



# WSE12-3N2411S37

W12-3

**SMALL PHOTOELECTRIC SENSORS** 





# Ordering information

Туре	Part no.
WSE12-3N2411S37	1045357

Other models and accessories → www.sick.com/W12-3

Illustration may differ



# Detailed technical data

### **Features**

Functional principle	Through-beam photoelectric sensor
Sensing range max.	0 m 5 m
Sensing range	0 m 4 m
Emitted beam	
Light source	LED <sup>1)</sup>
Type of light	Infrared light
Light spot size (distance)	Ø 750 mm (5 m)
Key LED figures	
Wave length	850 nm
Adjustment	Potentiometer, 5 turns
Angle of dispersion	Approx. 4°
Part number of individual components	2046741 WS12-3D2410S36 2056043 WE12-3N2411S37

 $<sup>^{1)}</sup>$  Average service life: 100,000 h at  $\rm T_U$  = +25  $^{\circ}\rm C.$ 

# Safety-related parameters

MTTF <sub>D</sub>	826 years
DC <sub>avg</sub>	0 %

### **Electronics**

Supply voltage U <sub>B</sub>	10 V DC 30 V DC <sup>1)</sup>
Ripple	< 5 V <sub>pp</sub> <sup>2)</sup>
Current consumption, sender	$\leq$ 30 mA $^{3)}$
Current consumption, receiver	$\leq$ 25 mA $^{3)}$
Protection class	III
Digital output	
Туре	NPN
Switching mode	Light/dark switching
Signal voltage NPN HIGH/LOW	Approx. VS / < 2.5 V
Output current I <sub>max.</sub>	≤ 100 mA
Response time	≤ 5,000 µs <sup>4)</sup>
Switching frequency	100 Hz <sup>5)</sup>
Output function	Complementary
Circuit protection	A <sup>6)</sup> C <sup>7)</sup> D <sup>8)</sup>
Test input sender off	TE to 0 V, Sender off

 $<sup>^{1)}\,\</sup>mathrm{Limit}$  values when operated in short-circuit protected network: max. 8 A.

#### Mechanics

Housing	Rectangular
Dimensions (W x H x D)	15.6 mm x 48.5 mm x 42 mm
Connection	Male connector M12, 4-pin
Material	
Housing	Metal
Front screen	Plastic, PMMA
Weight	120 g

### Ambient data

Enclosure rating	IP66 IP67 IP69K
Ambient operating temperature	-40 °C +60 °C
Ambient temperature, storage	-40 °C +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

# Classifications

ECLASS 5.0	27270901
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 $<sup>^{2)}\,\</sup>mbox{May}$  not fall below or exceed  $\mbox{U}_{\mbox{\scriptsize V}}$  tolerances.

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

 $<sup>^{\</sup>rm 4)}$  Signal transit time with resistive load.

<sup>&</sup>lt;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.

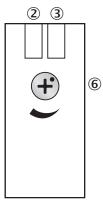
# WSE12-3N2411S37 | W12-3

SMALL PHOTOELECTRIC SENSORS

ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

# Adjustments

WL12-3, WSE12-3



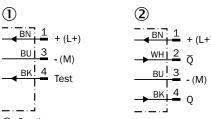
- ② LED indicator yellow: Status of received light beam ③ LED indicator green: Supply voltage active
- Sensitivity control: potentiometer

# Connection type



# Connection diagram

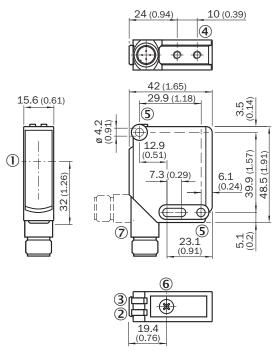
# Cd-077



- ① Sender
- ② Receiver

# Dimensional drawing (Dimensions in mm (inch))

#### WL12-3, WSE12-3



- ① Optical axis
- ② LED indicator yellow: Status of received light beam
- ③ LED indicator green: Supply voltage active
- 4 M4 threaded mounting hole, 4 mm deep
- (5) Mounting hole, Ø 4.2 mm
- ⑤ Sensitivity control: potentiometer
- ⑦ Connection

# Recommended accessories

Other models and accessories → www.sick.com/W12-3

	Brief description	Туре	Part no.
Others			
	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones	DOL-1204-G05MNI	6052615

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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

