



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

WTB4S-3P2232V



Model Name > [WTB4S-3P2232V](#)
Part No. > [1046396](#)



Illustration may differ

At a glance

- WashDown rated for fluid tightness (IP 66, IP 67, IP 68 and IP 69K) and Ecolab certified
- Tough stainless steel housing (316L/1.4404)
- Resistant to a variety of common cleaning and disinfection agents
- Modern electrical connection available - M12 connector with pin casting
- Best background and extraneous light suppression in its class with OES3 technology and two emitter LED's
- Flexible sensing ranges and hysteresis settings
- Key lock function, remote teach, quality monitoring

Your benefits

- 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
- Quick and easy alignment due to highly visible PinPoint emitter LED
- 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 44.9 mm x 22.2 mm
Housing design:	Washdown
Housing design (light emission):	Rectangular
Sensing range max.:	4 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)

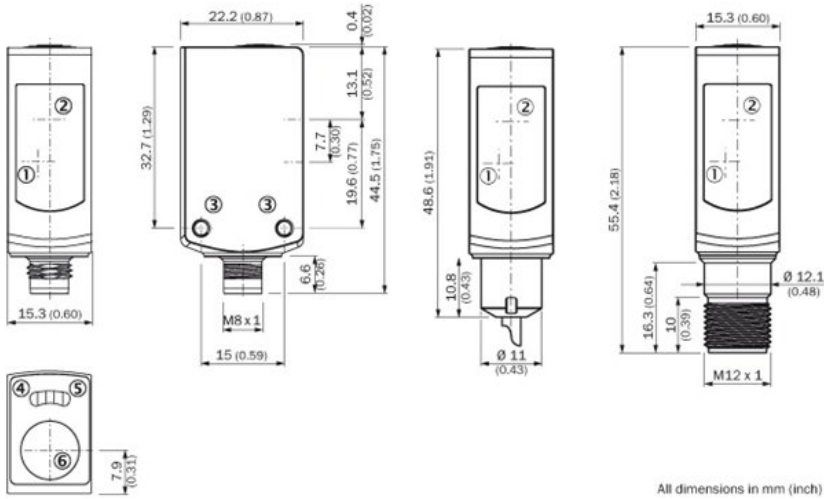
1) 2) Object with 90 % reflectance (referred to standard white DIN 5033) 3) Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption:	$\leq 30\text{ mA}$ ²⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I _{max.} :	$\leq 100\text{ mA}$
Response time:	$< 0.5\text{ ms}$ ³⁾
Switching frequency:	1,000 Hz ⁴⁾
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, C ^{5) 6) 7)}
Protection class:	III
Weight:	40 g
Special device:	-
Housing material:	Stainless steel, Stainless steel 316L
Enclosure rating:	IP 66 IP 67 IP 68 ⁸⁾ IP 69K
Ambient operating temperature:	$-30\text{ °C} \dots 60\text{ °C}$, $-30\text{ °C} \dots 70\text{ °C}$ ⁹⁾
Ambient storage temperature:	$-30\text{ °C} \dots 75\text{ °C}$
UL File No.:	NRKH.E181493 & NRKH7.E181493

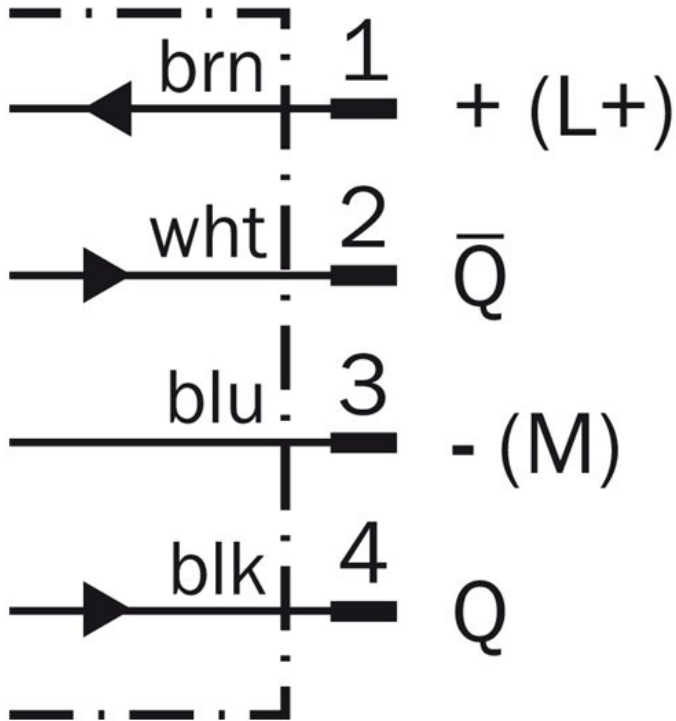
1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ $A = V_S$ connections reverse-polarity protected ⁶⁾ B = inputs and output reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ Only in case of correctly mounted IP 69K connecting cable ⁹⁾ At $UV \leq 24\text{ V}$ and $IA < 30\text{ mA}$

Dimensional drawing

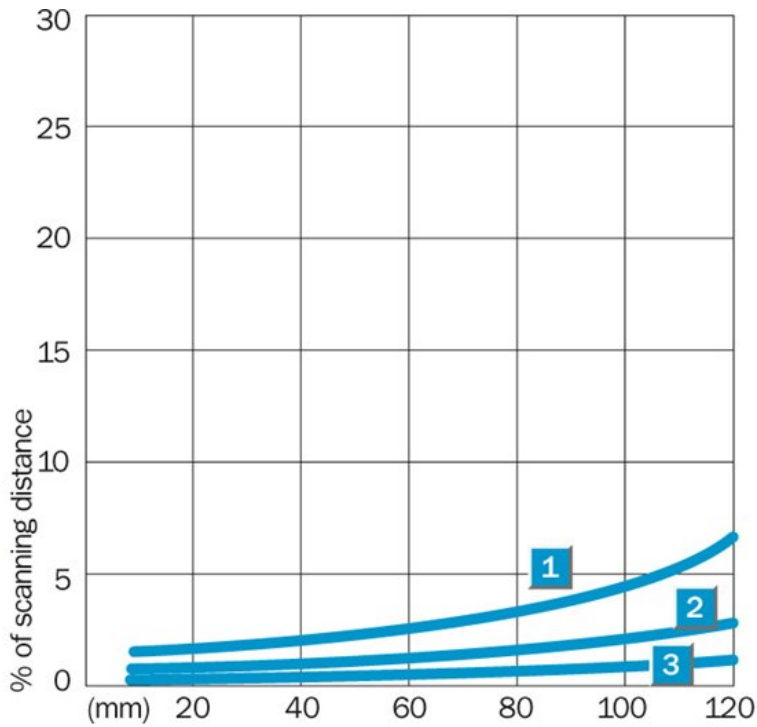


- [1] Center of optical axis, receiver
- [2] Center of optical axis, sender
- [3] Threaded mounting hole M3
- [4] Status indicator LED,
yellow: Status of received light beam
- [5] Status indicator LED green: power on
- [6] Teach-in button

Connection diagram

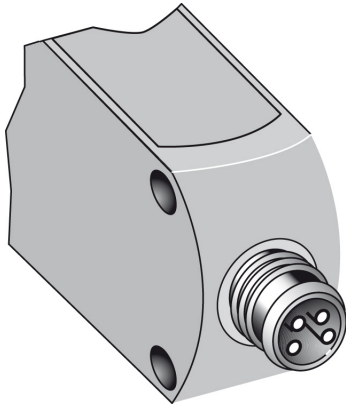


Characteristic curve

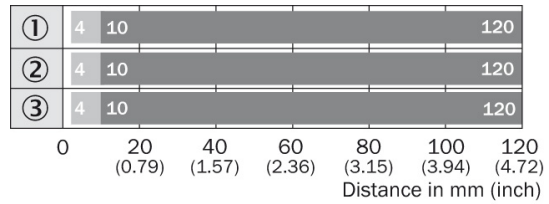


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

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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