



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

WTB4S-3N1132H



Type > **WTB4S-3N1132H**
Part No. > **1048098**



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 ... 120 mm ¹⁾
Sensing range:	10 mm ... 120 mm ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	650 nm
Teach-in:	Single teach-in button
Adjustment:	Teach-in

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

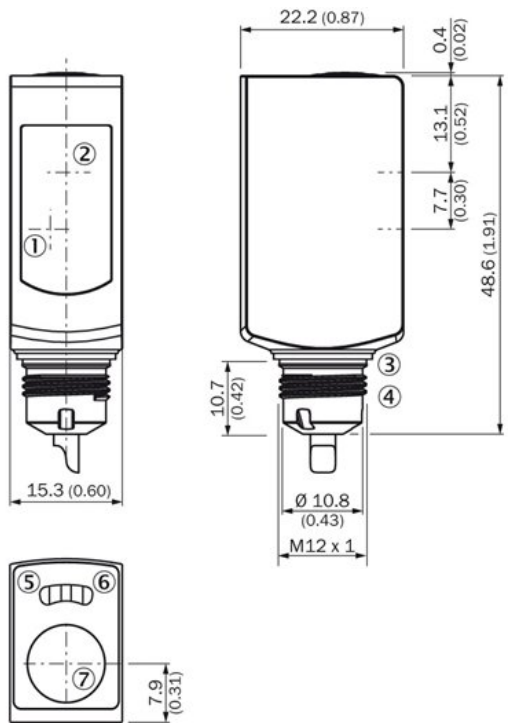
^{1) 2)} Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

Supply voltage: 10 V DC ... 30 V DC ¹⁾
Power consumption: ≤ 30 mA ²⁾
Output type: NPN
Switching mode: Light/dark switching
Output current I_{max.}: ≤ 100 mA
Response time: < 0.5 ms ³⁾
Switching frequency: 1,000 Hz ⁴⁾
Connection type: Cable, 4-wire, 2 m ⁵⁾
Cable material: PVC
Conductor cross-section: 0.14 mm²
Circuit protection:::
A
B ^{6) 7) 8)}
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 ⁹⁾
Ambient storage temperature: -30 °C ... 75 °C
UL File No.: FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

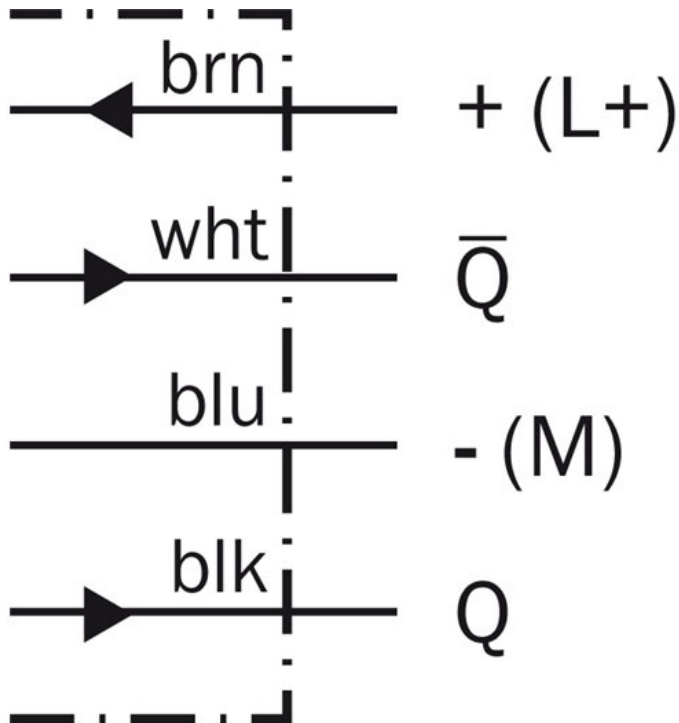
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ Do not bend below 0 °C ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity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

Dimensional drawing

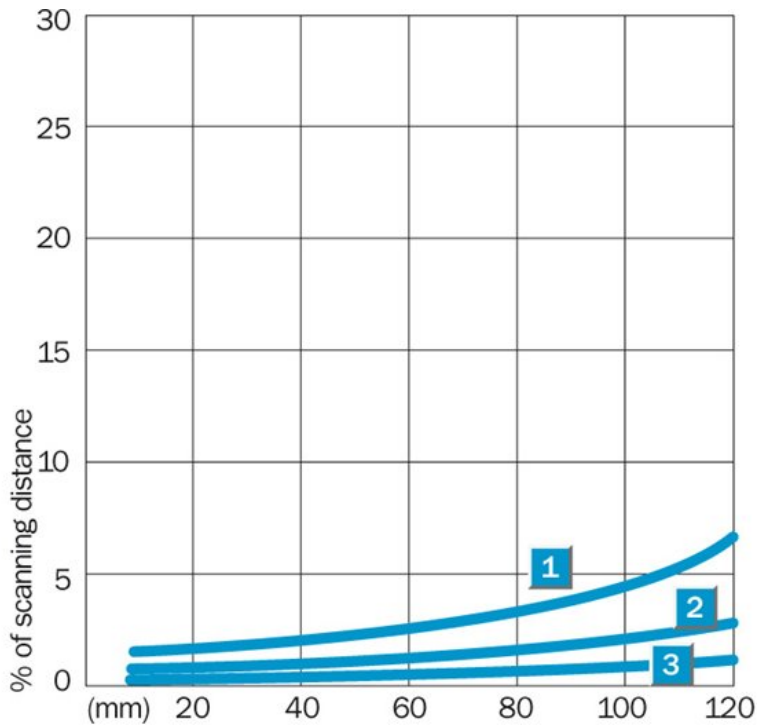


- [1] Center of optical axis, receiver
- [2] Center of optical axis, sender
- [3] gasket (tightening torque 6Nm)
- [4] Connector M12
- [5] Status indicator LED,
yellow: Status of received light beam
- [6] Status indicator LED green: power on
- [7] Teach-in button

Connection diagram

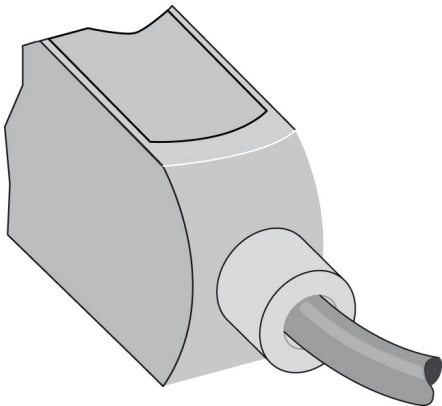


Characteristic curve

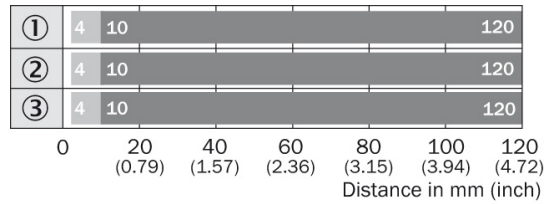


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

Connection type



Sensing range diagram



■ 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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