speeds

<sup>1)</sup> Object with 6 % remission.

<sup>2)</sup> Average service life: 50,000 h at T<sub>U</sub> = +25 °C.

<sup>3)</sup> Pulse length 4 µs, max. pulse power < 5,0 mW.

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
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<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A.

<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.

<b>Ripple</b>	$\leq 5 V_{pp}^{2)}$
<b>Power consumption</b>	55 mA <sup>3)</sup>
<b>Switching output</b>	PNP NPN
<b>Switching mode</b>	Light/dark switching
<b>Switching mode selector</b>	Selectable via L/D control cable
<b>Signal voltage PNP HIGH/LOW</b>	$U_v - < 2 V, U_v / 0 V, \leq 1.5 V$
<b>Signal voltage NPN HIGH/LOW</b>	$U_v - < 2 V, U_v / 0 V, \leq 1.5 V$
<b>Output current <math>I_{max.}</math></b>	100 mA
<b>Response time</b>	$\leq 200 \mu s^{4)}$
<b>Switching frequency</b>	2,500 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>	III
<b>Weight</b>	+ 130 g
<b>Special device</b>	✓
<b>Housing material</b>	Metal
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-10 °C ... +50 °C
<b>Ambient storage temperature</b>	-25 °C ... +75 °C
<b>UL File No.</b>	American Version, 242362, 242361 (0312012-00)

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<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.

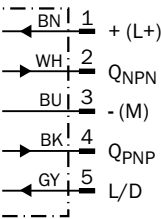
## Classifications

<b>ECI@ss 5.0</b>	27270904
<b>ECI@ss 5.1.4</b>	27270904
<b>ECI@ss 6.0</b>	27270904
<b>ECI@ss 6.2</b>	27270904
<b>ECI@ss 7.0</b>	27270904
<b>ECI@ss 8.0</b>	27270904
<b>ECI@ss 8.1</b>	27270904
<b>ECI@ss 9.0</b>	27270904
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719

UNSPSC 16.0901	39121528
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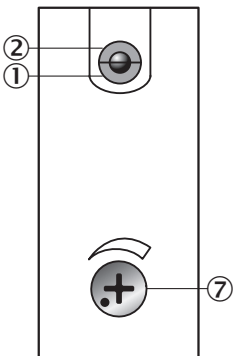
Connection diagram

Cd-145



Adjustments possible

WT12L-2



- ① Operating indicator, green
- ② LED reception indicator, yellow
- ⑦ Adjustment of sensing range



## 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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