



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

WTB4S-3P3234H



**Model Name** > [WTB4S-3P3234H](#)  
**Part No.** > [1048097](#)



*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):	15.3 mm x 48.5 mm x 22.3 mm
Housing design:	Hygiene
Housing design (light emission):	Rectangular, Slim
Sensing range max.:	3 mm ... 120 mm <sup>1)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>2)</sup>
Wave length:	650 nm
Teach-in:	Single teach-in button
Adjustment:	Teach <sub>3)</sub> in cable

Light spot size (distance): 2.5 mm (50 mm)

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

Uv with PNP and M with NPN

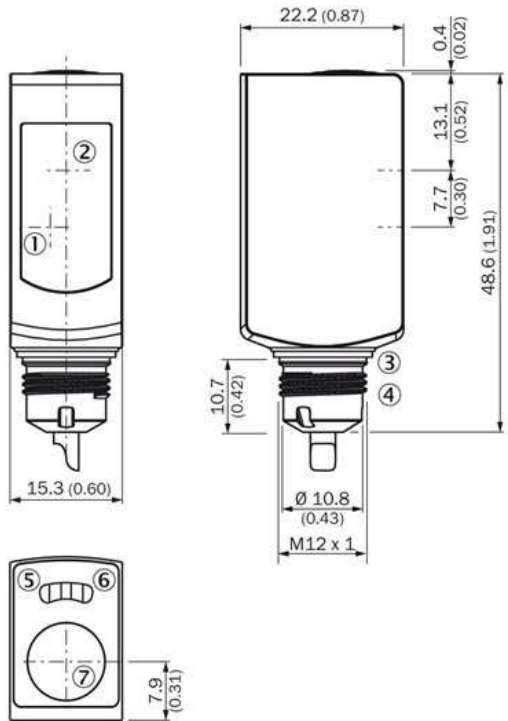
## Mechanics/electronics

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Supply voltage: 10 V DC ... 30 V DC <sup>1)</sup>  
Ripple: 5 Vpp <sup>2)</sup>  
Power consumption:  $\leq 30\text{ mA}$  <sup>3)</sup>  
Output type: PNP  
Switching mode: Light switching  
Output current I<sub>max.</sub>:  $\leq 100\text{ mA}$   
Response time:  $< 0.5\text{ ms}$  <sup>4)</sup>  
Switching frequency: 1,000 Hz <sup>5)</sup>  
Connection type: Cable with connector M8, 4-pin, 150 mm <sup>6)</sup>  
Cable material: PVC  
Circuit protection::: A  
B <sup>7)</sup> <sup>8)</sup> <sup>9)</sup>  
C  
Protection class: III  
Weight: 40 g  
Housing material: Stainless steel, Stainless steel 316L  
Enclosure rating: IP 66  
IP 67  
IP 69K  
Ambient operating temperature:  $-30\text{ °C} \dots 60\text{ °C}$ ,  $-30\text{ °C} \dots 70\text{ °C}$  <sup>10)</sup>  
Ambient storage temperature:  $-30\text{ °C} \dots 75\text{ °C}$   
UL File No.: FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

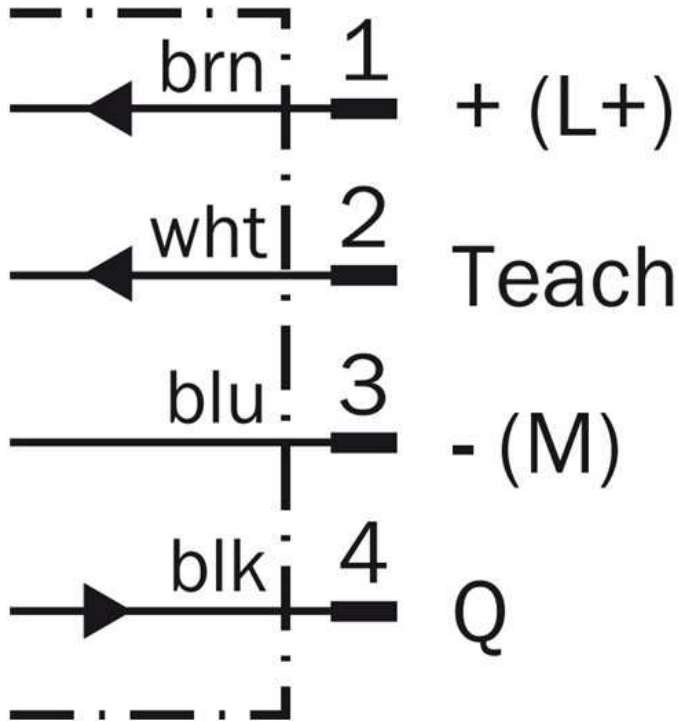
<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> Do not bend below 0 °C <sup>7)</sup> A =  $V_S$  connections reverse-polarity protected <sup>8)</sup> B = inputs and output reverse-polarity protected <sup>9)</sup> C = interference suppression <sup>10)</sup> At UV  $\leq 24\text{ V}$  and IA < 30 mA

**Dimensional drawing**

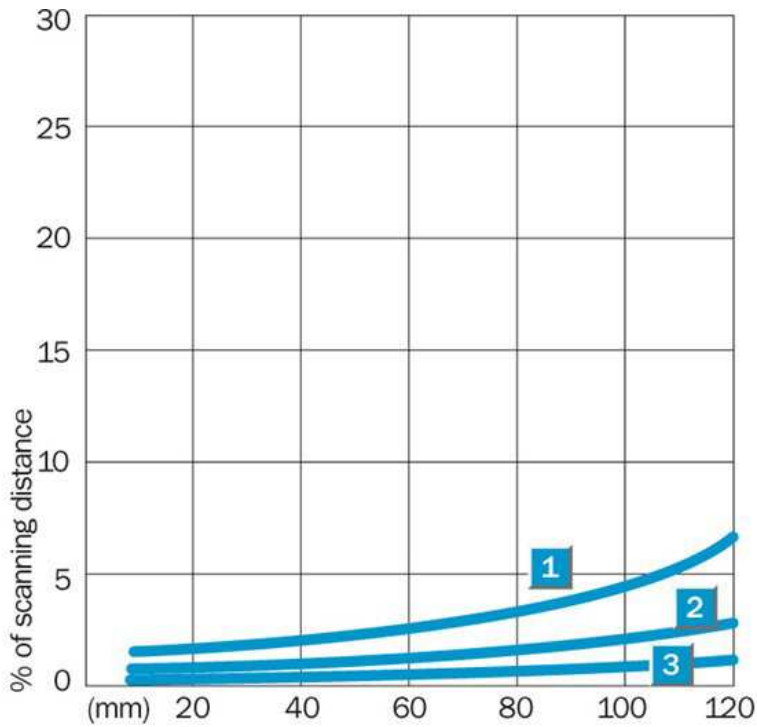


- |1| Center of optical axis, receiver
- |2| Center of optical axis, sender
- |3| gasket (tightening torque 6Nm)
- |4| Connector M12
- |5| Status indicator LED,  
yellow: Status of received light beam
- |6| Status indicator LED green: power on
- |7| Teach-in button

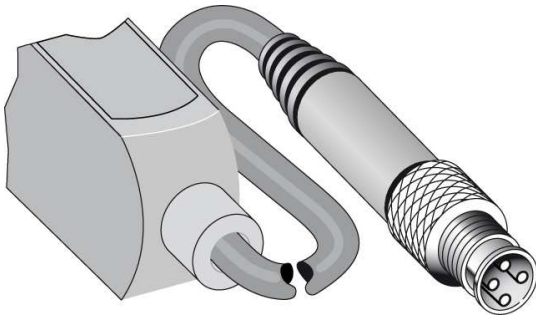
**Connection diagram**



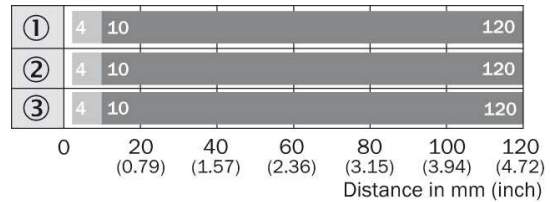
## Characteristic curve



## Connection type



## Sensing range diagram



■ 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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