



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

WTB4S-3N1162H



**Model Name** > **WTB4S-3N1162H**  
**Part No.** > **1048095**



*Illustration may differ*

**At a glance**

- Hygienic designed stainless steel housing and accessories (316L/1.4404)
- Hygienic mounting using M12-adapter thread or D12-adapter shaft
- IP 66, IP 67, IP 68 and IP 69K enclosure rating and Ecolab certified
- Resistant to a variety of common cleaning and disinfection agents
- Best background and extraneous light suppression in its class with OES3 technology and two emitter LED's
- Stainless steel teach-in pushbutton with a metal membrane
- Flexible sensing ranges and hysteresis settings
- Key lock function, remote teach, quality monitoring

**Your benefits**

- Smooth hygienic housing and accessories with no grooves or crevices eliminates the potential for bacteria to grow, providing a more hygienic solution.
- 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
- 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 49.2 mm x 22.15 mm
Housing design:	Hygiene
Housing design (light emission):	Rectangular
Sensing range max.:	3 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)

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

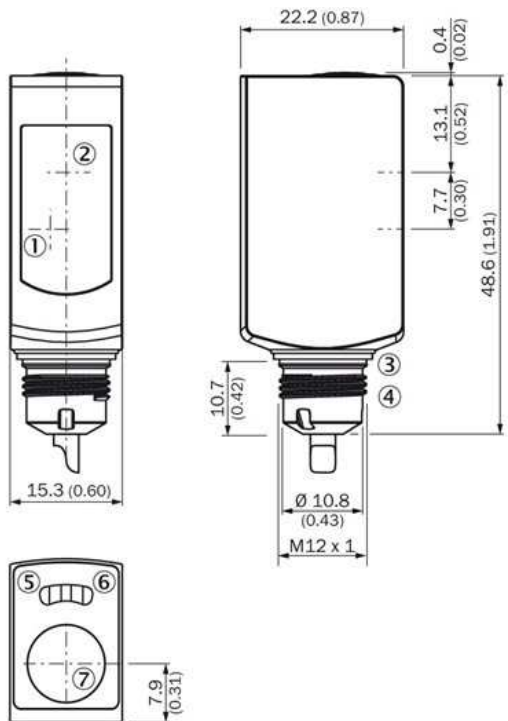
## Mechanics/electronics

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Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Power consumption:	≤ 30 mA <sup>2)</sup>
Output type:	NPN
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:	Cable, 4-wire, 2 m <sup>5)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Circuit protection:::	A B C <sup>6) 7) 8)</sup>
Protection class:	III
Weight:	80 g
Housing material:	Stainless steel, Stainless steel 316L
Enclosure rating:	IP 66 IP 67 IP 68 IP 69K
Ambient operating temperature:	-30 °C ... 60 °C, -30 °C ... 70 °C <sup>9)</sup>
Ambient storage temperature:	-30 °C ... 75 °C
UL File No.:	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

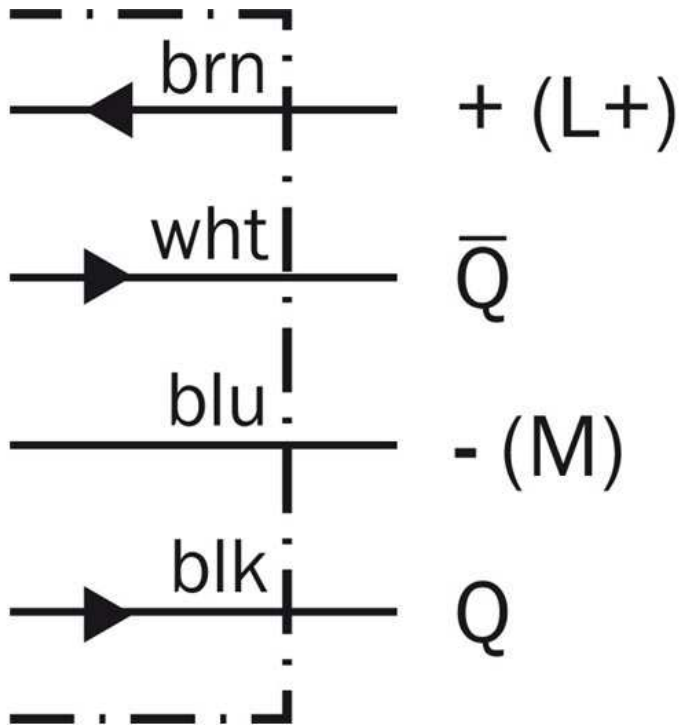
<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A <sup>2)</sup> Without load <sup>3)</sup> Signal transit time with resistive load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> Do not bend below 0 °C <sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>7)</sup> B = inputs and output reverse-polarity protected <sup>8)</sup> C = interference suppression <sup>9)</sup> At UV ≤ 24 V and IA < 30 mA

## Dimensional drawing

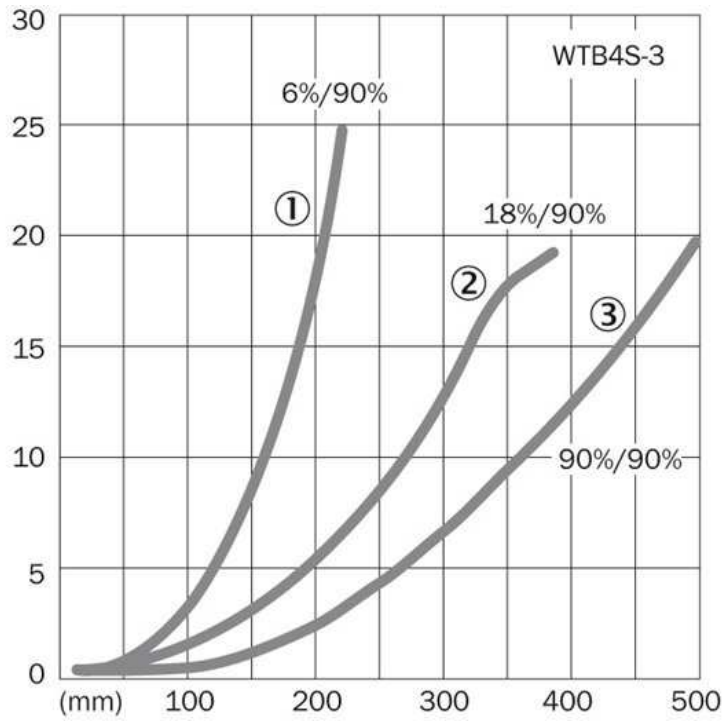


- |1| Center of optical axis, receiver
- |2| Center of optical axis, sender
- |3| gasket (tightening torque 6Nm)
- |4| Connector M12
- |5| Status indicator LED,  
yellow: Status of received light beam
- |6| Status indicator LED green: power on
- |7| Teach-in button

## Connection diagram

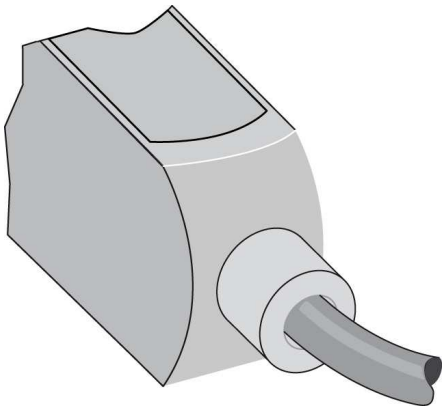


**Characteristic curve**

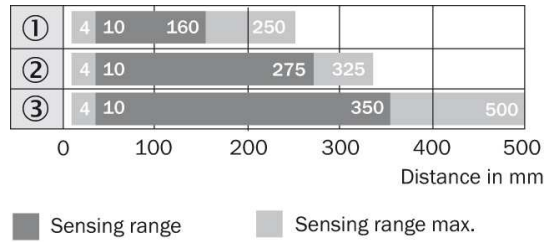


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

**Connection type**



**Sensing range diagram**



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