



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

WTB4S-3N1165H



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Type > [WTB4S-3N1165H](#)
Part No. > [1048107](#)



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 48.6 mm x 22.15 mm
Housing design:	Hygiene
Housing design (light emission):	Rectangular, Slim
Sensing range max.:	3 mm ... 500 mm ¹⁾
Sensing range:	10 mm ... 350 mm ²⁾
Type of light:	Visible red light ³⁾
Light source:	PinPoint LED ³⁾
Wave length:	650 nm
Adjustment:	Cable

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 $T_A = +25\text{ °C}$ ⁴⁾ External teach-in: pulse > 2 s with voltage Uv with PNP and M with NPN

Mechanics/electronics

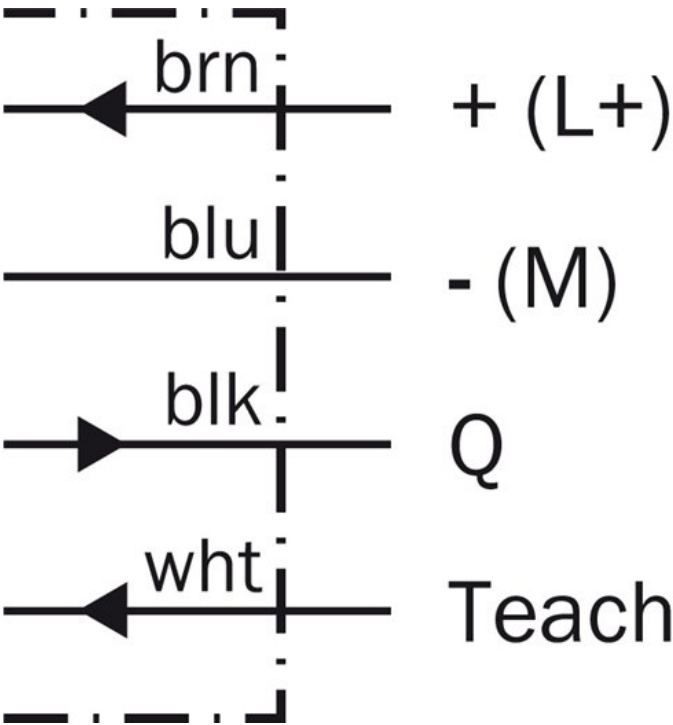
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	NPN
Switching mode:	Light switching
Output current I _{max} :	≤ 100 mA
Response time:	< 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Cable, 4-wire, 2 m ⁶⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Circuit protection:::	A B ^{7) 8) 9)} C
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 ¹⁰⁾
Ambient storage temperature:	-30 °C ... 75 °C
UL File No.:	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

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

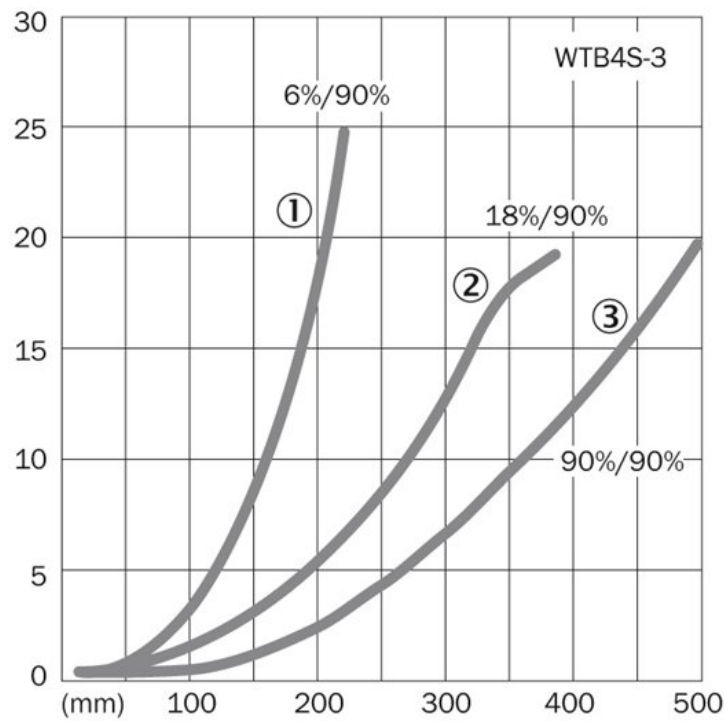
Dimensional drawing

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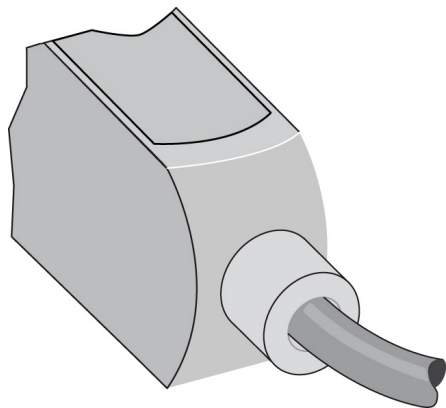
Connection diagram



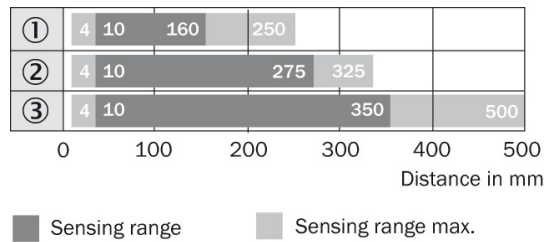
Characteristic curve



Connection type



Sensing range diagram



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