



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

WL4S-3F2132V



**Model Name** > [WL4S-3F2132V](#)  
**Part No.** > [1046428](#)



*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 44.9 mm x 22.2 mm                           |
| Housing design:                  | Washdown   |
| Housing design (light emission): | Rectangular, Slim                                      |
| Sensing range max.:              | 0 m ... 5 m <sup>1)</sup>                              |
| Sensing range:                   | 0 m ... 3 m <sup>2)</sup>                              |
| Type of light:                   | Visible red light                                      |
| Light source:                    | PinPoint LED <sup>3)</sup>                             |
| Wave length:                     | 650 nm   |
| Teach-in:                        | Single teach-in button                                 |
| Adjustment:                      | Teach-in   |
| 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

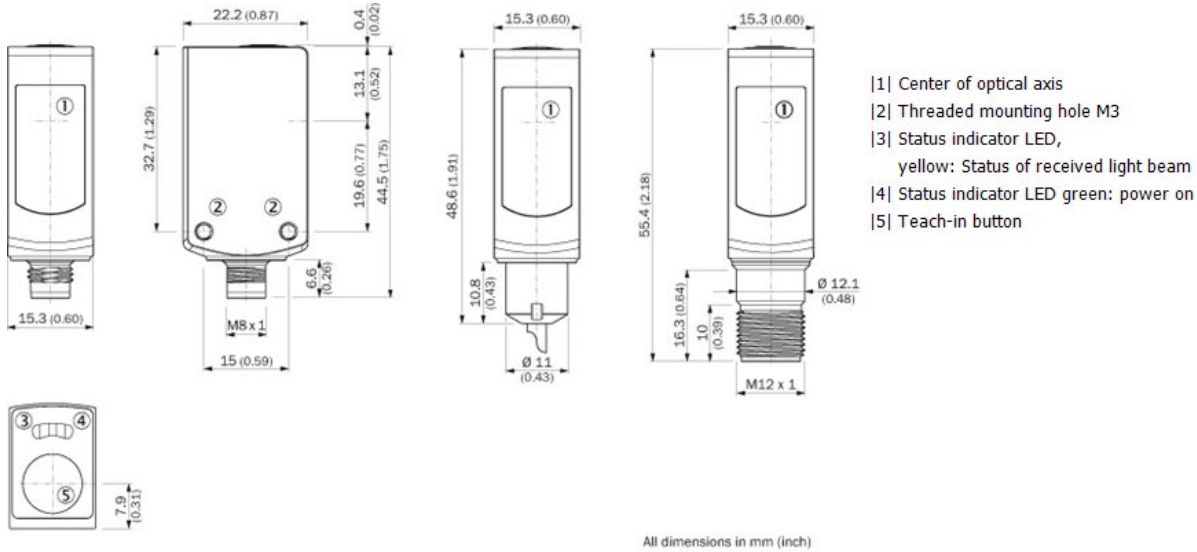
**Mechanics/electronics**

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

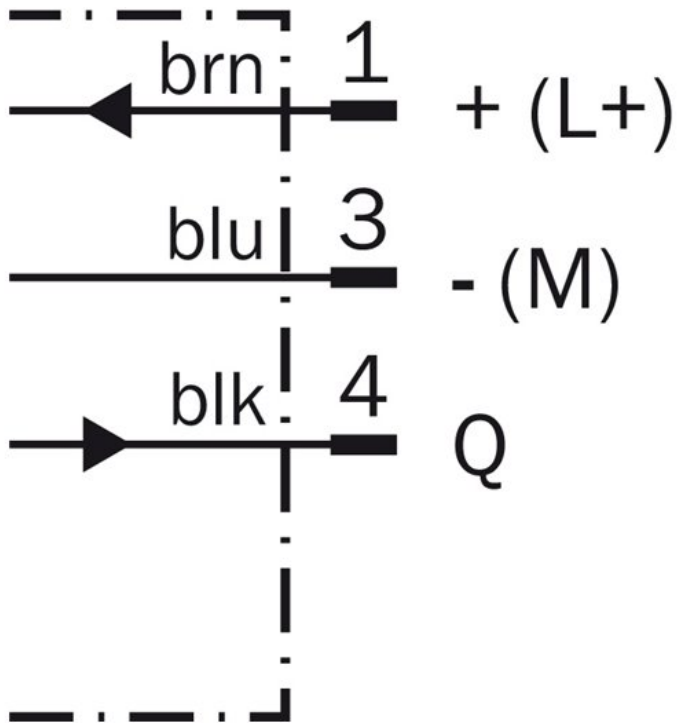
|                                     |   |
|-------------------------------------|---|
| Switching mode:                     | Dark-switching  |
| Output current I <sub>max</sub> ..: | ≤ 100 mA  |
| Response time:                      | < 0.5 ms <sup>4)</sup>  |
| Switching frequency:                | 1,000 Hz <sup>5)</sup>  |
| Connection type:                    | Connector M8, 3-pin   |
| Circuit protection:::               | A<br>B<br>C <sup>6) 7) 8)</sup>                               |
| Protection class:                   | III   |
| Weight:                             | 40 g  |
| Polarisation filter:                | ✓   |
| Housing material:                   | Stainless steel, Stainless steel 316L                         |
| Enclosure rating:                   | IP 66<br>IP 67<br>IP 68 <sup>9)</sup><br>IP 69K <sup>9)</sup> |
| Ambient operating temperature:      | -30 °C ... 60 °C, -30 °C ... 70 °C <sup>10)</sup>             |
| Ambient storage temperature:        | -30 °C ... 75 °C  |
| UL File No.:                        | NRKH.E181493 & NRKH7.E181493                                  |

1) Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A <sup>2)</sup> May not exceed or fall short of V<sub>S</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> A = V<sub>S</sub> connections reverse-polarity protected <sup>7)</sup> B = inputs and output reverse-polarity protected <sup>8)</sup> C = interference suppression <sup>9)</sup> Only in case of correctly mounted IP 69K connecting cable <sup>10)</sup> At UV ≤ 24 V and IA < 30 mA

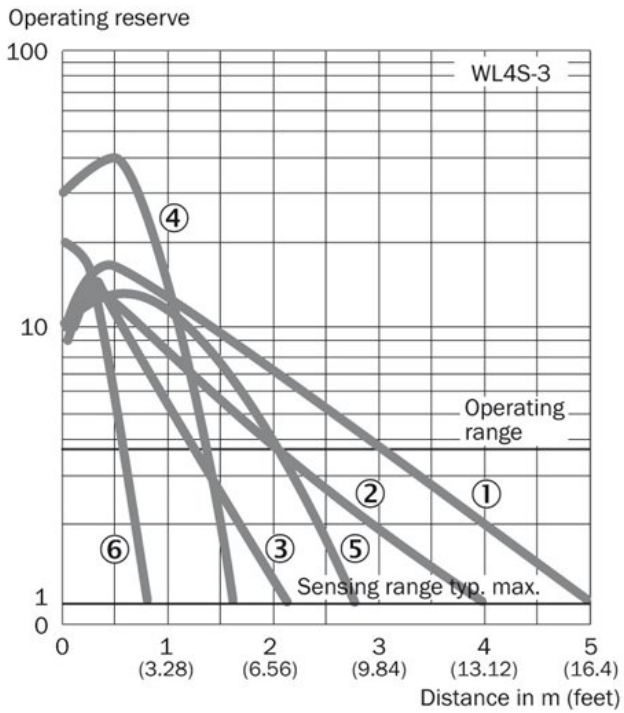
## Dimensional drawing



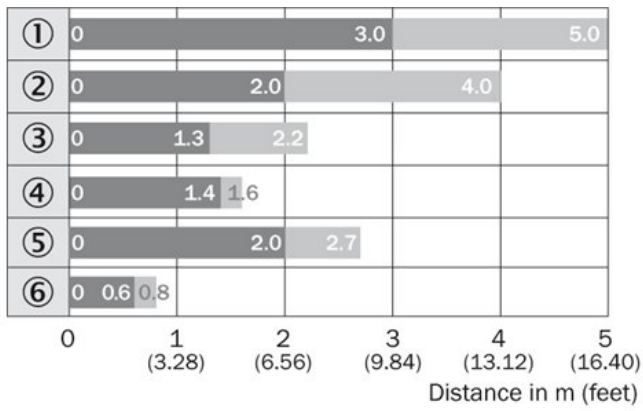
Connection diagram



Characteristic curve



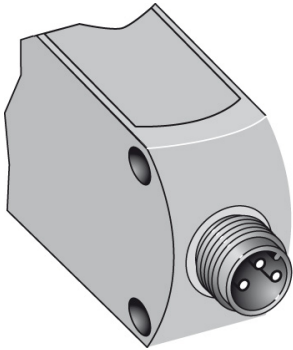
## Sensing range diagram



■ Operating range      ■ Sensing range typ. max.

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

## Connection type



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