



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

WTB4S-3N1135H



Type > [WTB4S-3N1135H](#)
Part No. > [1048101](#)



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 ... 120 mm ¹⁾
Sensing range:	10 mm ... 120 mm
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Wave length:	650 nm
Adjustment:	able

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

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at $T_A = +25\text{ °C}$ ³⁾ 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 mm²
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

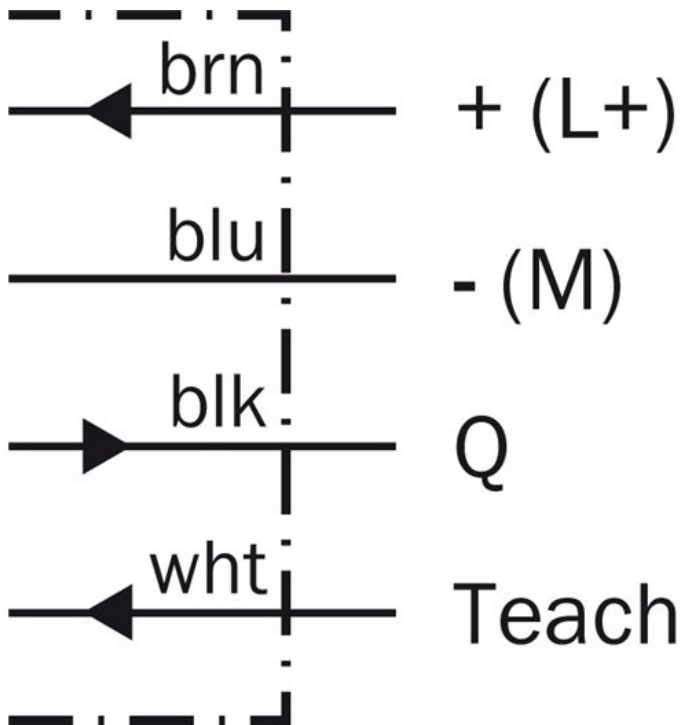
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾

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 IA < 30 mA

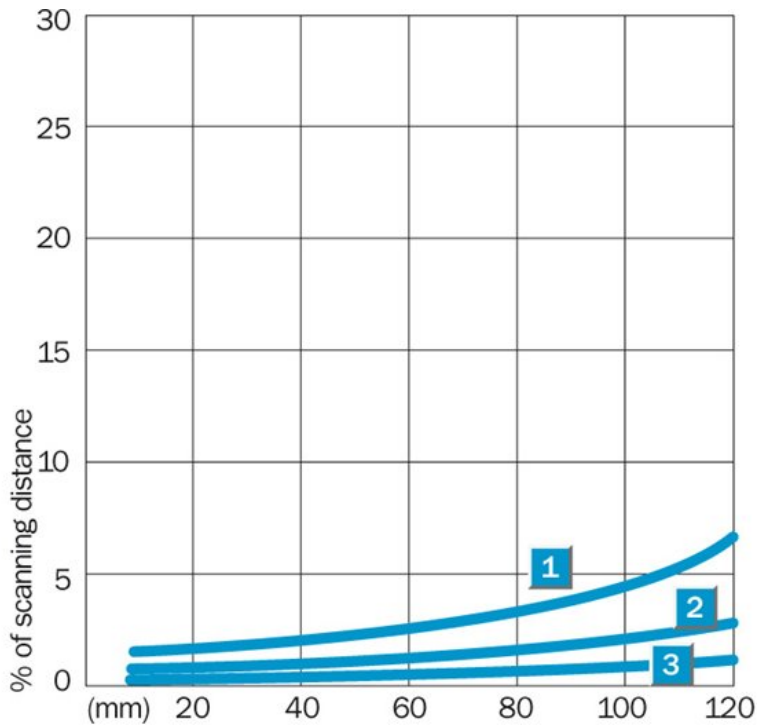
Dimensional drawing

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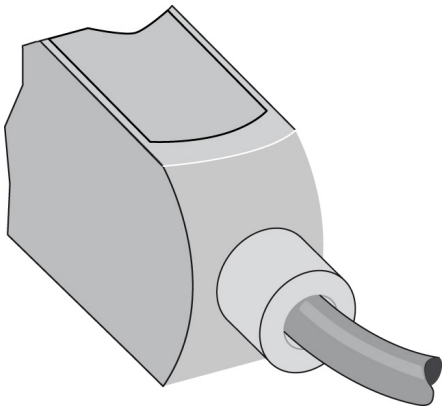
Connection diagram



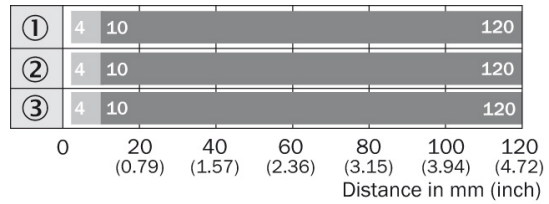
Characteristic curve



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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