



Photoelectric sensors  
W12-3, Photoelectric proximity sensor,  
Background suppression

WTB12-3P2461S02



**Type** > [WTB12-3P2461S02](#)  
**Part No.** > [1055582](#)



*Illustration may differ*

**At a glance**

- State of the art technology provides precise background suppression
- Rugged sensor that withstands harsh environments
- PinPoint LED technology with highly visible light spot
- Rugged die-cast zinc housing with optional Teflon® coating
- Versatile mounting options due to dovetail mounting - mounting holes and oblong holes
- Highly visible status LEDs
- Sensing range adjustment via potentiometer

**Your benefits**

State of the art technology, e.g. OES3 provides precise background suppression and reliable detection of challenging objects

High immunity to ambient light, optical reflections and crosstalk ensures fewer false readings and less downtime

PinPoint LED technology provides a highly visible light spot that enables quick and easy sensor alignment

Highly visible status LEDs simplify sensing distance adjustments and reduce installation time

A rugged metal housing withstands high-pressure cleaners and cleaning agents, reducing downtime

Complementary outputs in one housing reduce inventory and procurement costs

IO-Link enables quick remote diagnostics and maintenance (optional)

Easy installation using SICK accessories



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	15.6 mm x 48.5 mm x 42 mm
Housing design (light emission):	Rectangular
Sensing range max.:	30 mm ... 700 mm <sup>1)</sup>
Sensing range:	50 mm ... 700 mm <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>

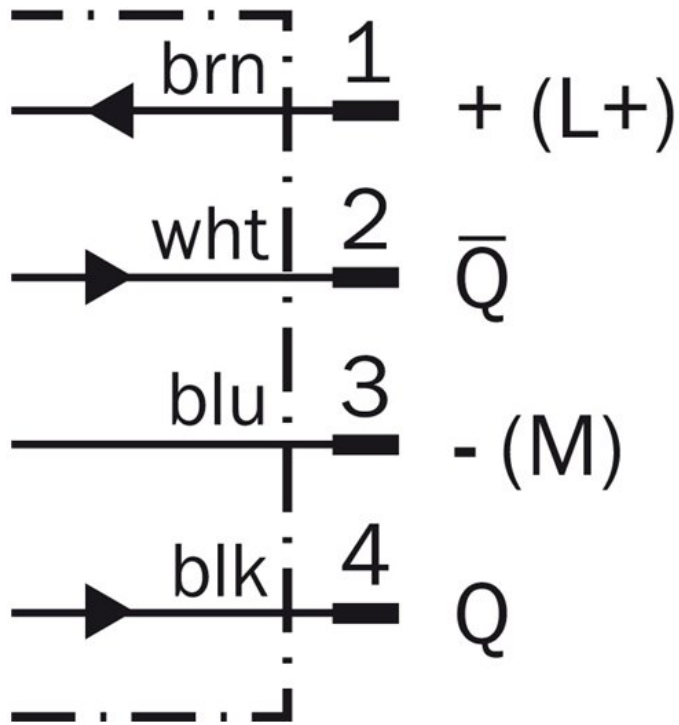
Special features:	Sensing range limited at 700 mm +/- 100 mm, Sensing range pre adjusted at 200 mm
Adjustment:	Potentiometer, 5-turn Sensing range preset: 200 mm
Light spot size (distance):	Ø 9 mm (400 mm)
<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033) <sup>2)</sup> +/- 100 mm <sup>3)</sup> Average service life of 100,000 h at T <sub>A</sub> = +25 °C	

## Mechanics/electronics

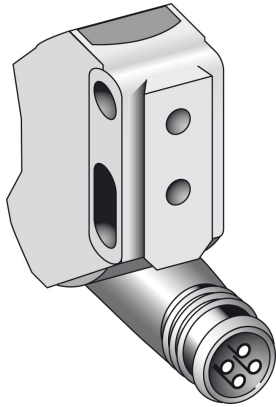
Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	≤ 5 Vpp <sup>2)</sup>
Power consumption:	≤ 40 mA <sup>3)</sup>
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I <sub>max.</sub> :	100 mA
Response time:	≤ 700 µs <sup>4)</sup>
Switching frequency:	± 750 Hz <sup>5)</sup>
Connection type:	M12, 4-pin male connector
Circuit protection:::	A, C, D <sup>6) 7) 8)</sup>
Protection class:	II
Weight:	120 g
Special device:	✓
Housing material:	Metal
Enclosure rating:	IP 66 IP 67 IP 69K
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Signal voltage PNP HIGH/LOW:	> U <sub>v</sub> - 2,5 V / ca. 0 V

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A    <sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances    <sup>3)</sup> Without load    <sup>4)</sup> Signal transit time with resistive load  
<sup>5)</sup> With light/dark ratio 1:1    <sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected    <sup>7)</sup> C = interference suppression    <sup>8)</sup> D = outputs overcurrent and short-circuit protected

Connection diagram



Connection type



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