



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

WTB4S-3P3435V



Model Name > [WTB4S-3P3435V](#)
Part No. > [1046407](#)



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 48.6 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:	Cable
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: 100,000 h at $T_U = +25\text{ °C}$

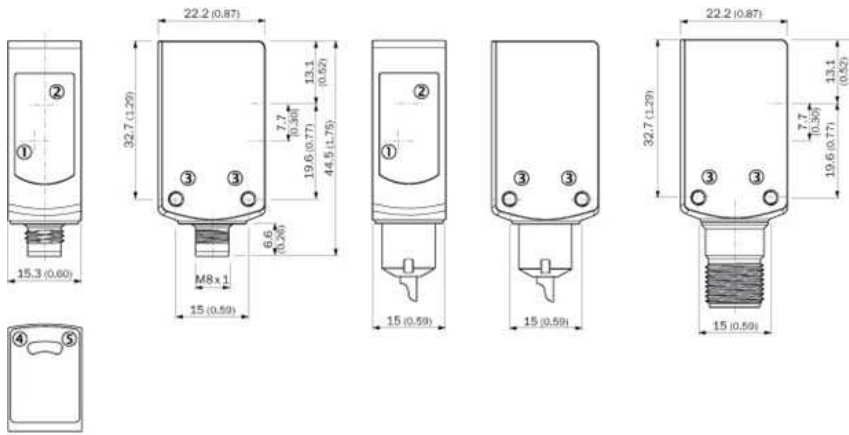
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	PNP
Switching mode:	Light switching
Output current I _{max} :	≤ 100 mA
Response time:	< 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type::	Cable with connector M12, 4-pin, 150 mm ^{6) 7)}
Cable material:	PVC
Circuit protection:::	A, B, C ^{8) 9) 10)}
Protection class:	III
Weight:	60 g
Special device:	-
Enclosure rating:	IP 66 IP 67 IP 68 IP 69K
Ambient operating temperature:	-30 °C ... +60 °C, -30 °C ... +70 °C ¹¹⁾
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 below U_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⁾ Do not bend below 0 °C ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ B = inputs and output reverse-polarity protected ¹⁰⁾ C = interference suppression ¹¹⁾ At UV ≤ 24 V and IA < 30 mA

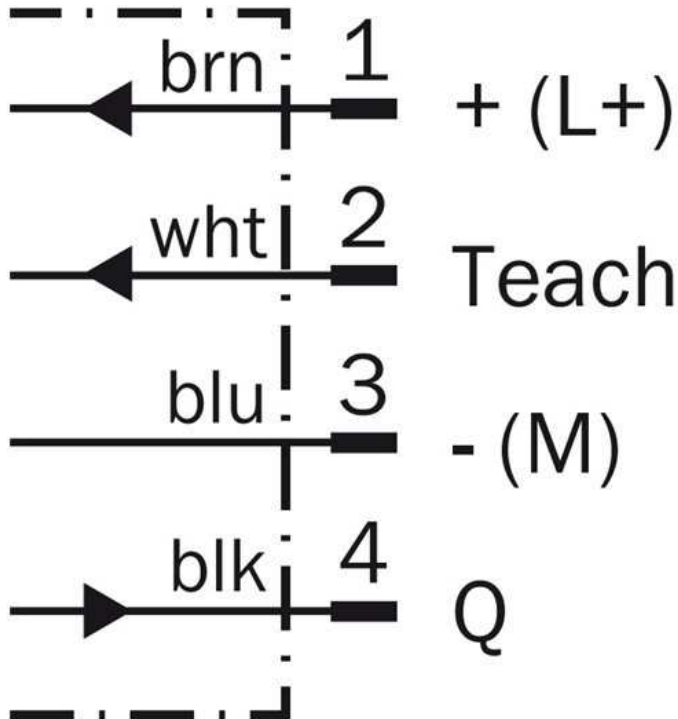
Dimensional drawing



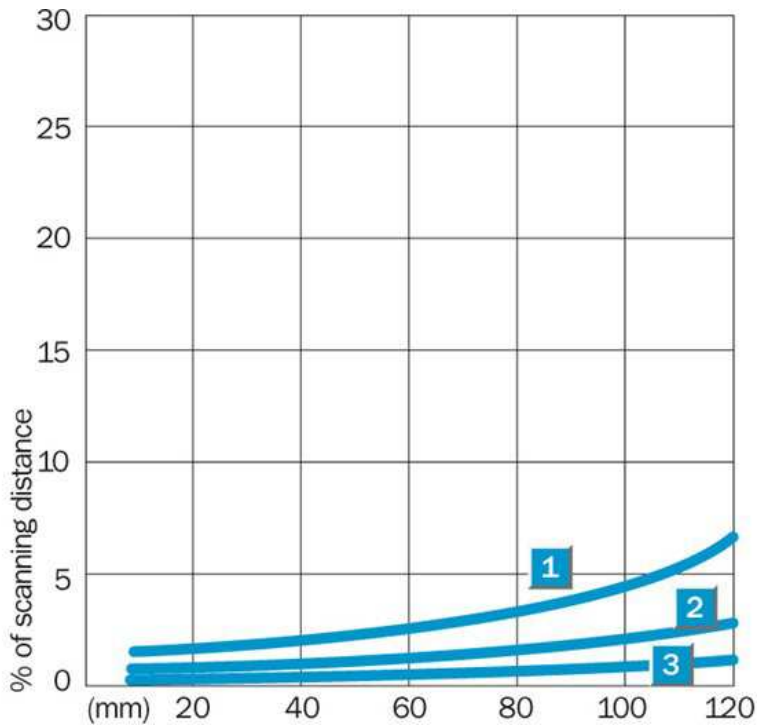
- [1] Center of receiver's optical axis
- [2] Center of optical axis, sender
- [3] Threaded mounting hole M3
- [4] Status indicator LED, yellow: Status of received light beam
- [5] Status indicator LED green: supply voltage on

All dimensions in mm (inch)

Connection diagram

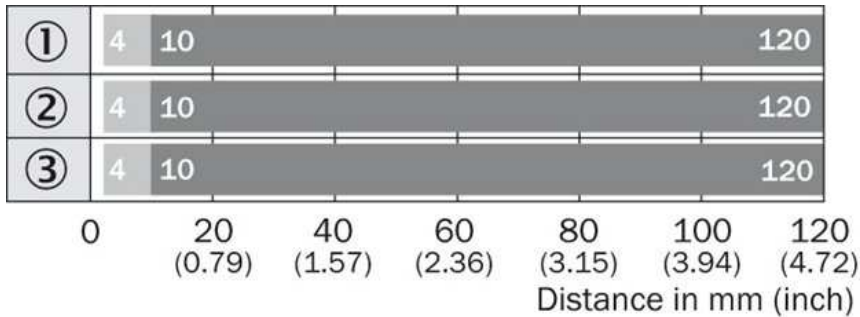


Characteristic curve



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

Sensing range diagram

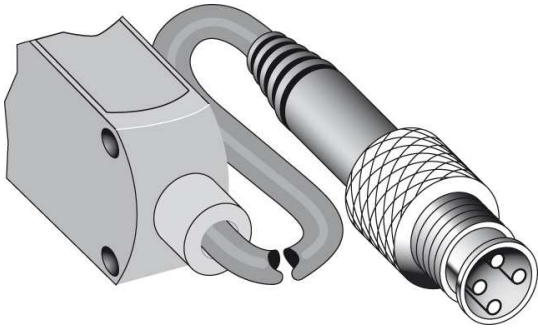


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

■ 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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