



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

WTB4S-3P3204HS01



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Model Name > [WTB4S-3P3204HS01](#)
Part No. > [1048532](#)



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 ... 280 mm ¹⁾
Sensing range:	10 mm ... 280 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
cable⁴⁾

Light spot size (distance):

Ø 2.5 mm (100 mm)

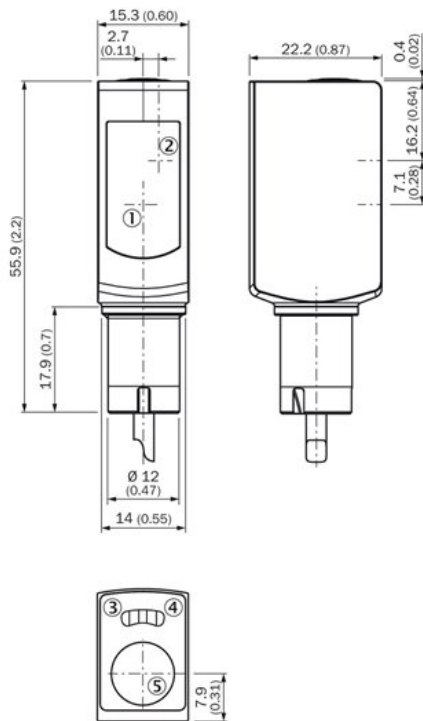
^{1) 2)} Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C ⁴⁾ External teach-in: pulse > 2 s with voltage U_v with PNP and M with NPN

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption:	≤ 30 mA ²⁾
Output type:	PNP
Switching mode:	Light switching
Output current I _{max} :	≤ 100 mA
Response time:	< 0.5 ms ³⁾
Switching frequency:	1,000 Hz ⁴⁾
Connection type:	Cable with connector M8, 4-pin, 150 mm ⁵⁾
Cable material:	PVC
Circuit protection:::	A B C ^{6) 7) 8)}
Protection class:	III
Weight:	50 g
Housing material:	Stainless steel, Stainless steel 316L
Enclosure rating:	IP 66 IP 67 IP 68 IP 69K
Special feature:	D12 adapter shaft
Special features:	Light spot diameter of 2.5 mm in 150 mm distance, Reduced sensing range of 280 mm
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

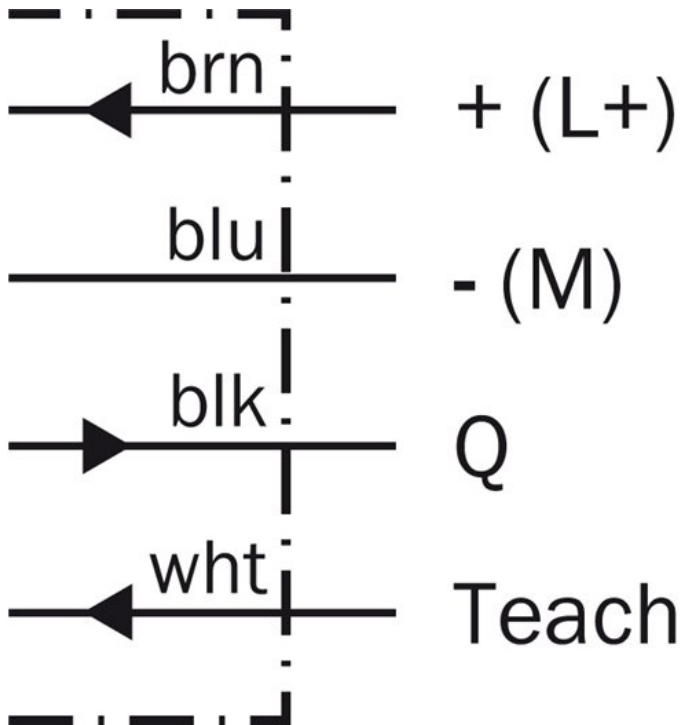
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ Do not bend below 0 °C ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity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

Dimensional drawing

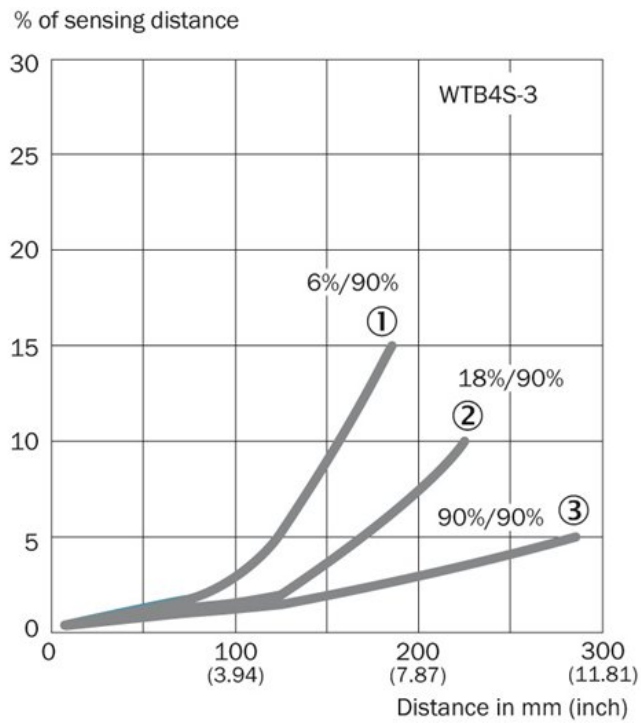


- [1] Center of optical axis, sender
- [2] Center of optical axis, receiver
- [3] Status indicator LED,
yellow: Status of received light beam
- [4] Status indicator LED green: power on
- [5] single teach-in button

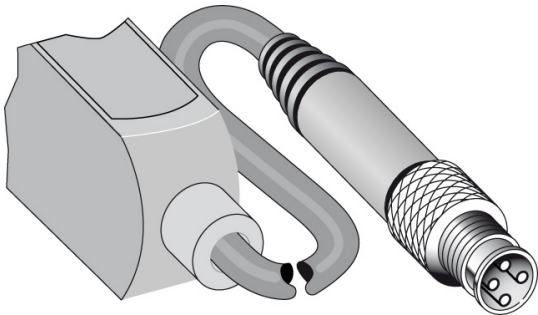
Connection diagram



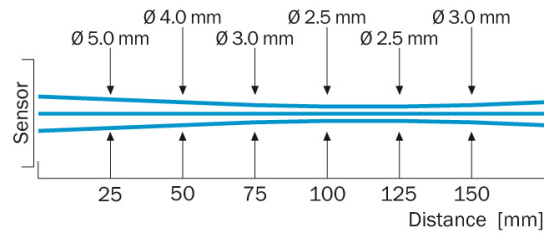
Characteristic curve



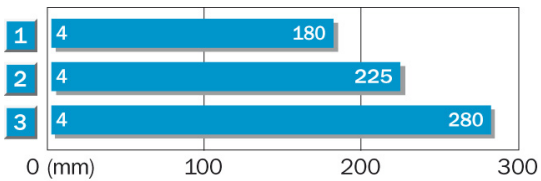
Connection type



Light spot size



Sensing range diagram



1	Scanning range on black, 6 % remission
2	Scanning range on gray, 18 % remission
3	Scanning range on white, 90 % remission

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