



Photoelectric sensors  
W4SL-3V, Through-beam photoelectric sensor

WSE4SL-3N1137V



**Model Name** > [WSE4SL-3N1137V](#)  
**Part No.** > [1058270](#)



*Illustration may differ*

**At a glance**

- Precise laser light spot, laser class 1
- Stainless steel housing with washdown design
- Latest SICK proprietary ASIC and laser technologies for very good background suppression and ambient light immunity
- ECOLAB certified, tested to IP66, IP67, IP68 and IP69K enclosure rating
- State-of-the-art connections through 100 % sealed electronics
- Patented teach-in pushbutton consisting of a stainless steel membrane welded into the housing

**Your benefits**

- Highly visible, even light spot with a sharp contour to facilitate alignment
- Washable stainless steel housing reduces bacterial contamination
- Innovative washdown design with sealed connections and unique patented membrane teach-in pushbutton
- High level of system availability and minimal operating costs even when aggressive cleaners are used, thanks to high-quality manufacturing and inspection
- Long sensing range allows use from up to 60 m
- Sender-receiver system ensures high reliability
- Established and proven housing design for easy installation



**Features**

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	12.2 mm x 41.8 mm x 17.3 mm
Housing design:	Washdown <sup>1)</sup>
Housing design (light emission):	Rectangular, Slim
Mounting hole:	M3
Sensing range max.:	0 m ... 60 m
Sensing range:	0 m ... 50 m
Type of light:	Visible red light
Light source:	Laser <sup>2)</sup>
Laser class:	1 (EN60825-1:2008-05 & IEC 60825-1:2007-03/CDRH 21 CFR 1040.10 & 1040.11)
Wave length:	650 nm
Adjustment:	Single teach-in button
Light spot size (distance):	Ø 1 mm (500 mm)

1) The essential difference between a standard/washdown product and a hygiene product is that where the process and contact with the medium (activity in the vicinity of the food) are concerned, the product is designed in accordance with the latest standards and hygiene design guidelines, and materials are selected accordingly 2)

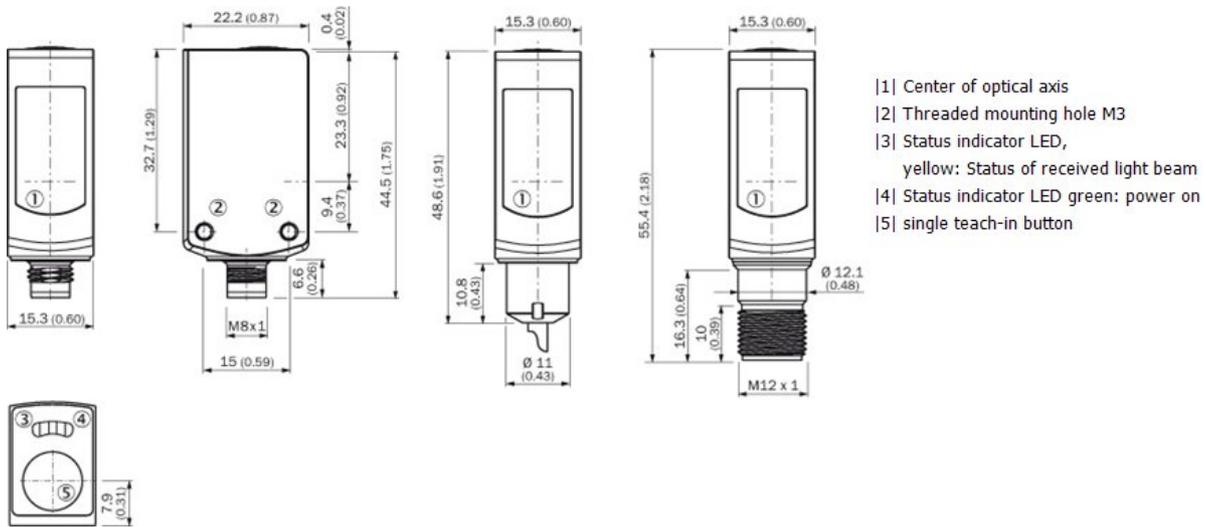
Average service life 50,000 h at  $T_A = +25\text{ °C}$

## Mechanics/electronics

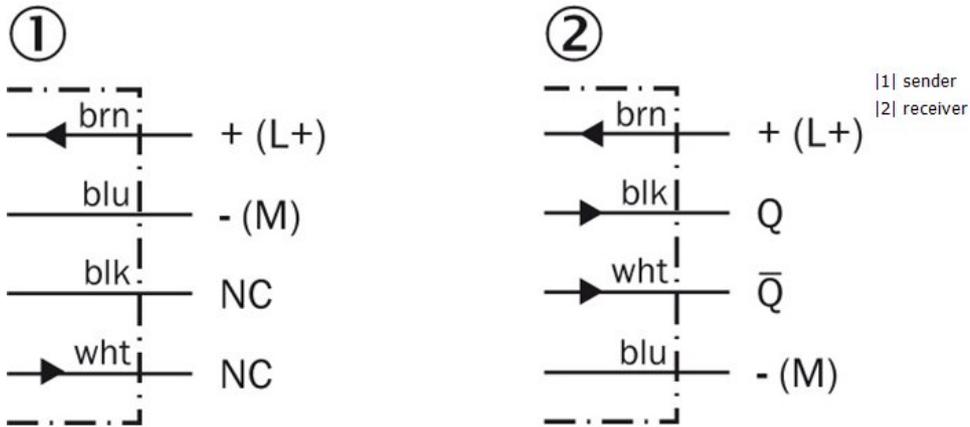
Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Power consumption:	$\leq 30\text{ mA}$ <sup>2)</sup>
Output type:	NPN <sup>3)</sup>
Output function:	Complementary
Switching mode:	Light/dark-switching <sup>4)</sup>
Output current I <sub>max.</sub> :	$\leq 100\text{ mA}$
Response time:	$\leq 0.5\text{ ms}$ <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Connection type:	Cable, 4-wire, 2 m <sup>7)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Circuit protection:::	A, B, C <sup>8) 9) 10)</sup>
Protection class:	III
Weight:	100 g
Housing material:	Stainless steel
Optics material:	PMMA
Enclosure rating:	IP 66, IP 67, IP 68, IP 69K <sup>11)</sup>
Ambient operating temperature:	-30 °C ... 50 °C
Ambient storage temperature:	-30 °C ... 70 °C
Ambient operating temperature extended:::	-30 °C ... 55 °C <sup>12) 13)</sup>
MTTFd:	350 a (EN ISO 13849-1) <sup>14)</sup>

1) Limit values, operation in short-circuit protected network max. 8 A 2) Without load 3) 4) Q = light-switching 5) Signal transit time with resistive load 6) With light/dark ratio 1:1 7) Do not bend below 0 °C 8)  $A = V_S$  connections reverse-polarity protected 9) B = inputs and output reverse-polarity protected 10) C = interference suppression 11) Only in case of correctly mounted IP 69K connecting cable 12) As of  $T_a = 50\text{ °C}$ , a max. supply voltage  $V_{max.} = 24\text{ V}$  and a max. load current  $I_{max.} = 50\text{ mA}$  is permitted 13) Using the sensor below  $T_a = -10\text{ °C}$  is possible, if the sensor is turned on at  $T_a > -10\text{ °C}$ , then the environment cools down and the sensor is not disconnected from the supply voltage during the whole time. It is not allowed to turn on the sensor below  $T_a = -10\text{ °C}$  14) Mode of calculation: Parts-Count-calculation

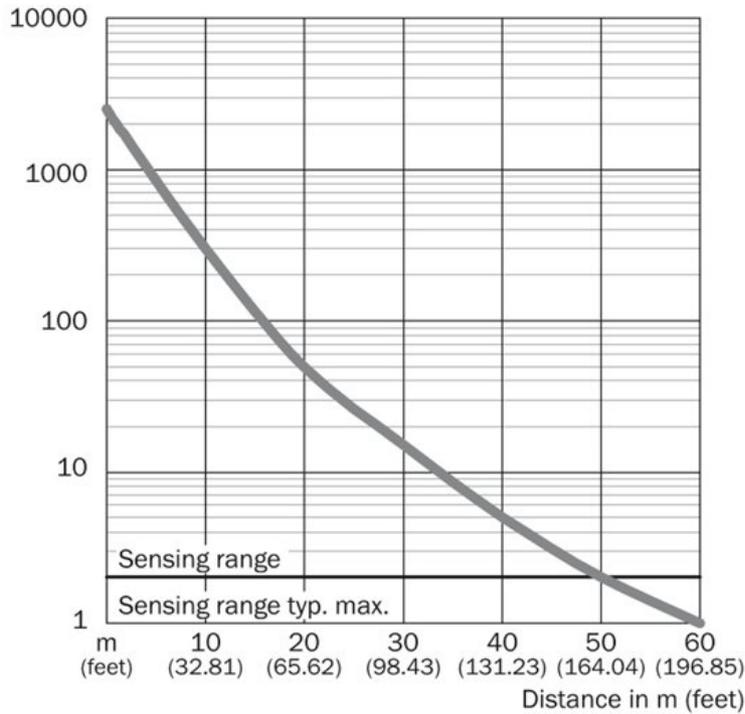
## Dimensional drawing



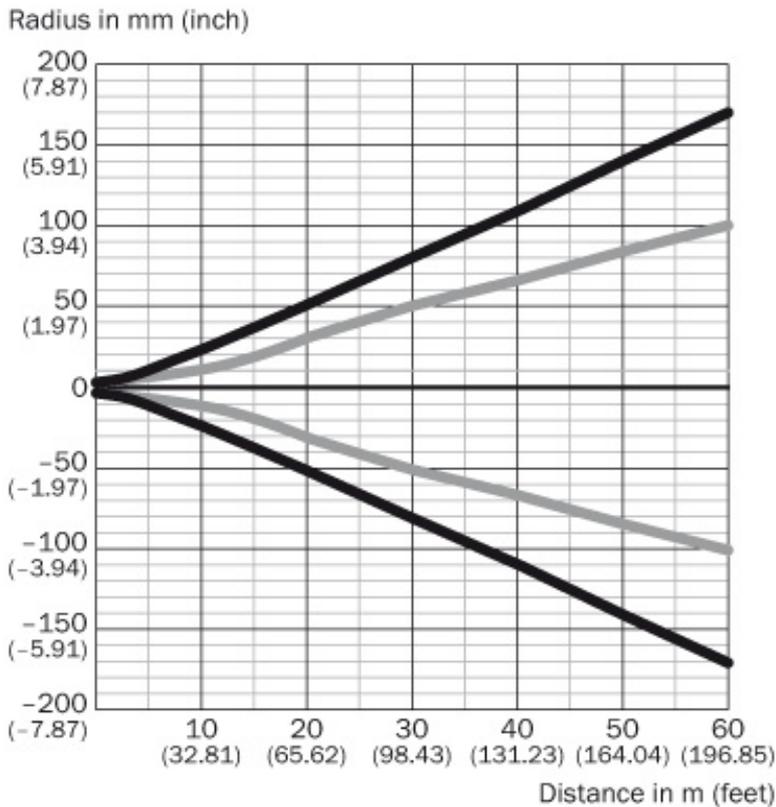
## Connection diagram



**Characteristic curve**



**Light spot size**

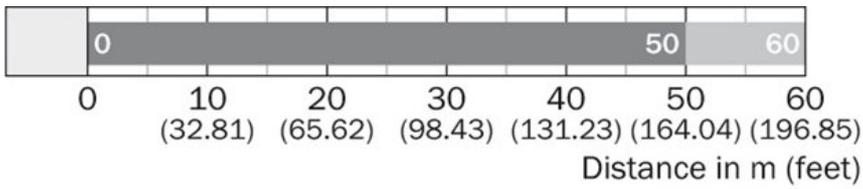


**Dimensions in mm (inch)**

Sensing range	Vertical	Horizontal
<b>0.5 m</b> (1.64 feet)	< 1.0 (0.04)	< 1.0 (0.04)
<b>1 m</b> (3.28 feet)	1.5 (0.06)	1.2 (0.05)
<b>5 m</b> (16.40 feet)	15 (0.59)	11 (0.43)
<b>10 m</b> (32.81 feet)	45 (1.77)	28 (1.10)
<b>60 m</b> (196.85 feet)	336 (13.23)	200 (7.87)

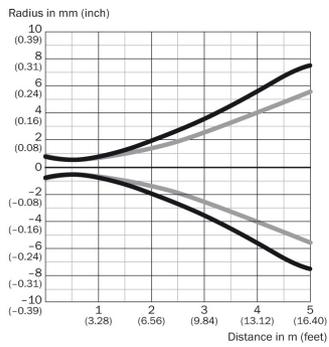
- Vertical
- Horizontal

## Sensing range diagram



■ Sensing range      ■ Sensing range typ. max.

## Lichtfleckgröße (Detailansicht)



— Vertical  
— Horizontal

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