



WSE27-3P2410S03

W27

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
WSE27-3P2410S03	1054544

Other models and accessories → [www.sick.com/W27](http://www.sick.com/W27)

## Detailed technical data

### Features

<b>Functional principle</b>	Through-beam photoelectric sensor
<b>Dimensions (W x H x D)</b>	24.6 mm x 80.6 mm x 54 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	0 m ... 45 m
<b>Sensing range</b>	0 m ... 35 m
<b>Focus</b>	Approx. 6°
<b>Type of light</b>	Infrared light
<b>Light source</b>	LED <sup>1)</sup>
<b>Light spot size (distance)</b>	Ø 3.7 m (25 m)
<b>Angle of dispersion</b>	Approx. 6°
<b>Wave length</b>	880 nm
<b>Adjustment</b>	None
<b>Special features</b>	Maximum sensing range 45 m Switching frequency 300 Hz

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

## Mechanics/electronics

<b>Supply voltage <math>U_B</math></b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Power consumption, sender</b>	45 mA <sup>3)</sup>
<b>Power consumption, receiver</b>	20 mA <sup>3)</sup>
<b>Switching output</b>	PNP
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark switching
<b>Signal voltage PNP HIGH/LOW</b>	Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$
<b>Output current <math>I_{\max}</math></b>	≤ 100 mA
<b>Response time</b>	≤ 1.7 ms <sup>4)</sup>
<b>Switching frequency</b>	300 Hz <sup>5)</sup>
<b>Angle of reception</b>	Approx. 3°
<b>Connection type</b>	Male connector M12, 4-pin
<b>Circuit protection</b>	A <sup>6)</sup> B <sup>7)</sup> C <sup>8)</sup>
<b>Protection class</b>	II <sup>9)</sup>
<b>Weight</b>	200 g
<b>Special device</b>	✓
<b>Housing material</b>	Plastic, ABS
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP66 IP67
<b>Test input sender off</b>	TE to 0 V
<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>	2060720 WE27-3P2410S03 2060721 WS27-3D2410S03

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

<sup>2)</sup> May not exceed or fall below  $U_V$  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> B = inputs and output reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

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

## Safety-related parameters

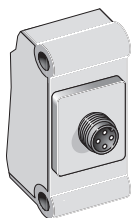
<b>MTTF<sub>D</sub></b>	996 years
<b>DC<sub>avg</sub></b>	0 %

## Classifications

<b>ECLASS 5.0</b>	27270901
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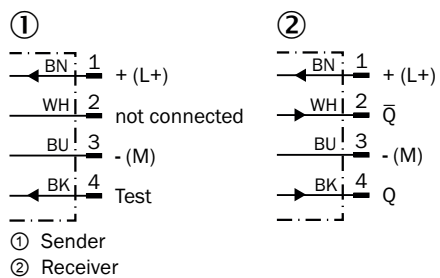
<b>ECLASS 5.1.4</b>	27270901
<b>ECLASS 6.0</b>	27270901
<b>ECLASS 6.2</b>	27270901
<b>ECLASS 7.0</b>	27270901
<b>ECLASS 8.0</b>	27270901
<b>ECLASS 8.1</b>	27270901
<b>ECLASS 9.0</b>	27270901
<b>ECLASS 10.0</b>	27270901
<b>ECLASS 11.0</b>	27270901
<b>ECLASS 12.0</b>	27270901
<b>ETIM 5.0</b>	EC002716
<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



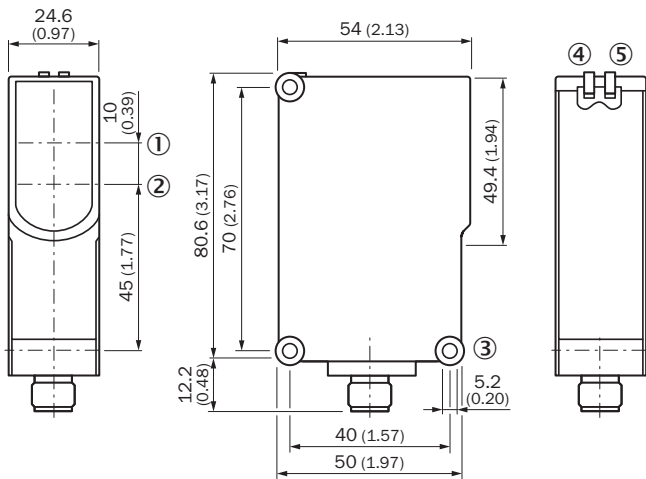
### Connection diagram

Cd-072



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




WL27-3, WSE27-3



- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Mounting hole  $\varnothing$  5.2 mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

**Recommended accessories**

Other models and accessories → [www.sick.com/W27](http://www.sick.com/W27)

	Brief description	Type	Part no.
Device protection (mechanical)			
	Protective housing for W26, W27-3 and mounting rods with diameter 12 mm ... 20 mm, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp BEF-KHS-KH1 (2022726), mounting hardware	BEF-SG-W27	2039601
Plug connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> <math>\leq 0.75 \text{ mm}^2</math></li> </ul>	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)