



Photoelectric sensors  
W12-3, Through-beam photoelectric sensor

WSE12-3P1131



**Type** > [WSE12-3P1131](#)  
**Part No.** > [1041460](#)



*Illustration may differ*

**At a glance**

- Through-beam variant
- Rugged die-cast zinc housing optional Teflon® coating
- PinPoint LED technology with highly visible light spot
- Chemically, thermally and mechanically resistant metal housing
- Dovetail mounting - mounting holes and oblong holes
- Highly visible status LEDs
- Operating range up to 20 m

**Your benefits**

High immunity to optical interference provides reliable object detection, large sensing ranges and high reserve levels  
 Highly visible PinPoint LED light spot provides quick and easy sensor alignment  
 Rugged metal housing (optional Teflon® coating available) requires fewer maintenance costs due to its resistance to high-pressure cleaning  
 Highly visible status LEDs simplify mounting and reduce installation time  
 Easy installation using SICK accessories



**Features**

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	15.6 mm x 48.5 mm x 42 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 20 m
Sensing range:	0 m ... 15 m
Type of light:	Visible red light
Light source:	LED <sup>1)</sup>
Wave length:	640 nm
Angle of dispersion:	Ca. 1.5 °
Adjustment:	Potentiometer, 5 turns
Light spot size (distance):	Ø 220 mm (15 m)

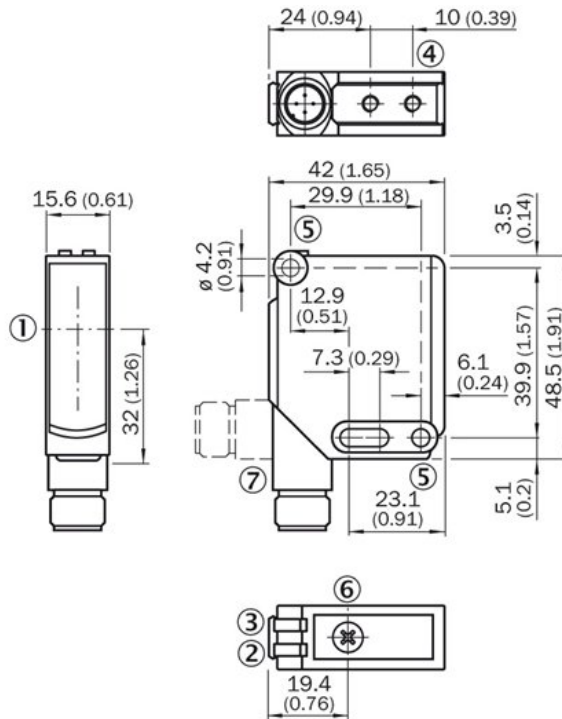
<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Power consumption, sender:	≤ 30 mA <sup>2)</sup>
Power consumption, receiver:	≤ 15 mA <sup>3)</sup>
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Signal voltage PNP HIGH/LOW:	> U <sub>v</sub> - 2,5 V / ca. 0 V
Output current I <sub>max.</sub> :	100 mA
Response time:	≤ 330 μs <sup>4)</sup>
Switching frequency:	1,500 Hz <sup>5)</sup>
Connection type:	Cable, 4-wire, 2 m <sup>6)</sup>
Cable material:	PVC
Conductor cross-section:	0.25 mm <sup>2</sup>
Circuit protection:::	A, C, D <sup>7)</sup> <sup>8)</sup> <sup>9)</sup>
Protection class:	II
Weight:	200 g
Housing material:	Metal
Enclosure rating:	IP 66 IP 67 IP 69K
Test input sender off:	TE to 0 V
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
Part number of individual components:	Receiver, WE12-3P1131, 2045602, Sender, WS12-3D1130, 2045601
UL File No.:	NRKH.E181493 & NRKH7.E181493

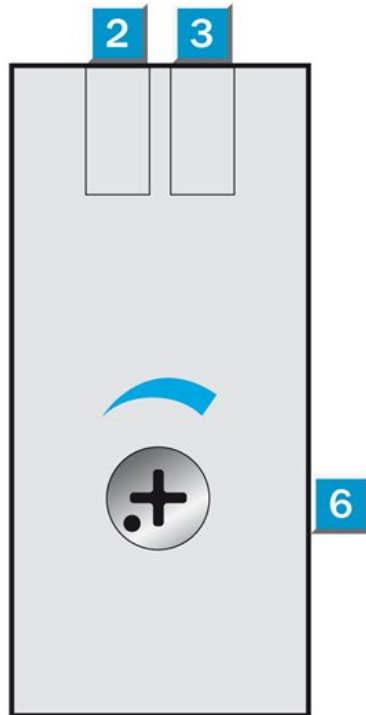
<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> Without load <sup>3)</sup> Signal transit time with resistive load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> Do not bend below 0 °C <sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>8)</sup> C = interference suppression <sup>9)</sup> D = outputs overcurrent and short-circuit protected

## Dimensional drawing



- |1| Optical axis
- |2| LED indicator yellow: Light received
- |3| Green LED indicator: supply voltage active
- |4| M4 threaded mounting hole, 4 mm deep
- |5| Mounting hole,  $\varnothing$  4.2 mm
- |6| Sensitivity adjustment: poti
- |7| Connection

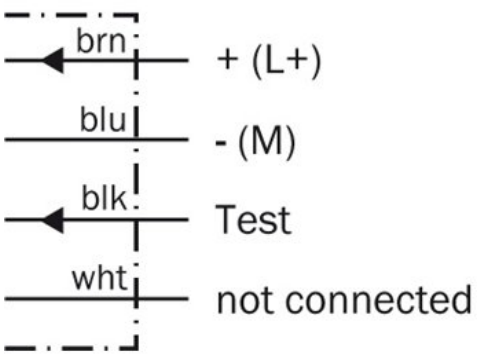
## Adjustments possible



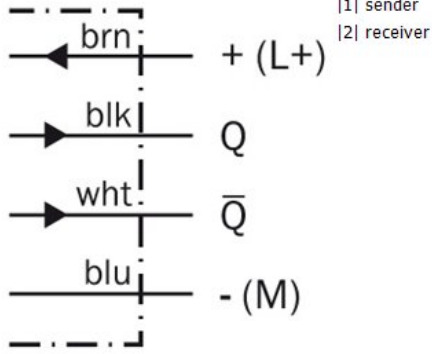
- |2| LED indicator yellow: Light received
- |3| Green LED indicator: supply voltage active
- |6| Sensitivity adjustment: poti

Connection diagram

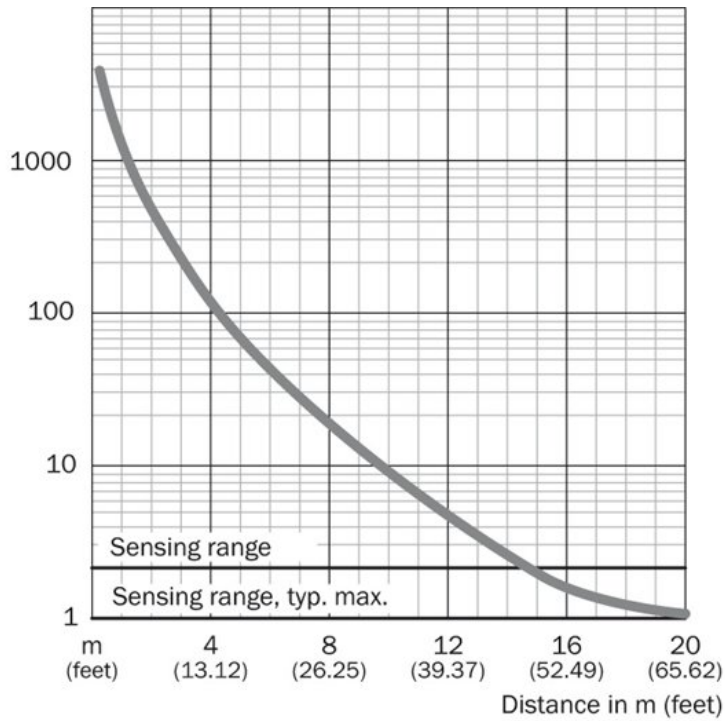
①



②

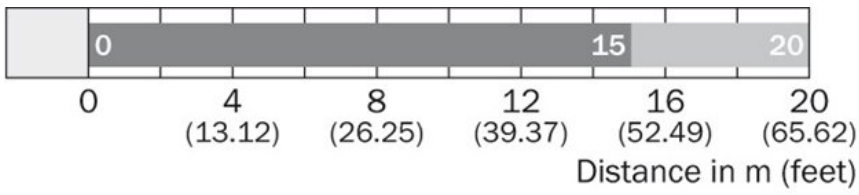


Characteristic curve



### Sensing range diagram

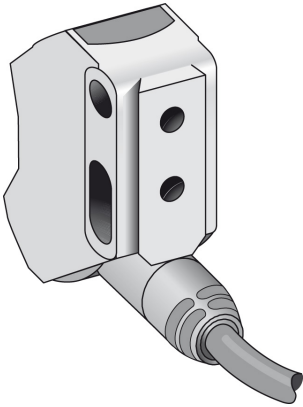
---



■ Sensing range      ■ Sensing range typ. max.

### Connection type

---



**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)