



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

WTB12-3P3461S03



Model Name > [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

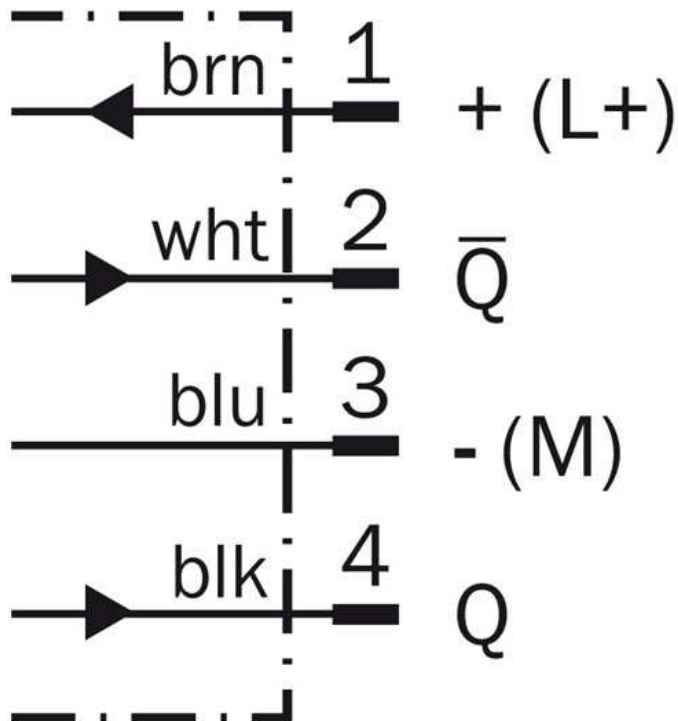
Mechanics/electronics

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

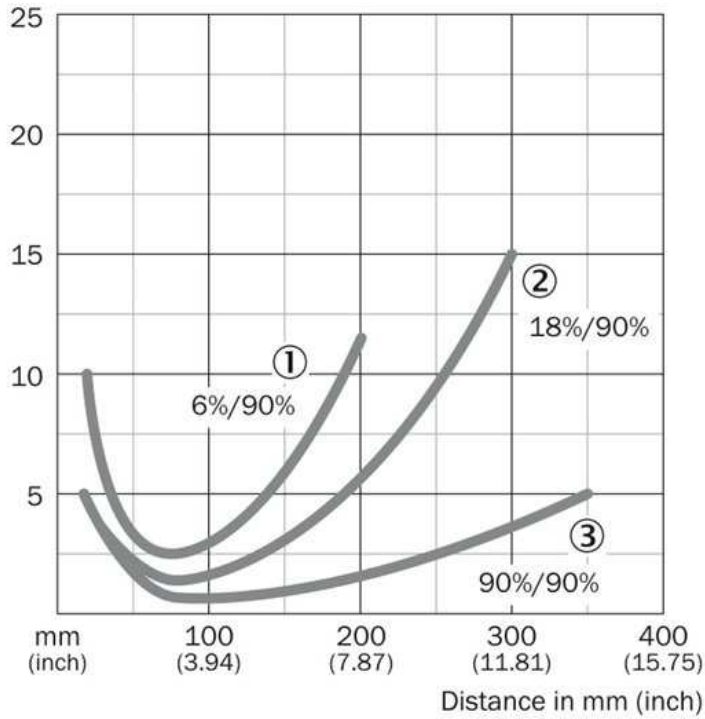
| | |
|------------------------------------|---|
| Output type: | PNP |
| Output function: | Complementary |
| Switching mode: | Light/dark switching |
| Signal voltage PNP HIGH/LOW: | > U _v - 2,5 V / ca. 0 V |
| Output current I _{max.} : | 100 mA |
| Response time: | ≤ 700 μs ³⁾ |
| Switching frequency: | 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

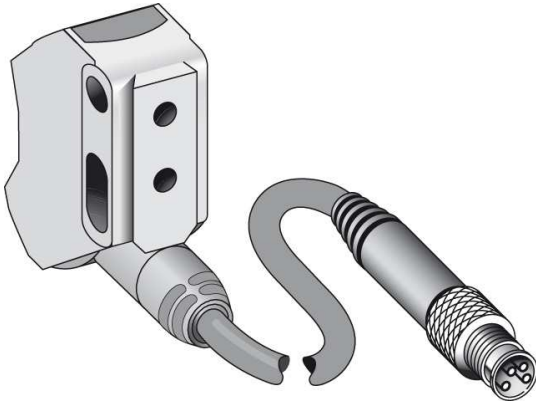


Characteristic curve

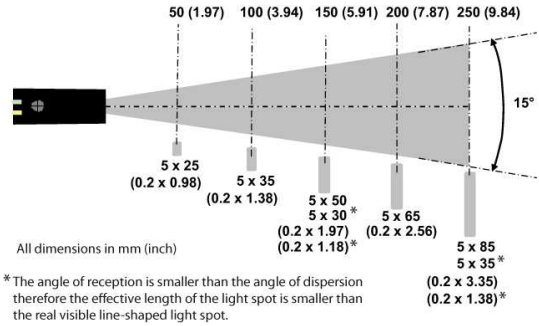


- [1] Sensing range on black, 6 % remission
- [2] Sensing range on grey, 18 % remission
- [3] Sensing range on white, 90 % remission

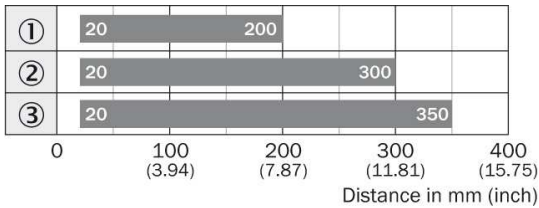
Connection type



Light spot size



Sensing range diagram



■ Sensing range

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