



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

WTB4S-3P3234H



Type > [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 ¹⁾
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Wave length:	650 nm
Teach-in:	Single teach-in button
Adjustment:	Teach ₃ in cable

Light spot size (distance): 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

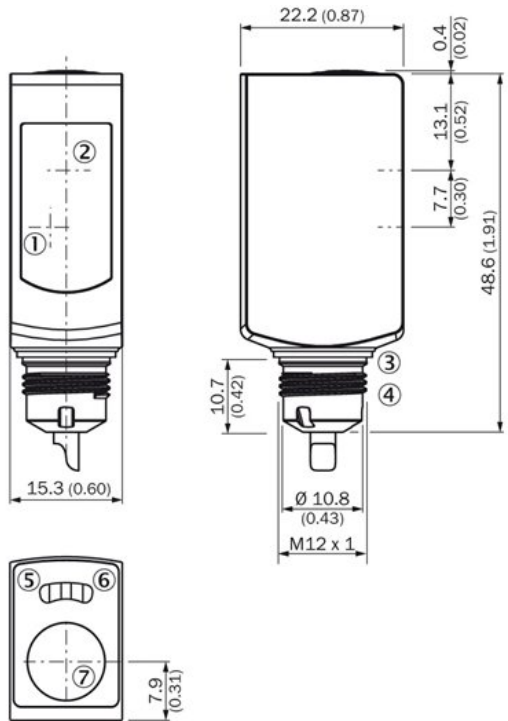
Uv with PNP and M with NPN

Mechanics/electronics

Supply voltage: 10 V DC ... 30 V DC ¹⁾
Ripple: 5 Vpp ²⁾
Power consumption: $\leq 30\text{ mA}$ ³⁾
Output type: PNP
Switching mode: Light switching
Output current I_{max.}: $\leq 100\text{ mA}$
Response time: $< 0.5\text{ ms}$ ⁴⁾
Switching frequency: 1,000 Hz ⁵⁾
Connection type: Cable with M8 male connector, 4-pin, 150 mm ⁶⁾
Cable material: PVC
Circuit protection::: A
B ⁷⁾ ⁸⁾ ⁹⁾
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: $-30\text{ °C} \dots 60\text{ °C}$, $-30\text{ °C} \dots 70\text{ °C}$ ¹⁰⁾
Ambient storage temperature: $-30\text{ °C} \dots 75\text{ °C}$
UL File No.: FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

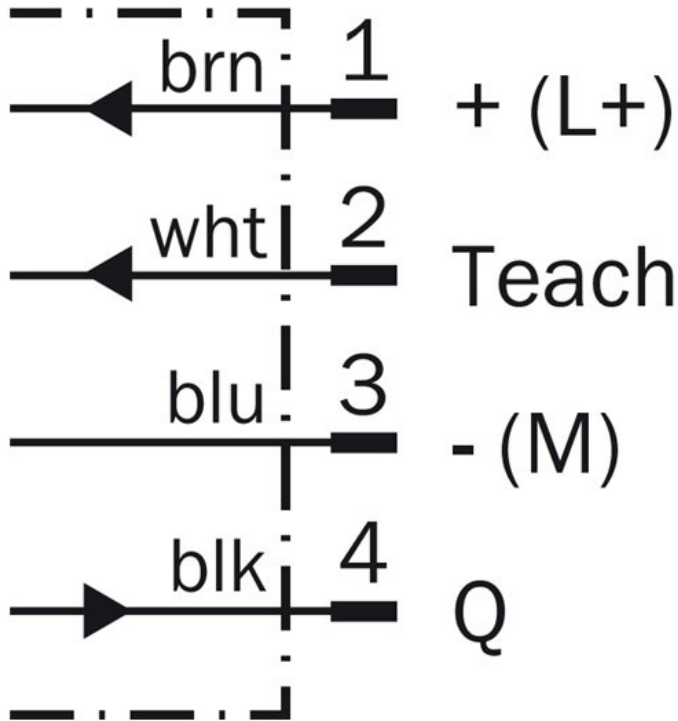
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below 0 °C ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and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

Dimensional drawing

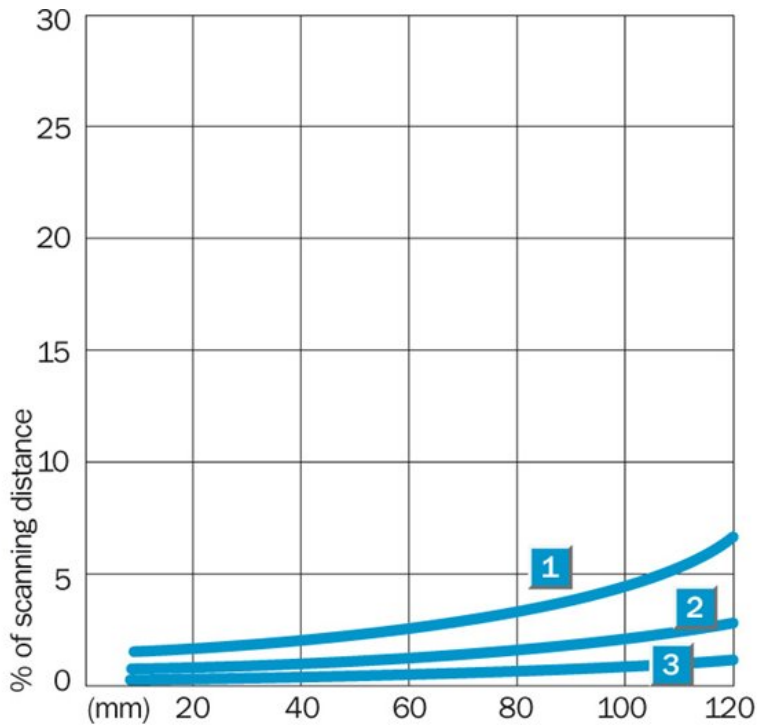


- |1| Center of optical axis, receiver
- |2| Center of optical axis, sender
- |3| gasket (tightening torque 6Nm)
- |4| Connector M12
- |5| Status indicator LED,
yellow: Status of received light beam
- |6| Status indicator LED green: power on
- |7| Teach-in button

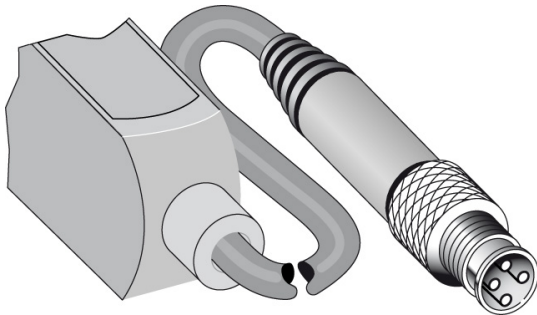
Connection diagram



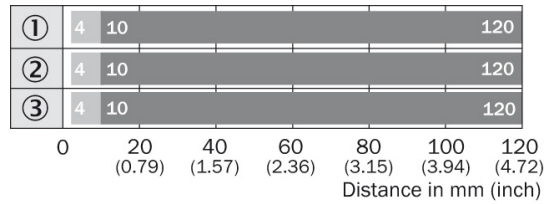
Characteristic curve



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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