



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

WTB4S-3P2235V



**Model Name** > [WTB4S-3P2235V](#)  
**Part No.** > [1045093](#)



*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 44.5 mm x 22.2 mm
Housing design:	Washdown
Housing design (light emission):	Rectangular
Sensing range max.:	4 mm ... 120 mm <sup>1)</sup>
Sensing range:	10 mm ... 120 mm <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	650 nm
Adjustment:	Cable
Light spot size (distance):	Ø 2.5 mm (50 mm)

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

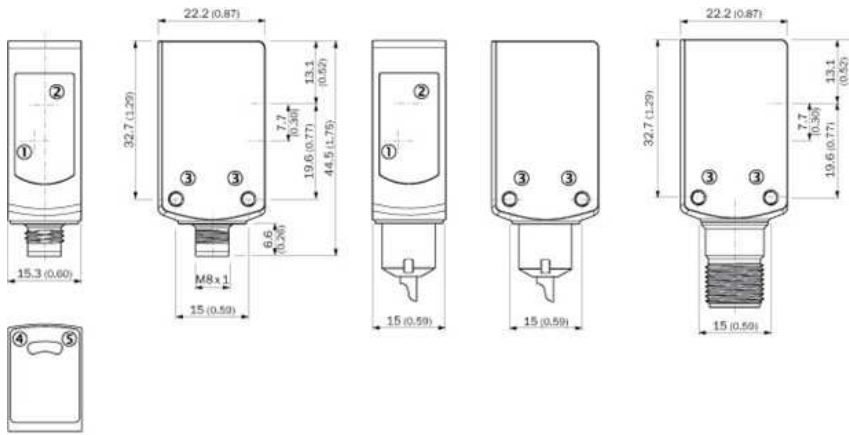
## Mechanics/electronics

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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, 4-pin <sup>6)</sup>
Circuit protection:::	A, B, C <sup>7) 8) 9)</sup>
Protection class:	III
Weight:	40 g
Special device:	-
Enclosure rating:	IP 66 IP 67 IP 68 <sup>10)</sup> IP 69K
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  $U_v$  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 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  $UV \leq 24\text{ V}$  and  $IA < 30\text{ mA}$

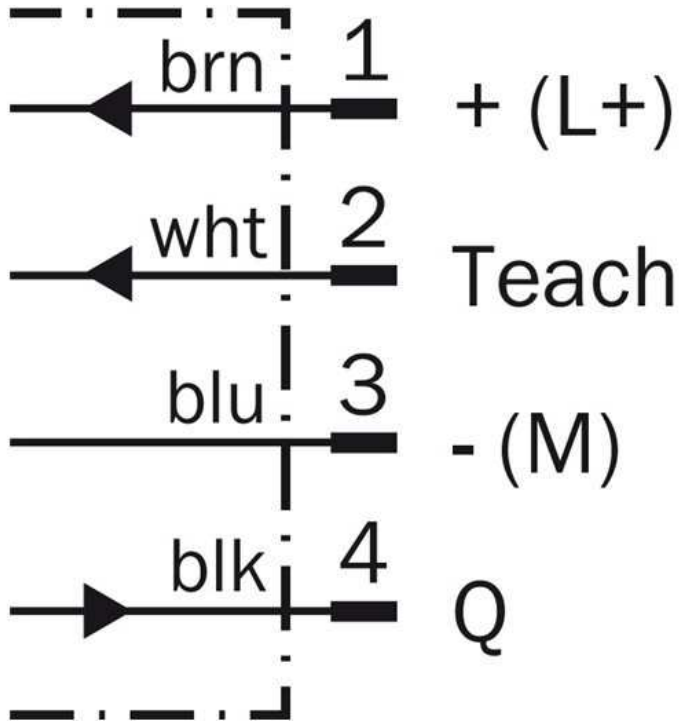
## Dimensional drawing



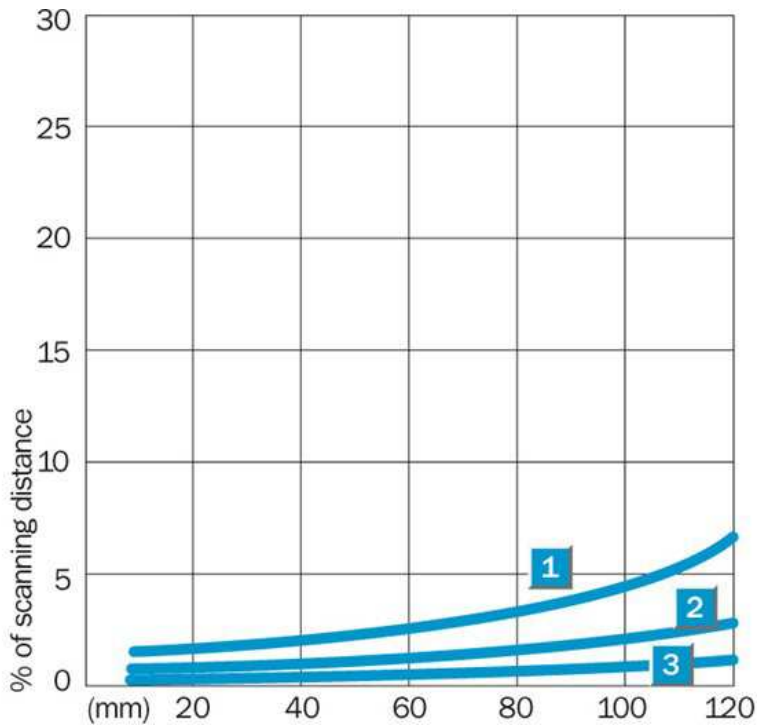
- [1] Center of receiver's optical axis
- [2] Center of optical axis, sender
- [3] Threaded mounting hole M3
- [4] Status indicator LED,  
yellow: Status of received light beam
- [5] Status indicator LED green: supply voltage on

All dimensions in mm (inch)

## Connection diagram

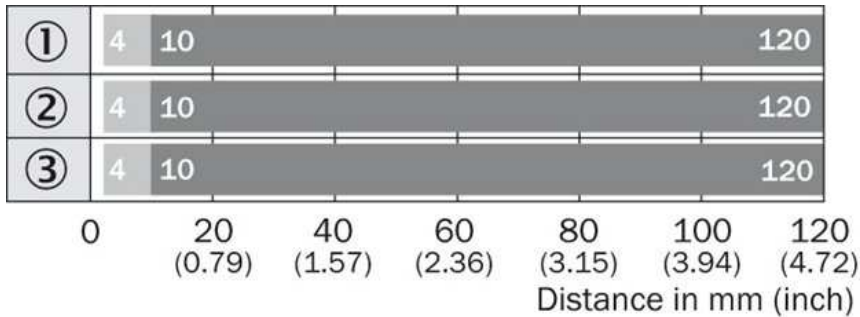


### Characteristic curve



- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

### Sensing range diagram



- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

■ Operating distance    ■ Sensing distance max. typ.

- ① Sensing distance on black, 6 % remission
- ② Sensing distance on grey, 18 % remission
- ③ Sensing distance on white, 90 % remission

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