



Photoelectric sensors  
W9-3, Through-beam photoelectric sensor

WSE9M4-3P3430



**Model Name** > [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 <sup>1)</sup>        |
| Wave length:                     | 650 nm                            |
| Light spot size (distance):      | Ø 25 mm (1 m)                     |

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

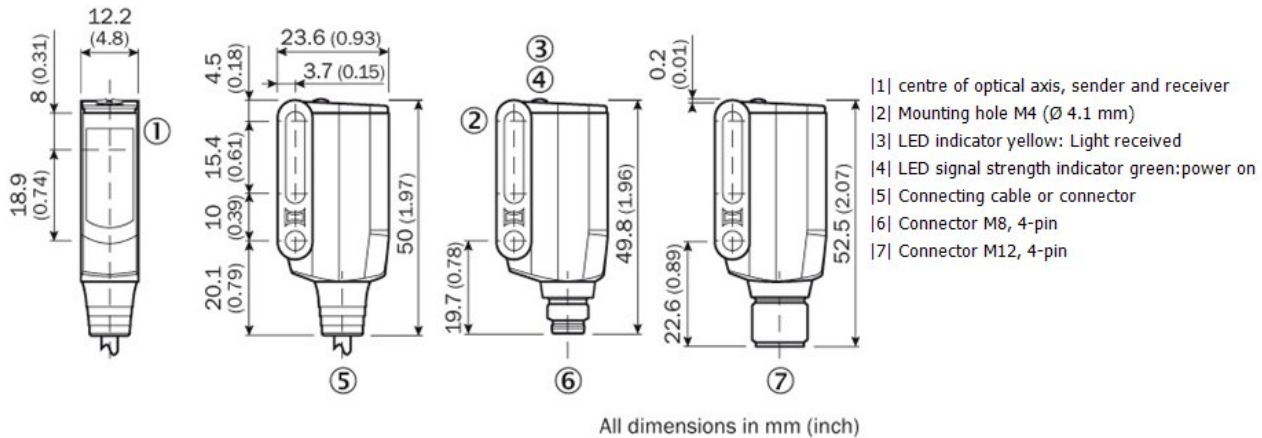
**Mechanics/electronics**

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

|                                       |  |
|---------------------------------------|--|
| Switching frequency:                  | 1,000 Hz <sup>8)</sup>   |
| Connection type:                      | Cable with connector M12, 4-pin, 120 mm                        |
| Circuit protection:::                 | A, B, C <sup>9) 10) 11)</sup>                                  |
| Protection class:                     | III  |
| Weight:                               | 13 g   |
| Polarisation filter:                  | ✓  |
| Housing material:                     | Plastic, VISTAL  |
| Optics material:                      | PMMA   |
| Enclosure rating:                     | IP 66<br>IP 67<br>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   |

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

## Dimensional drawing



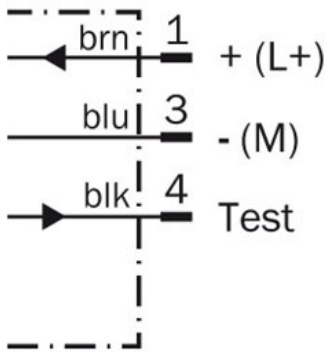
Adjustments possible



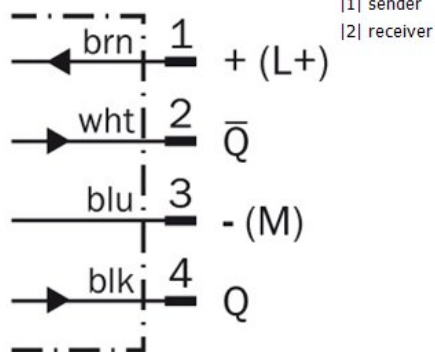
|3| LED indicator yellow: Light received  
|4| LED signal strength indicator green:power on

Connection diagram

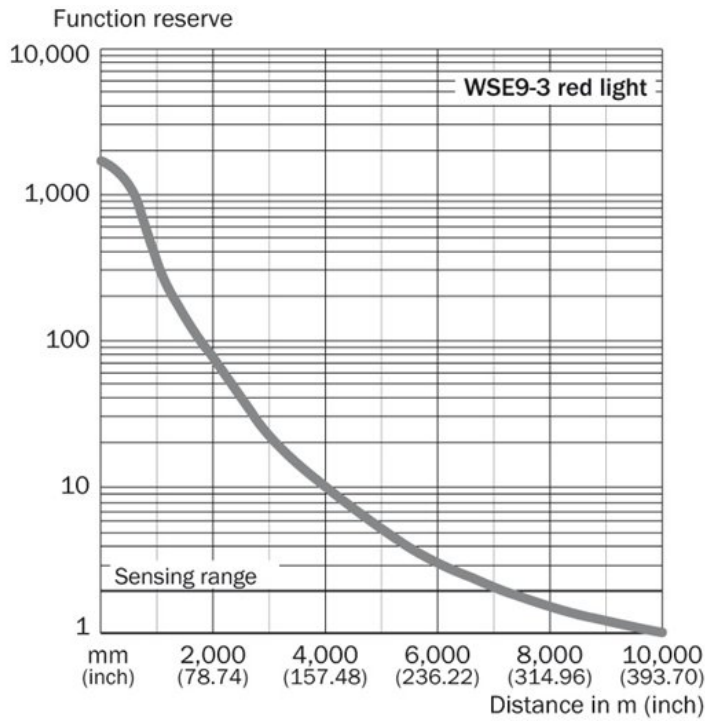
①



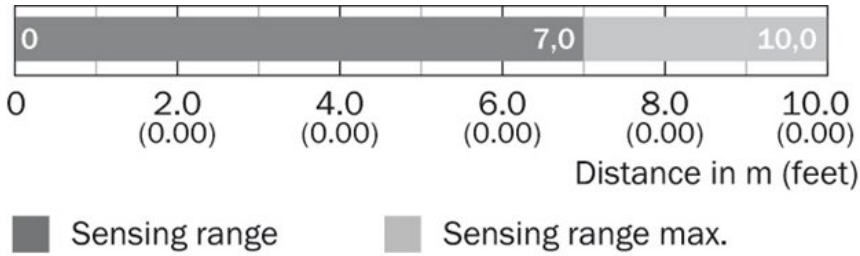
②



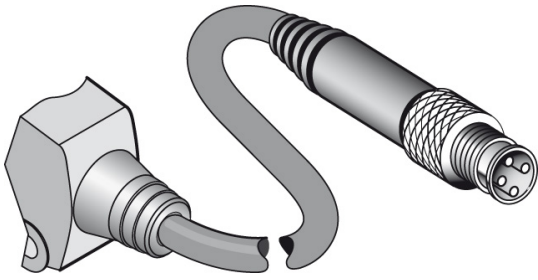
**Characteristic curve**



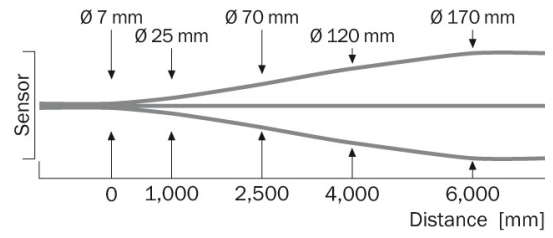
**Sensing range diagram**



### Connection type



### Light spot size



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