



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

WTB4-3N3212S55



Model Name > **WTB4-3N3212S55**
Part No. > **1046787**



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



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.:	3 mm ... 250 mm ¹⁾
Sensing range:	15 mm ... 250 mm ²⁾
Type of light:	Infrared light
Light source:	LED ³⁾
Wave length:	880 nm
Adjustment:	Single teach-in button
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 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple::	< 5 V _{pp} ^{2) 3)}
Power consumption:	≤ 20 mA ⁴⁾
Output type:	NPN
Switching mode:	Light/dark switching
Output current I _{max} ::	≤ 100 mA ⁵⁾
Response time:	< 0.5 ms ⁶⁾
Switching frequency:	1,000 Hz ⁶⁾
Connection type:	Cable with connector M8, 4-pin, 100 mm ⁷⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Cable diameter:	3.4 mm
Circuit protection:::	A, C, D ^{8) 9) 10)}
Protection class:	III
Weight:	30 g
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +70 °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⁾ Do not bend below 0 °C ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ D = outputs overcurrent and short-circuit protected

Connection type



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