



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

WTB12-3P3461S03



Type > [WTB12-3P3461S03](#)
Part No. > [1057676](#)



Illustration may differ

At a glance

- State of the art technology provides precise background suppression
- Withstands harsh environments
- Line-shaped 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 with 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
- 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
- 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 ... 500 mm ¹⁾
Sensing range:	50 mm ... 500 mm
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Adjustment:	Potentiometer, 5 turns
Light spot size (distance):	5 x 50 mm (150 mm)

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

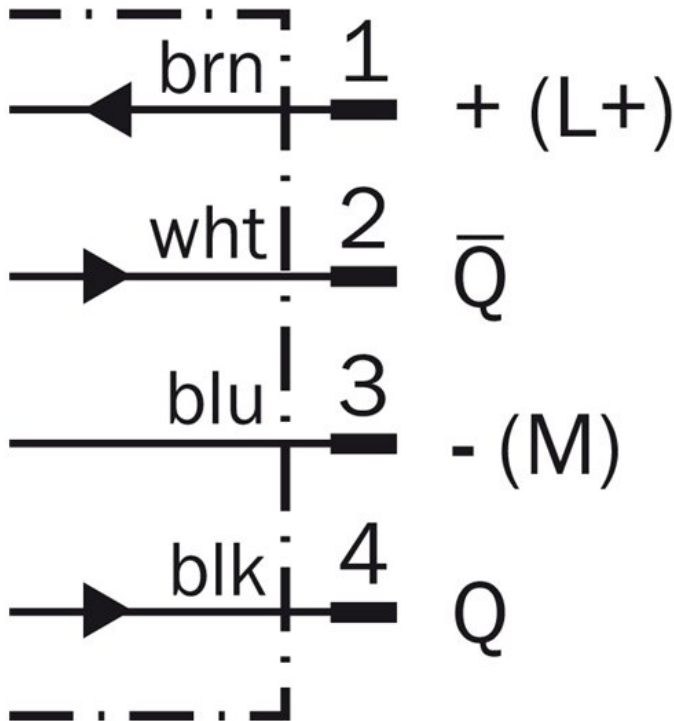
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption:	≤ 40 mA ²⁾

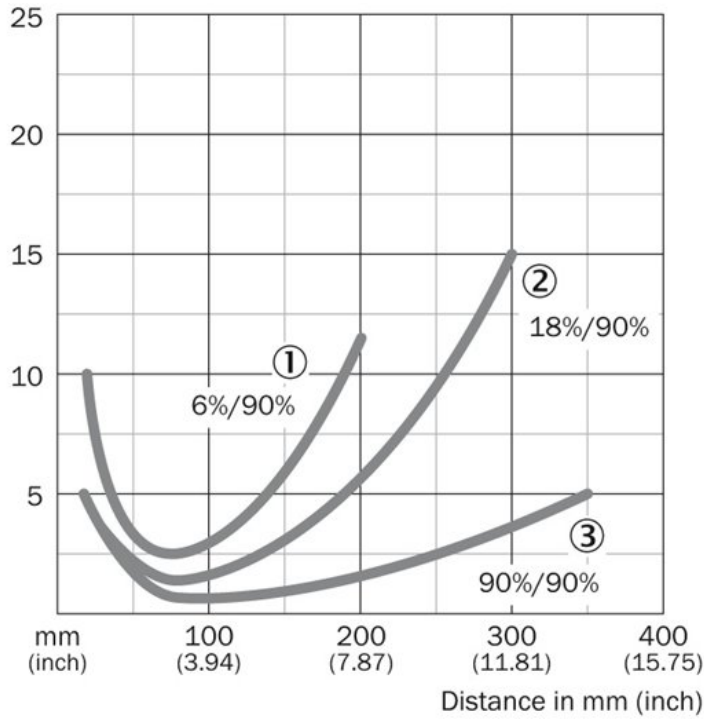
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Signal voltage PNP HIGH/LOW:	> $U_v - 2,5 \text{ V} / \text{ca. } 0 \text{ V}$
Output current $I_{\text{max.}}$:	100 mA
Response time:	$\leq 700 \mu\text{s}$ ³⁾
Switching frequency:	750 Hz ⁴⁾
Connection type:	Cable with connector M12, 4-pin, 200 mm
Circuit protection:::	A, C, D ^{5) 6) 7)}
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

¹⁾ Limit values, operation in short-circuit protected network max. 8 A
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

Connection diagram

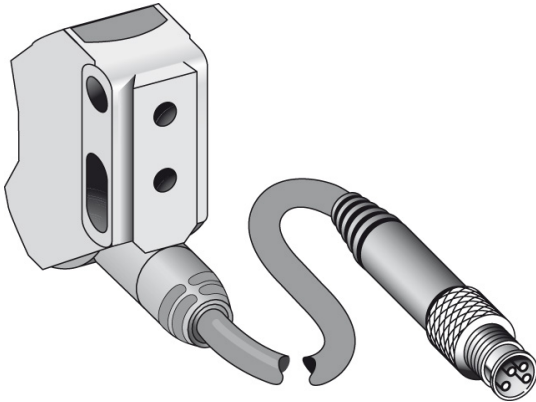


Characteristic curve

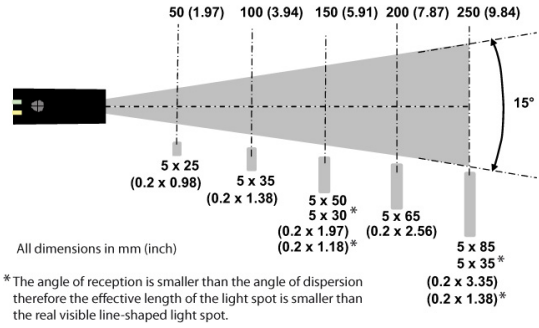


- [1] Sensing range on black, 6 % remission
- [2] Sensing range on grey, 18 % remission
- [3] Sensing range on white, 90 % remission

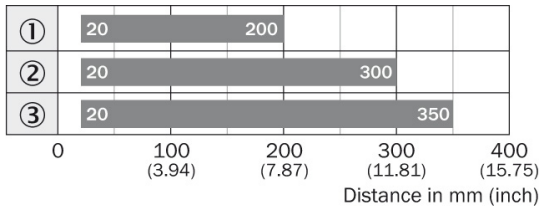
Connection type



Light spot size



Sensing range diagram



■ Sensing range

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