



Photoelectric sensors
W4-3, Photoelectric proximity sensor,
Background suppression

WTB4-3N2162



Model Name > [WTB4-3N2162](#)
Part No. > [1028088](#)



Illustration may differ

At a glance

- Intense light spot with PinPoint LED technology
- Sensor with IR light available upon request
- Sensing range of 4 - 150 mm
- Background suppression sensor available with laser-like light spot
- Adjustment either via teach-in pushbutton, 5-turn potentiometer, cable or IO-Link
- Second emitter LED designed for suppression of shiny backgrounds
- Flexible sensing ranges and hysteresis settings
- Key lock function, remote teach, quality monitoring

Your benefits

- Reliable detection of objects regardless of color and consistency
- Smart machine design ensures low-cost integration due to mounting flexibility in areas with limited space
- Best-in-class background suppression and a high immunity to ambient light, ensuring reliable object detection
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life
- Precise detection with a high level of repeat accuracy due to an intense light spot with PinPoint LED technology
- Quick and easy format adjustment
- Easy monitoring of sensor status
- Key lock function and parameter download prevent incorrect settings

The product has been discontinued. Please follow the "replacement product" link for information about alternative products.



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	16 mm x 39.5 mm x 12 mm
Housing design (light emission):	Rectangular
Sensing range max.:	4 mm ... 150 mm ¹⁾
Sensing range:	15 mm ... 150 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 7 mm (50 mm)

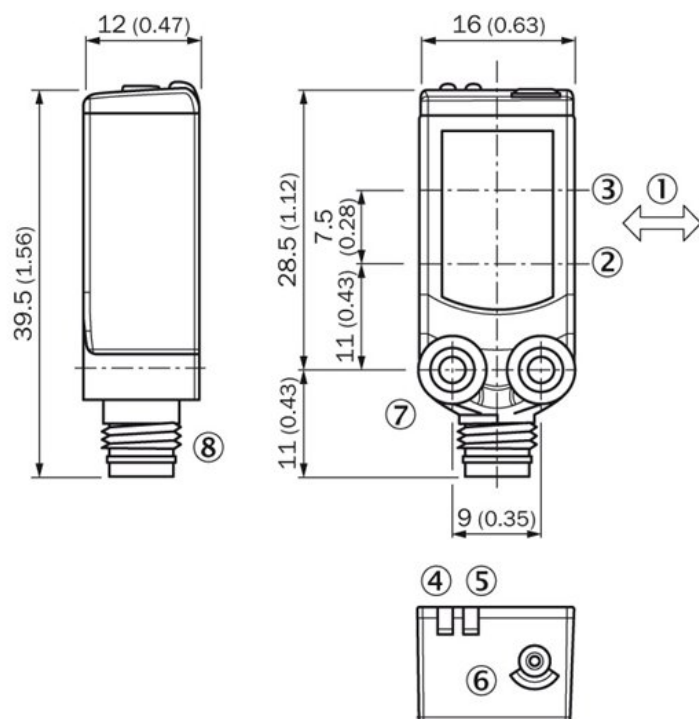
1) 2) Object with 90 % reflectance (referred to standard white DIN 5033) 3) Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

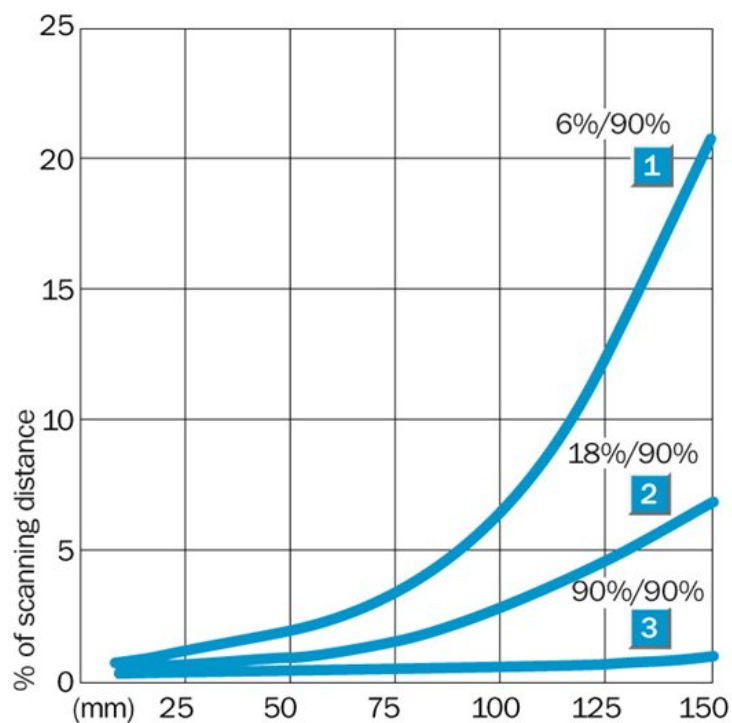
Supply voltage: 10 V DC ... 30 V DC ¹⁾
 Ripple: < 5 Vpp
 Power consumption: ≤ 20 mA ²⁾
 Output type: NPN
 Switching mode: Light switching
 Output current I_{max}: ≤ 100 mA
 Response time: < 0.5 ms ³⁾
 Switching frequency: ± 1,000 Hz ⁴⁾
 Connection type: Connector M8, 3-pin
 Circuit protection:: A, C, D ^{5) 6) 7)}
 Protection class: III
 Weight: 30 g
 Housing material: ABS, Plastic
 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

1) Limit values 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) C = interference suppression 7) D = outputs overcurrent and short-circuit protected

Dimensional drawing

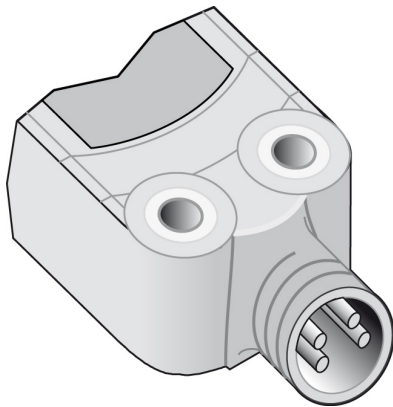


Characteristic curve

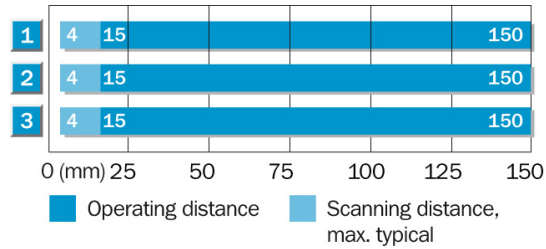


- 1] Sensing range on black, 6 % remission
- 2] Sensing range on grey, 18 % remission
- 3] Sensing range on white, 90 % remission

Connection type



Sensing range diagram



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

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