



Photoelectric sensors  
W4S-3 Inox, Photoelectric proximity sensor,  
Background suppression

WTB4S-3P2162V



**Model Name** > [WTB4S-3P2162V](#)  
**Part No.** > [1046384](#)



*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
- Best background and extraneous light suppression in its class with OES3 technology and two emitter LED's
- Flexible sensing ranges and hysteresis settings
- Key lock function, remote teach, quality monitoring

**Your benefits**

- Long service life in harsh conditions ensures less downtime and fewer replacement costs
- OES3 technology and special optical design ensures reliable detection of objects at an extended range which ensures less machine downtime caused by faulty switching
- Quick and easy alignment due to highly visible PinPoint emitter LED
- Easy adjustment via a stainless steel metal membrane teach-in pushbutton
- Quick and easy format adjustment
- Easy monitoring of sensor status
- Key lock function and parameter download prevent incorrect settings
- Simple sensor cloning



**Features**

|                                  |  |
|----------------------------------|--|
| Sensor/detection principle:      | Photoelectric proximity sensor, Background suppression |
| 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.:              | 4 mm ... 500 mm <sup>1)</sup>                          |
| Sensing range:                   | 10 mm ... 350 mm <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 6.5 mm (150 mm)                                      |

1) 2) Object with 90 % reflectance (referred to standard white DIN 5033) 3) Average service life of 100,000 h at  $T_A = +25\text{ °C}$

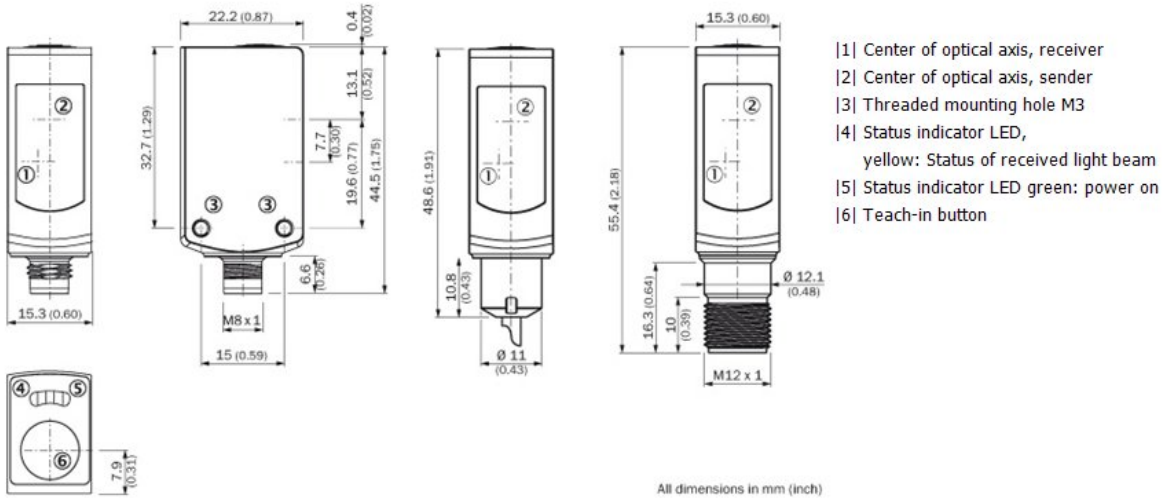
## Mechanics/electronics

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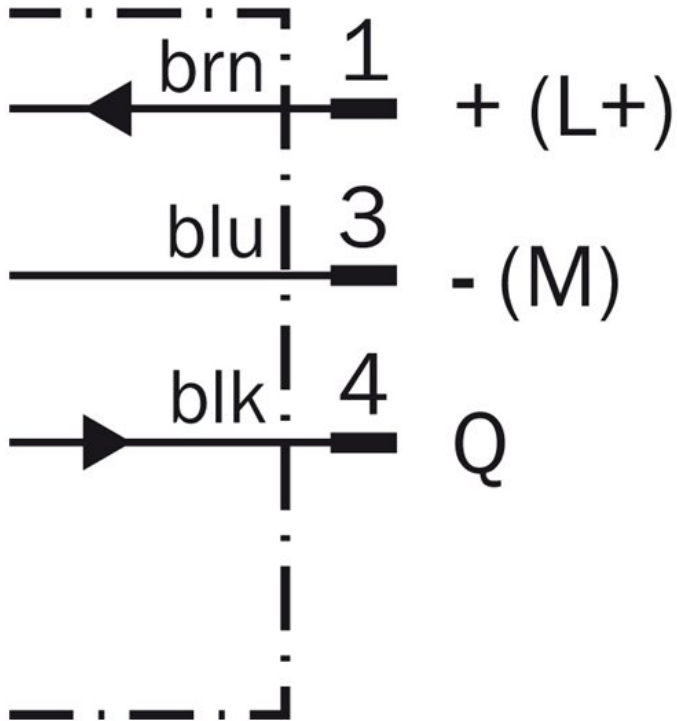
|                                   |   |
|-----------------------------------|---|
| Supply voltage:                   | 10 V DC ... 30 V DC <sup>1)</sup>                 |
| Ripple:                           | < 5 Vpp <sup>2)</sup>                             |
| Power consumption:                | ≤ 30 mA <sup>3)</sup>                             |
| Output type:                      | PNP   |
| Switching mode:                   | Light 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, B, C <sup>6) 7) 8)</sup>                       |
| Protection class:                 | III   |
| Weight:                           | 40 g  |
| Special device:                   | -   |
| Housing material:                 | Stainless steel, Stainless steel 316L             |
| Enclosure rating:                 | IP 66<br>IP 67<br>IP 68 <sup>9)</sup><br>IP 69K   |
| 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  $V_S$  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 =  $V_S$  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  $UV \leq 24\text{ V}$  and  $IA < 30\text{ mA}$

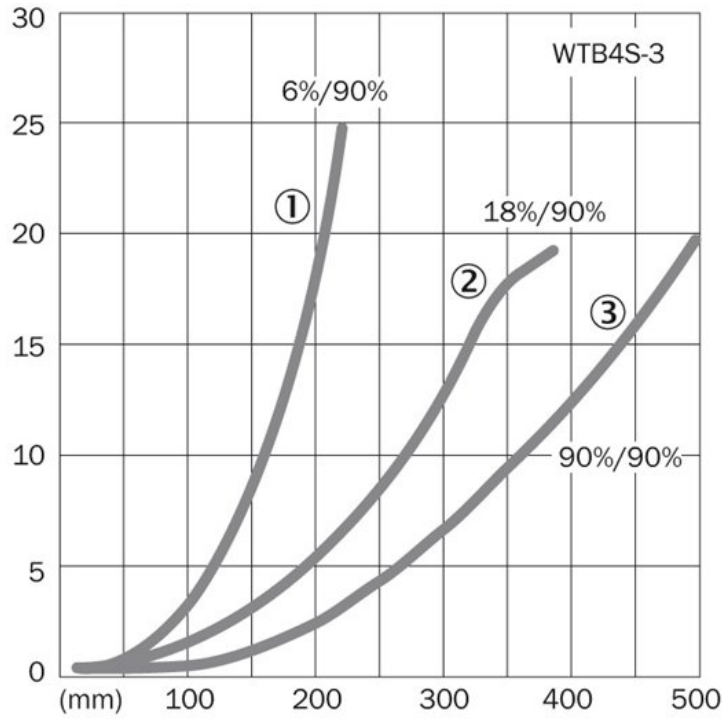
## Dimensional drawing



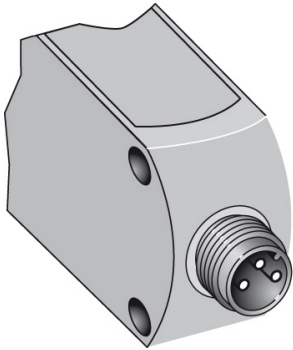
## Connection diagram



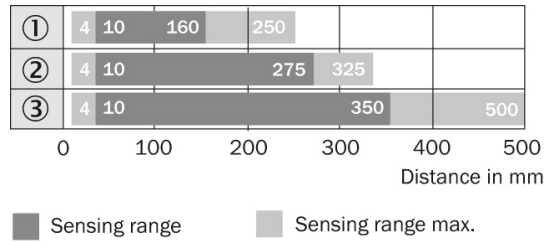
**Characteristic curve**



**Connection type**



**Sensing range diagram**



**Australia**

Phone +61 3 9457 0600  
1800 334 802 – 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 sac@sick.com.br

**Canada**

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

**Ceská 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 kundenservice@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 +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

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

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

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

**Nederlands**

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

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@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 admin@sicksgp.com.sg

**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 8865 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)