



Photoelectric sensors
W9-3, Through-beam photoelectric sensor

WSE9M4-3P3430



Type > [WSE9M4-3P3430](#)
Part No. > [1054435](#)



Illustration may differ

At a glance

- High-performance through-beam sensor in ultra-rugged VISTAL™ housing
- PinPoint LED for highly visible and precise light spot
- Variable mounting with M4 hole pattern
- Wide range of connection options

Your benefits

- Rugged VISTAL™ housing provides reliable installation and operation
- Reliable object detection in all situations using best-in-class performance
- Quick and easy alignment with reliable object detection due to the highly visible PinPoint light spot
- M4 slotted hole mounting for multiple mounting possibilities
- One housing with a wide range of options makes machine integration easy
- Variety of accessories for simple mounting



Features

| | |
|----------------------------------|-----------------------------------|
| Sensor/detection principle: | Through-beam photoelectric sensor |
| Dimensions (W x H x D): | 12.2 mm x 52.2 mm x 23.6 mm |
| Housing design (light emission): | Rectangular |
| Mounting hole: | M4 |
| Sensing range max.: | 0 m ... 10 m |
| Sensing range: | 0 m ... 7 m |
| Type of light: | Visible red light |
| Light source: | PinPoint LED ¹⁾ |
| Adjustment: | No adjustment |
| Light spot size (distance): | Ø 25 mm (1 m) |

¹⁾ Average service life of 100,000 h at T_A = +25 °C

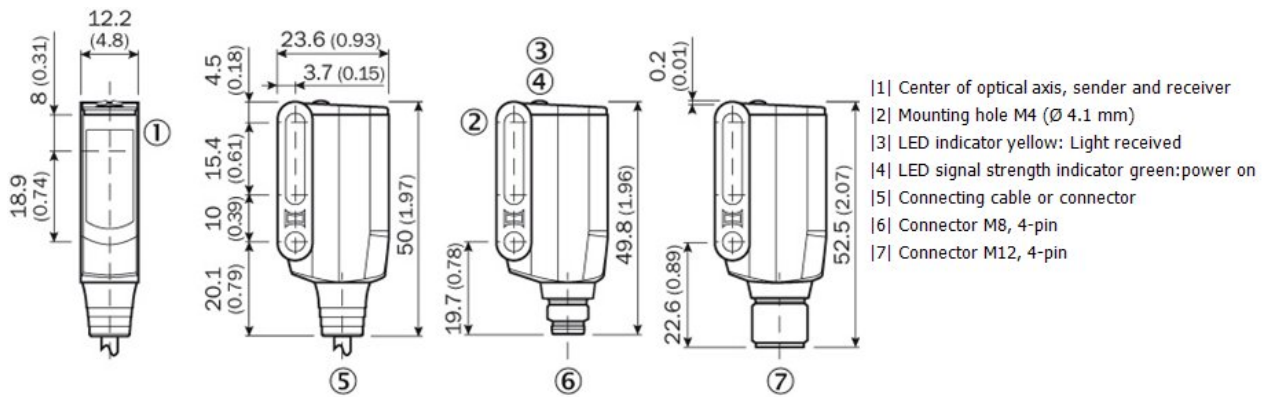
Mechanics/electronics

| | |
|------------------------------------|------------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Ripple: | < 5 Vpp ²⁾ |
| Power consumption: | ≤ 30 mA ³⁾ |
| Output type: | PNP ⁴⁾ |
| Switching mode: | Light/dark switching ⁵⁾ |
| Output current I _{max.} : | ≤ 100 mA ⁶⁾ |
| Response time: | < 0.5 ms ⁷⁾ |

| | |
|---------------------------------------|--|
| Switching frequency: | 1,000 Hz ⁸⁾ |
| Connection type: | Cable with connector M12, 4-pin, 120 mm ⁹⁾ |
| Conductor cross-section: | 0.14 mm ² |
| Circuit protection::: | A, B, C ¹⁰⁾ ¹¹⁾ ¹²⁾ |
| Protection class: | III |
| Weight: | 80 g |
| Polarisation filter: | - |
| Optics material: | PMMA |
| Enclosure rating: | IP 66 IP 67 IP 69K |
| Test input sender off: | Sender off |
| Ambient operating temperature: | -40 °C ... +60 °C |
| Ambient storage temperature: | -40 °C ... +75 °C |
| Part number of individual components: | Receiver, WE9M4-3P3430, 2060502, Sender, WS9M4-3D3430, 2060501 |
| UL File No.: | NRKH.E181493 |
| Housing material: | Plastic, VISTAL |

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ^{4) 5)} Q = light-switching ⁶⁾ As of
 Tu 50 °C, a max. load current $I_{max.} = 50$ mA is permitted ⁷⁾ Signal transit time with resistive load ⁸⁾ With light/dark ratio 1:1 ⁹⁾ Do not bend below 0 °C ¹⁰⁾ A = V_S
 connections reverse-polarity protected ¹¹⁾ B = inputs and output reverse-polarity protected ¹²⁾ C = interference suppression

Dimensional drawing



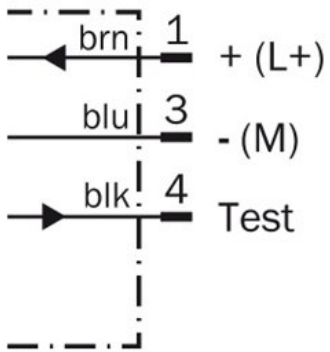
Adjustments possible



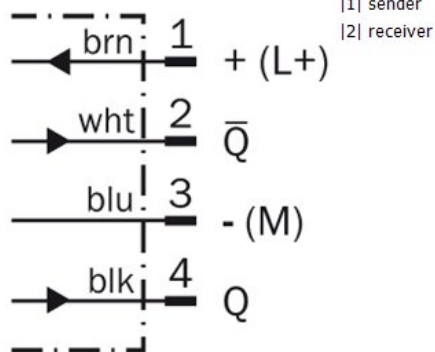
|3| LED indicator yellow: Light received
|4| LED signal strength indicator green:power on

Connection diagram

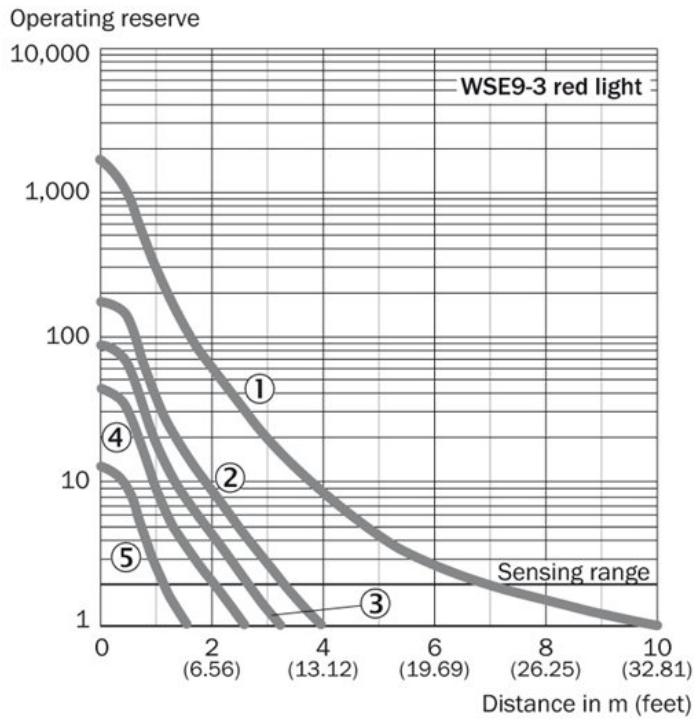
①



②

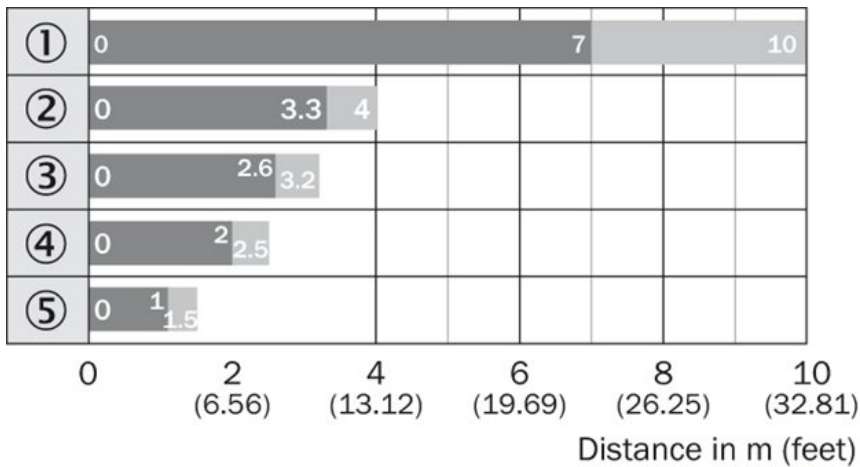


Characteristic curve



- [1] Without masks
- [2] With slotted mask, width 2.0 mm
- [3] With slotted mask, width 1.5 mm
- [4] With slotted mask, width 1.0 mm
- [5] With slotted mask, width 0.5 mm

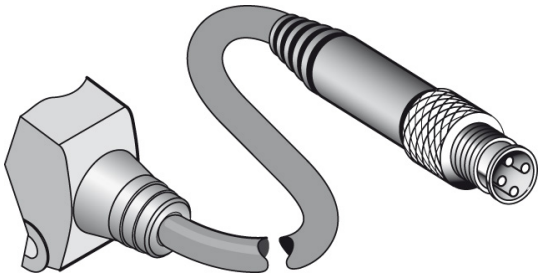
Sensing range diagram



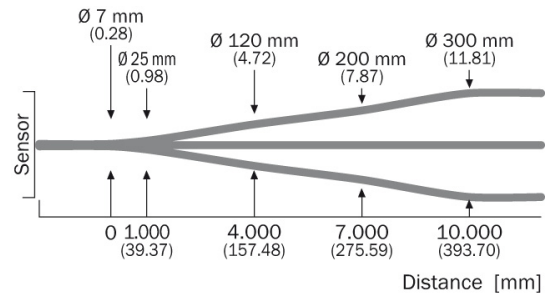
- [1] Without masks
- [2] With slotted mask, width 2.0 mm
- [3] With slotted mask, width 1.5 mm
- [4] With slotted mask, width 1.0 mm
- [5] With slotted mask, width 0.5 mm

■ Sensing range ■ Sensing range, max. typ.

Connection type



Light spot size



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