



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

WTB4S-3P2262



Model Name > [WTB4S-3P2262](#)
Part No. > [1070222](#)



Illustration may differ

At a glance

- Best background suppression in its class
- Setting either via teach-in pushbutton, 5-turn potentiometer cable or by IO-Link
- All models with PinPoint LED technology
- Versions with laser-like LED light spots
- High immunity to ambient light

Your benefits

- Less downtime due to reliable detection of all types of objects
- Laser-like light spot provides quick and easy alignment
- Smart machine design makes it possible to mount the sensor in the tightest spaces
- Reliable object detection due to best-in-class background suppression and high immunity to ambient light



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	12.2 mm x 41.8 mm x 17.3 mm
Housing design (light emission):	Rectangular
Sensing range max.:	4 mm ... 180 mm ¹⁾
Sensing range:	10 mm ... 180 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 6.5 mm (150 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

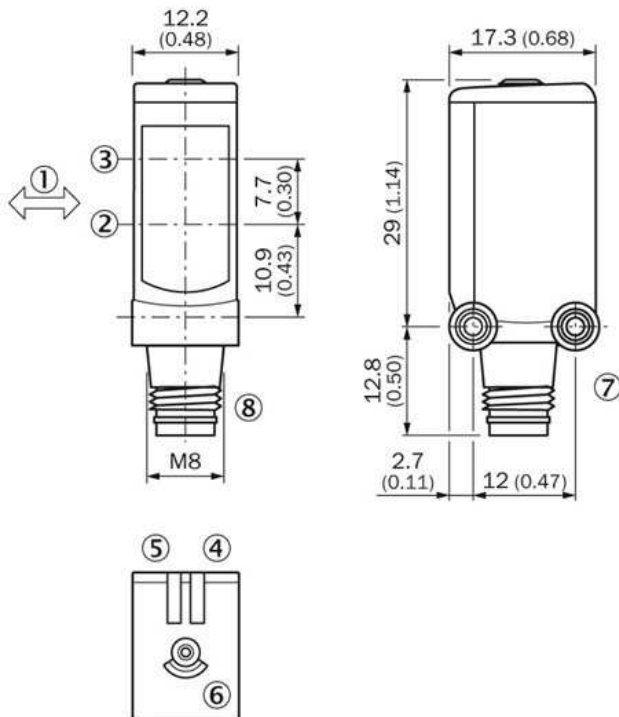
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	< 5 Vpp ^{2) 3)}
Power consumption:	≤ 20 mA ⁴⁾
Output type:	PNP
Switching mode:	Light/dark switching
Output current I _{max} :	≤ 100 mA
Response time:	< 0.5 ms ⁵⁾

Switching frequency: 1,000 Hz ⁶⁾
 Electrical connection: Connector M8, 4-pin
 Circuit protection::: A, C, D ^{7) 8) 9)}
 Protection class: III
 Weight: 30 g
 Optics material: PMMA
 Enclosure rating: IP 67
 IP 66
 Ambient operating temperature: -40 °C ... +60 °C
 Ambient storage temperature: -40 °C ... +75 °C
 UL File No.: NRKH.E181493 & NRKH7.E181493
 Housing material: ABS, Plastic

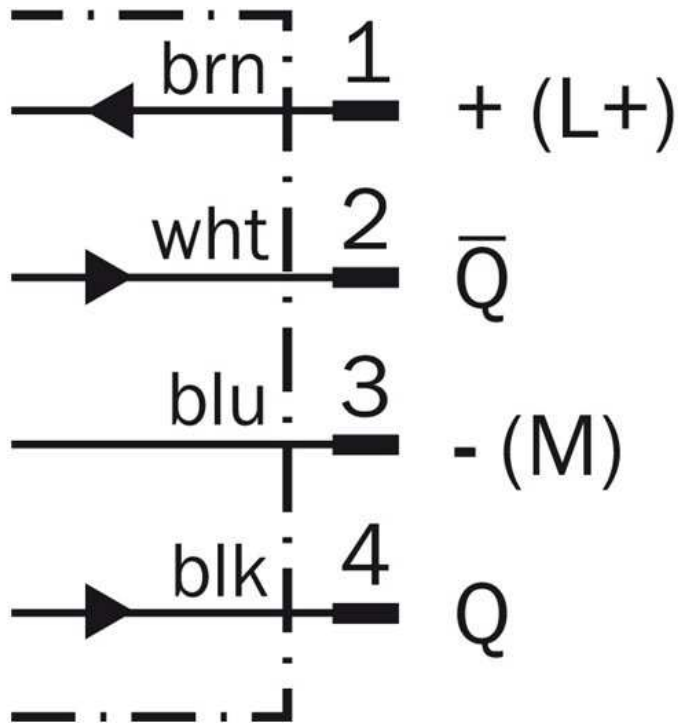
1) Limit values 2) 3) May not exceed or fall short of V_S tolerances 4) Without load 5) Signal transit time with resistive load 6) With light/dark ratio 1:1 7) $A = V_S$
 connections reverse-polarity protected 8) C = interference suppression 9) D = outputs overcurrent and short-circuit protected

Dimensional drawing

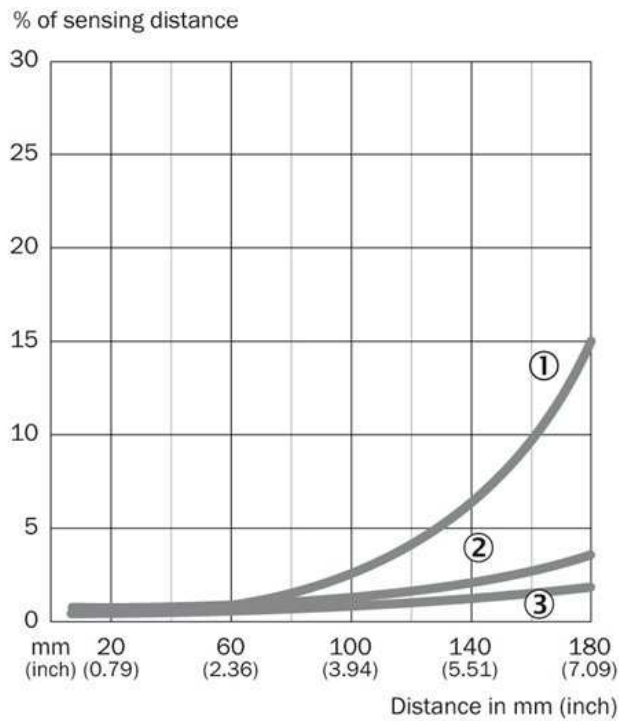


- [1] Standard direction of the material being detected
- [2] Optical axis receiver
- [3] Optical axis sender
- [4] Status indicator LED green: power on
- [5] Status indicator LED, yellow: Status of received light beam
- [6] Teach-in button
- [7] Threaded mounting hole M3
- [8] Connection

Connection diagram

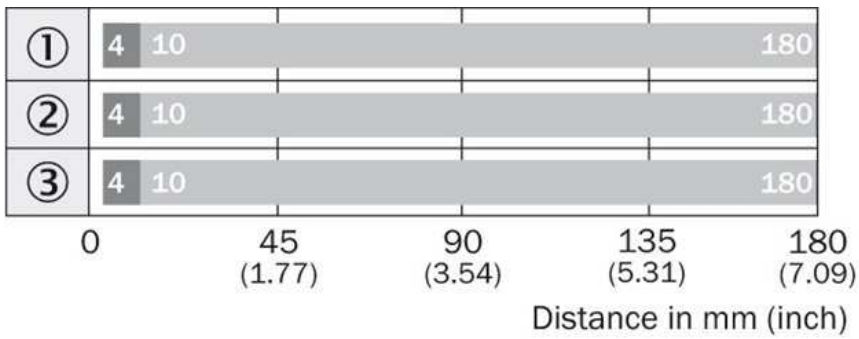


Characteristic curve



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

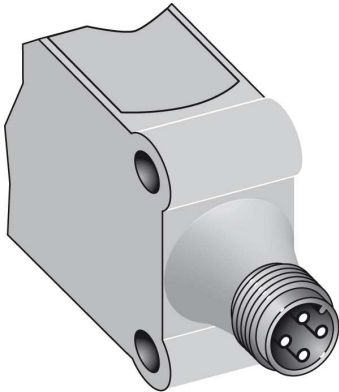
Sensing range diagram



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

■ Sensing range max. ■ Sensing range

Connection type



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