



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

WTB4S-3P2432V



Model Name > [WTB4S-3P2432V](#)
Part No. > [1054672](#)



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 49.2 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 |
| Adjustment: | Single teach-in button |
| Light spot size (distance): | Ø 2.5 mm (50 mm) |

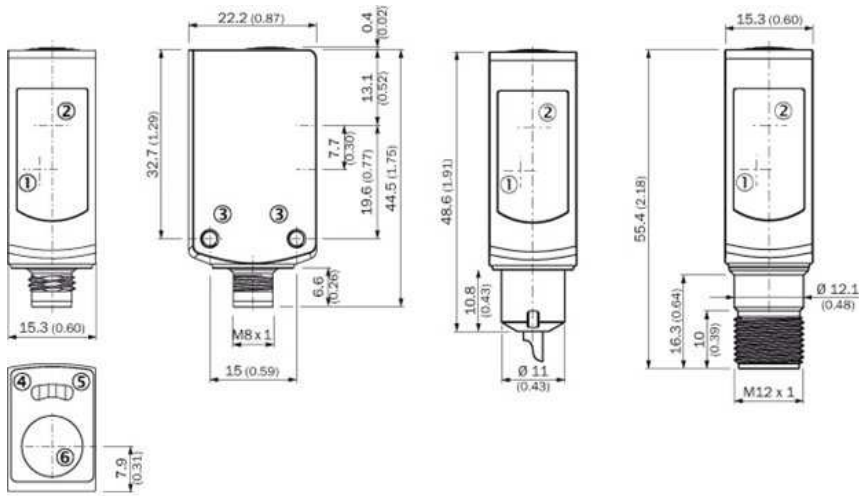
1) 2) Object with 90 % reflectance (referred to standard white, DIN 5033) 3) Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

| | |
|------------------------------------|---|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Ripple: | < 5 Vpp ²⁾ |
| Power consumption: | ≤ 30 mA ³⁾ |
| Output type: | PNP |
| Output function: | Complementary |
| Switching mode: | Light switching |
| Output current I _{max.} : | ≤ 100 mA |
| Response time: | < 0.5 ms ⁴⁾ |
| Switching frequency: | 1,000 Hz ⁵⁾ |
| Connection type: | Connector M12, 4-pin ⁶⁾ |
| Circuit protection::: | A, B, C ^{7) 8) 9)} |
| Protection class: | III |
| Weight: | 45 g |
| Special device: | - |
| 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.: | NRKH.E181493 & NRKH7.E181493 |
| Housing material: | Stainless steel, Stainless steel 316L |

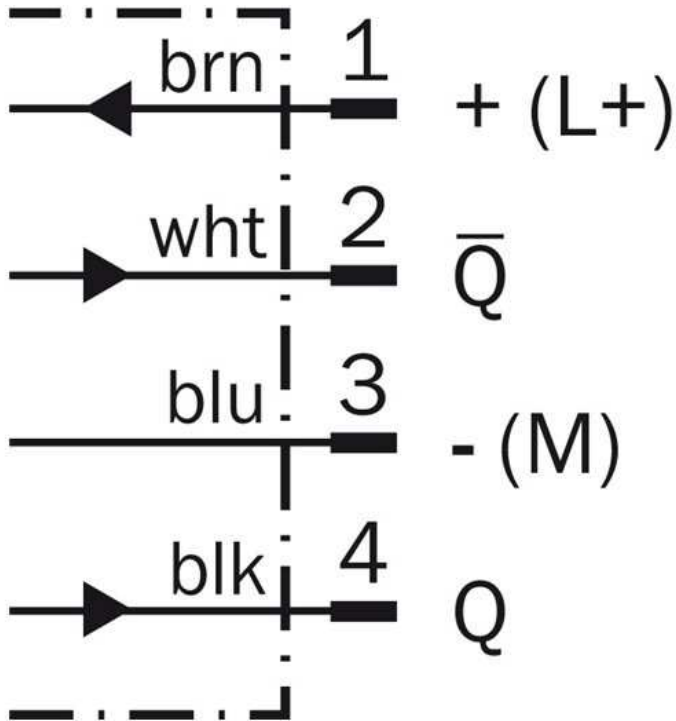
1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾
 Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Tightening torque, max.: 0.7 Nm ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and
 output reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ At UV ≤ 24 V and IA < 30 mA

Dimensional drawing

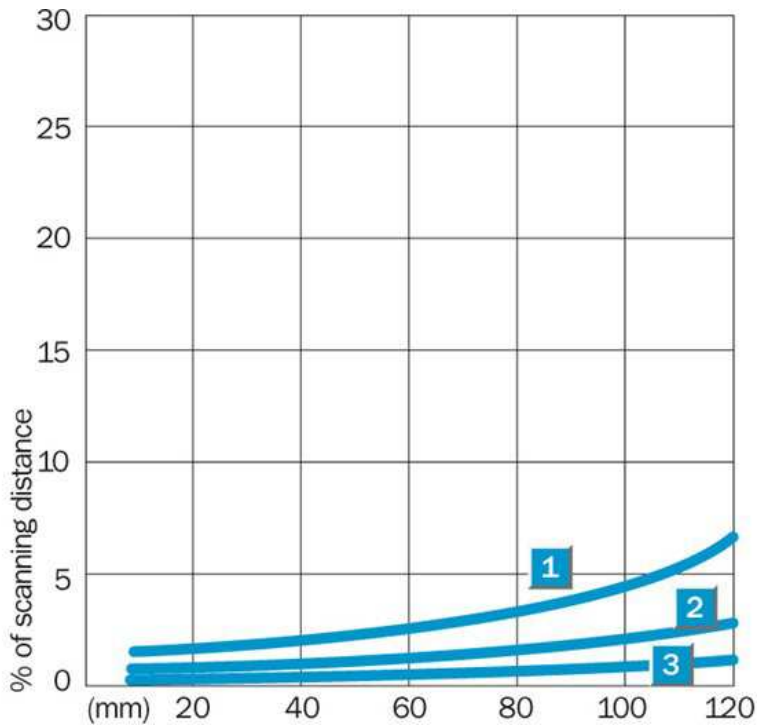


- [1] Center of optical axis, receiver
- [2] Center of optical axis, sender
- [3] Threaded mounting hole M3
- [4] Status indicator LED, yellow: Status of received light beam
- [5] Status indicator LED green: supply voltage on
- [6] Teach-in button

Connection diagram

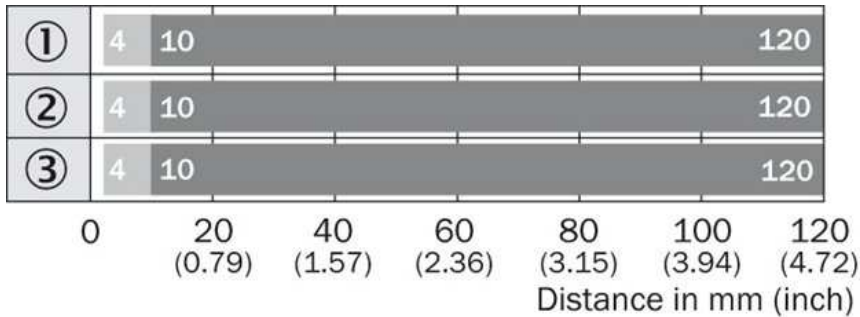


Characteristic curve



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

Sensing range diagram

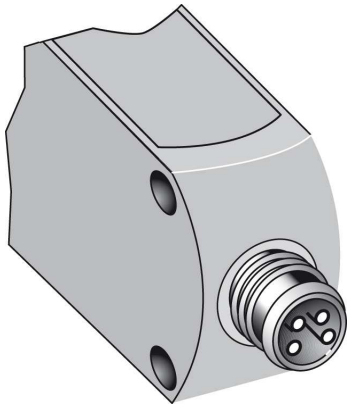


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

■ 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

Connection type



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