



Photoelectric sensors  
W4S-3 Inox, Photoelectric retro-reflective sensor,  
autocollimation

WL4S-3P2230V



**Model Name** > [WL4S-3P2230V](#)  
**Part No.** > [1045095](#)



*Illustration may differ*

**At a glance**

- WashDown rated for fluid tightness (IP 66, IP 67, IP 68 and IP 69K) and Ecolab certified
- Tough stainless steel housing (316L/1.4404)
- Resistant to a variety of common cleaning and disinfection agents
- Modern electrical connection available - M12 connector with pin casting
- Teach-in via stainless steel metal membrane teach button
- PinPoint LED technology provides a highly visible laser-like light spot

**Your benefits**

- Long service life in harsh conditions ensures less downtime and fewer replacement costs
- Easy adjustment via a stainless steel metal membrane teach-in pushbutton
- Quick and easy alignment due to highly visible PinPoint emitter LED
- Complete solution - chemically resistant reflectors available as an accessory



**Features**

|                                  |  |
|----------------------------------|--|
| Sensor/detection principle:      | Photoelectric retro-reflective sensor, autocollimation |
| Dimensions (W x H x D):          | 15.25 mm x 44.5 mm x 22.2 mm                           |
| Housing design:                  | Washdown   |
| Housing design (light emission): | Rectangular  |
| Sensing range max.:              | 0 m ... 4 m <sup>1)</sup>                              |
| Sensing range:                   | 0 m ... 2.5 m <sup>2)</sup>                            |
| Type of light:                   | Visible red light                                      |
| Light source:                    | PinPoint LED <sup>3)</sup>                             |
| Wave length:                     | 650 nm   |
| Light spot size (distance):      | Ø 45 mm (1.5 m)  |

<sup>1) 2)</sup> PL80A <sup>3)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C

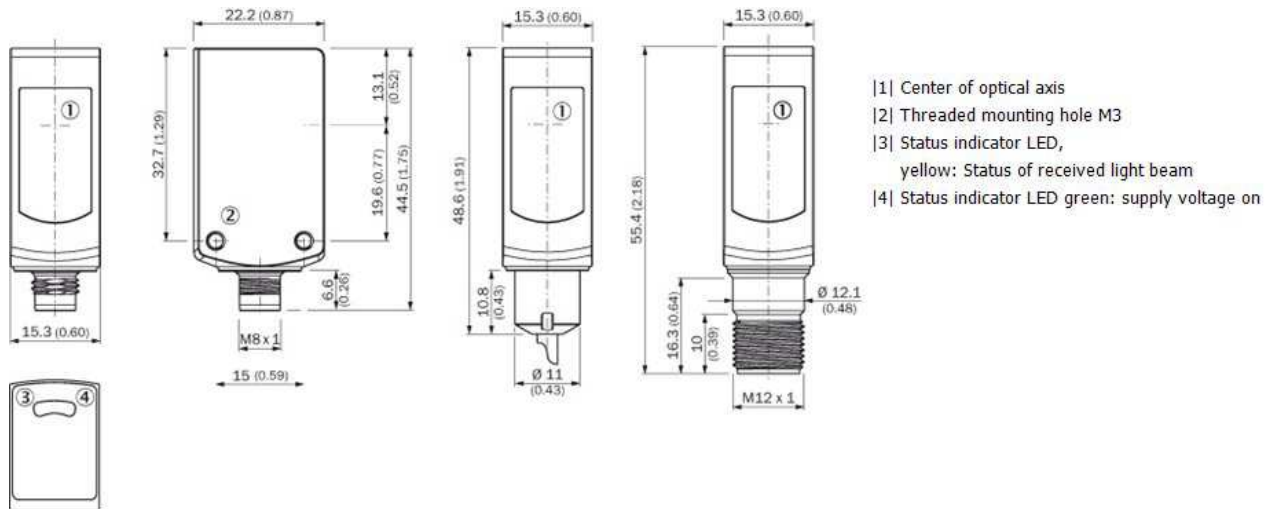
**Mechanics/electronics**

|                    |                                   |
|--------------------|-----------------------------------|
| Supply voltage:    | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:            | < 5 Vpp <sup>2)</sup>             |
| Power consumption: | ≤ 30 mA <sup>3)</sup>             |
| Output type:       | PNP                               |
| Output function:   | Complementary                     |
| Switching mode:    | Light/dark switching              |

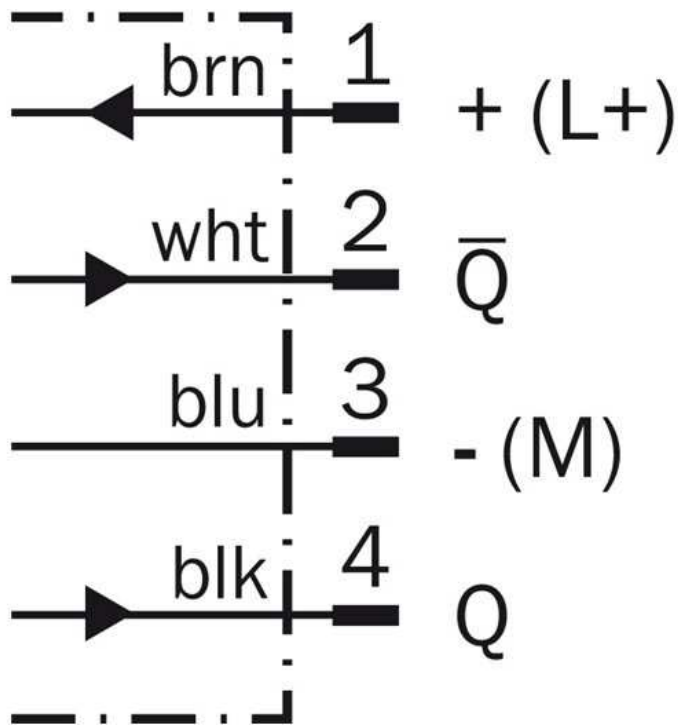
|                                     |   |
|-------------------------------------|---|
| Output current I <sub>max</sub> ..: | ≤ 100 mA  |
| Response time:                      | < 0.5 ms <sup>4)</sup>                              |
| Switching frequency:                | 1,000 Hz <sup>5)</sup>                              |
| Connection type:                    | Connector M8, 4-pin <sup>6)</sup>                   |
| Circuit protection:::               | A<br>B 7) 8) 9)<br>C                                |
| Protection class:                   | III   |
| Weight:                             | 40 g  |
| Polarisation filter:                | ✓   |
| Special device:                     | -   |
| Enclosure rating:                   | IP 66<br>IP 67<br>IP 68<br>IP 69K <sup>10)</sup>    |
| Ambient operating temperature:      | -30 °C ... +60 °C, -30 °C ... +70 °C <sup>11)</sup> |
| Ambient storage temperature:        | -30 °C ... +75 °C                                   |
| UL File No.:                        | NRKH.E181493 & NRKH7.E181493                        |
| Housing material:                   | Stainless steel, Stainless steel 316L               |

1) Limit values, reverse-polarity protected, operation 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> Tightening torque, max.: 0.6 Nm<sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected<sup>8)</sup> B = inputs and output reverse-polarity protected<sup>9)</sup> C = interference suppression<sup>10)</sup> Only in case of correctly mounted IP 69K connecting cable<sup>11)</sup> At UV ≤ 24 V and IA < 30 mA

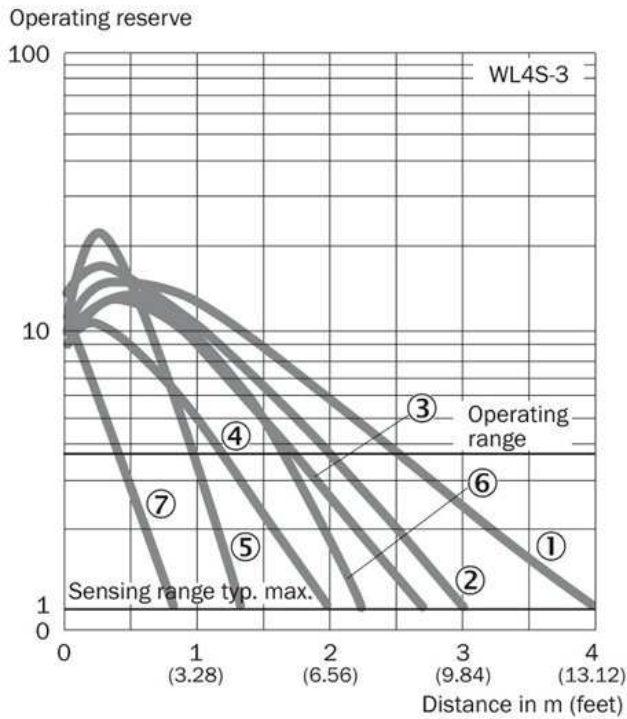
## Dimensional drawing



Connection diagram

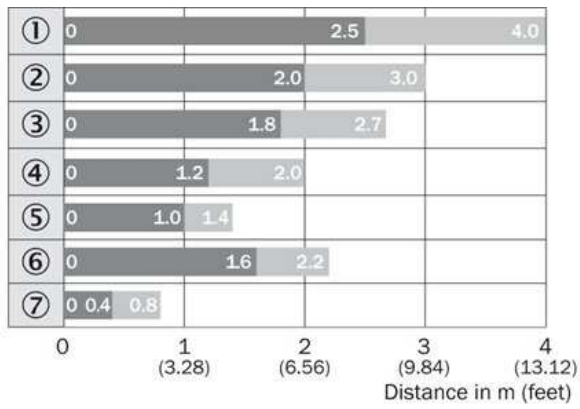


Characteristic curve



- |1| PL80A
- |2| P250F
- |3| PL40A
- |4| PL20A
- |5| PL10F
- |6| P250 CHEM
- |7| REF-IRF-56

## Sensing range diagram



- |1| PL80A
- |2| P250F
- |3| PL40A
- |4| PL20A
- |5| PL10F
- |6| P250 CHEM
- |7| REF-IRF-56

■ Operating range    ■ Sensing range typ. max.

- ① Reflector type PL80A
- ② Reflector type PL250F
- ③ Reflector type PL40A
- ④ Reflector type PL20A
- ⑤ Reflector type PL10F
- ⑥ Reflector type P250 CHEM
- ⑦ Reflexion tape REF-IRF-56

**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)