



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

WTB4S-3P5232H



Type > [WTB4S-3P5232H](#)  
Part No. > [1054864](#)



*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 63.2 mm x 22.15 mm
Housing design:	Hygiene
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
Teach-in:	Single teach-in button
Adjustment:	Teach-in

Light spot size (distance): Ø 2.5 mm (50 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  $T_A = +25\text{ °C}$

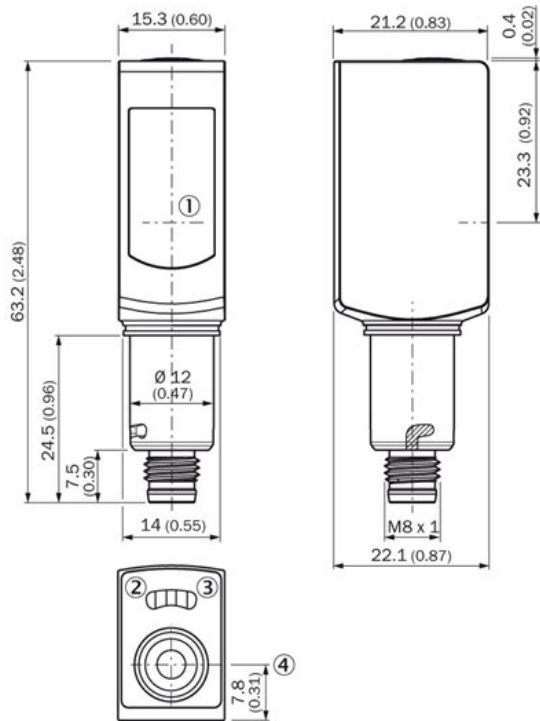
## Mechanics/electronics

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Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 Vpp
Power consumption:	≤ 30 mA <sup>2)</sup>
Output type:	PNP
Output function:	Complementary
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:	Connector M8, 4-pin <sup>5)</sup>
Circuit protection:::	A B <sup>6) 7) 8)</sup> C
Protection class:	III
Weight:	140 g
Housing material:	Stainless steel, Stainless steel 316L
Enclosure rating:	IP 66 IP 67 IP 68 IP 69K
Special feature:	D12 adapter shaft
Ambient operating temperature:	-30 °C ... 60 °C, -30 °C ... 70 °C <sup>9)</sup>
Ambient storage temperature:	-30 °C ... 75 °C
Mechanical connection:	D12 adapter shaft

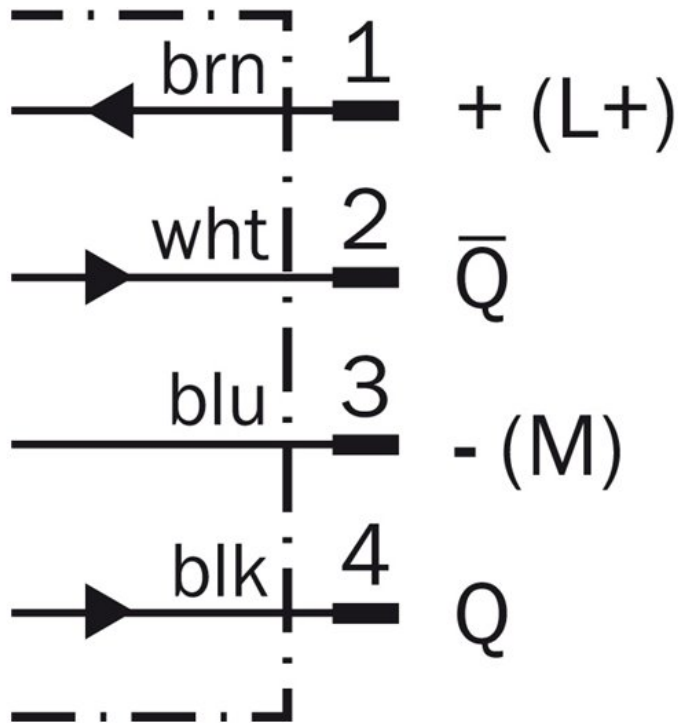
<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A <sup>2)</sup> Without load <sup>3)</sup> Signal transit time with resistive load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> Tightening torque, max.: 0.6 Nm <sup>6)</sup> A = V<sub>S</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**

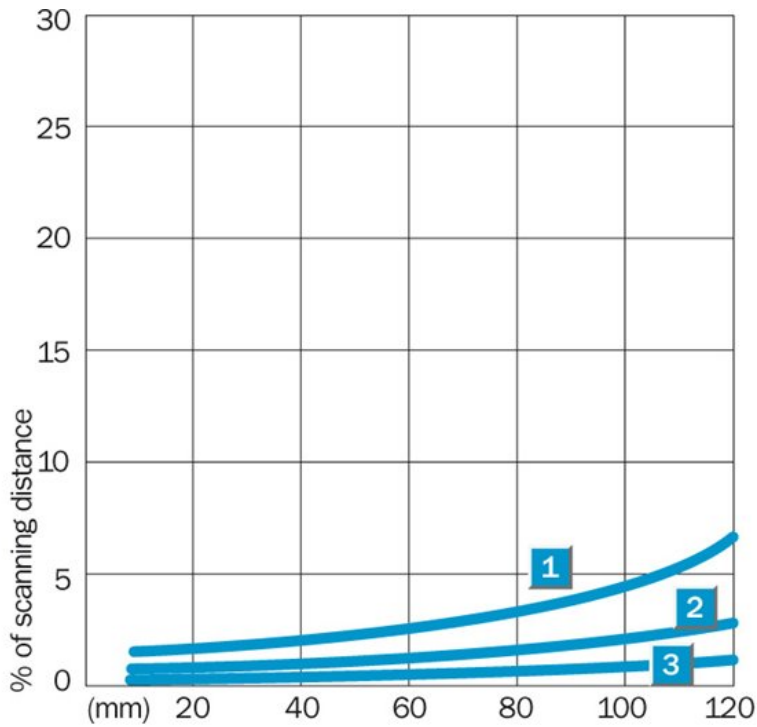


- [1] Centre of receiver's optical axis
- [2] Center of optical axis, sender
- [3] Status indicator LED,  
yellow: Status of received light beam
- [4] Status indicator LED green: power on
- [5] single teach-in button

**Connection diagram**

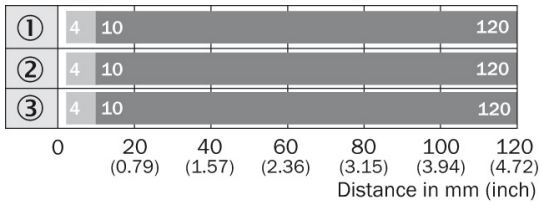


## Characteristic curve



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

## 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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