



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 of 100,000 h at T<sub>A</sub> = +25 °C

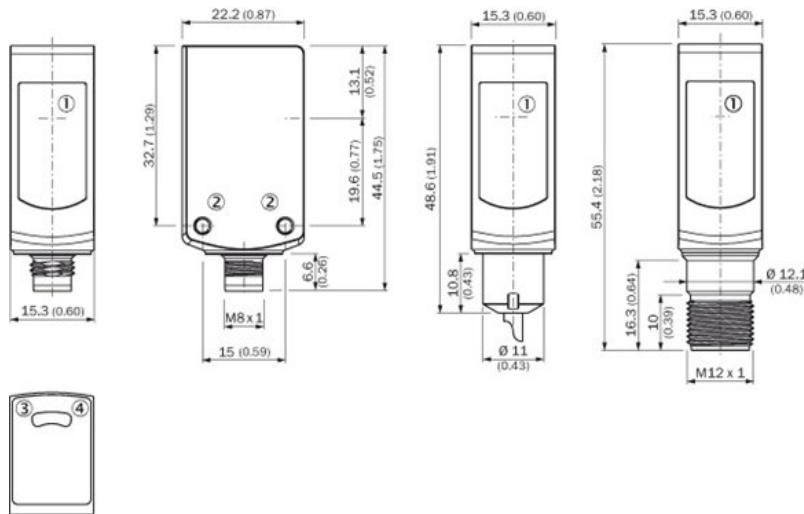
#### Mechanics/electronics

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Supply voltage:                   | 10 V DC ... 30 V DC <sup>1)</sup> |
| Power consumption:                | ≤ 30 mA <sup>2)</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>3)</sup>  
 Switching frequency: 1,000 Hz<sup>4)</sup>  
 Connection type: Connector M8, 4-pin  
 Circuit protection::  
     A  
     B 5) 6) 7)  
     C  
 Protection class: III  
 Weight: 40 g  
 Polarisation filter: ✓  
 Housing material: Stainless steel, Stainless steel 316L  
 Enclosure rating:  
     IP 66  
     IP 67  
     IP 68  
     IP 69K<sup>8)</sup>  
 Ambient operating temperature: -30 °C ... 60 °C, -30 °C ... 70 °C<sup>9)</sup>  
 Ambient storage temperature: -30 °C ... 75 °C  
 UL File No.: NRKH.E181493 & NRKH7.E181493

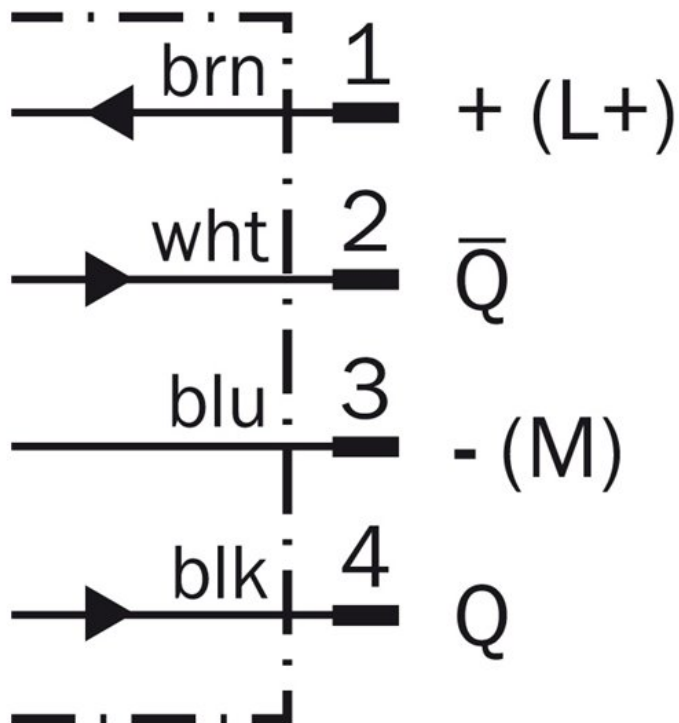
<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A <sup>2)</sup> Without load <sup>3)</sup> Signal transit time with resistive load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>6)</sup> B = inputs and output reverse-polarity protected <sup>7)</sup> C = interference suppression <sup>8)</sup> Only in case of correctly mounted IP 69K connecting cable <sup>9)</sup> At UV ≤ 24 V and IA < 30 mA

## Dimensional drawing

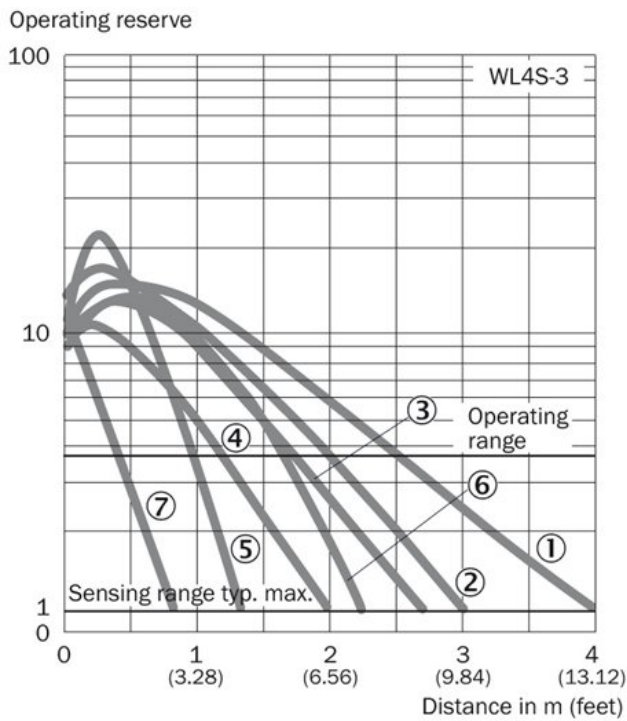


- [1] Center of optical axis
- [2] Threaded mounting hole M3
- [3] Status indicator LED, yellow: Status of received light beam
- [4] Status indicator LED green: power on

## Connection diagram

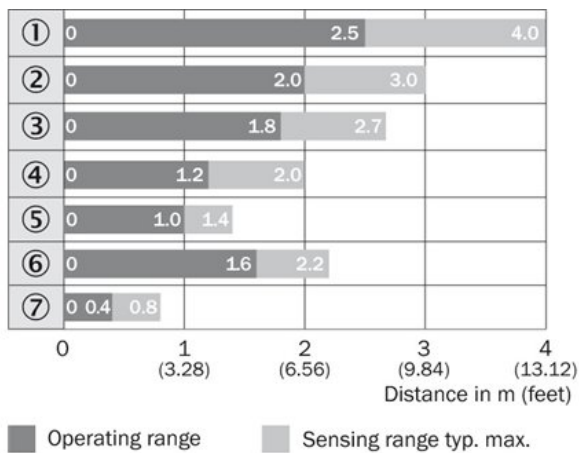


## Characteristic curve



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

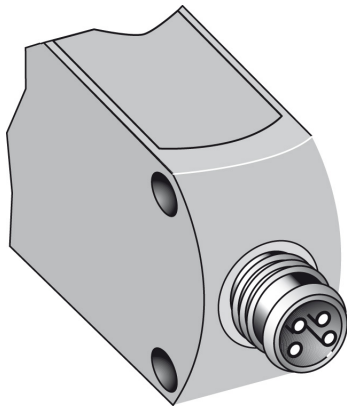
Sensing range diagram



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

- 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

Connection type



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