



Photoelectric sensors  
W9-3, Through-beam photoelectric sensor

WSE9-3N1130



**Model Name** > [WSE9-3N1130](#)  
**Part No.** > [1049079](#)



*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 M3 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 optics
- Quick and easy alignment with reliable object detection due to the highly visible PinPoint light spot
- M3 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 50 mm x 23.6 mm         |
| Housing design (light emission): | Rectangular                       |
| Mounting hole:                   | M3                                |
| 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>        |
| Adjustment:                      | No adjustment                     |
| 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

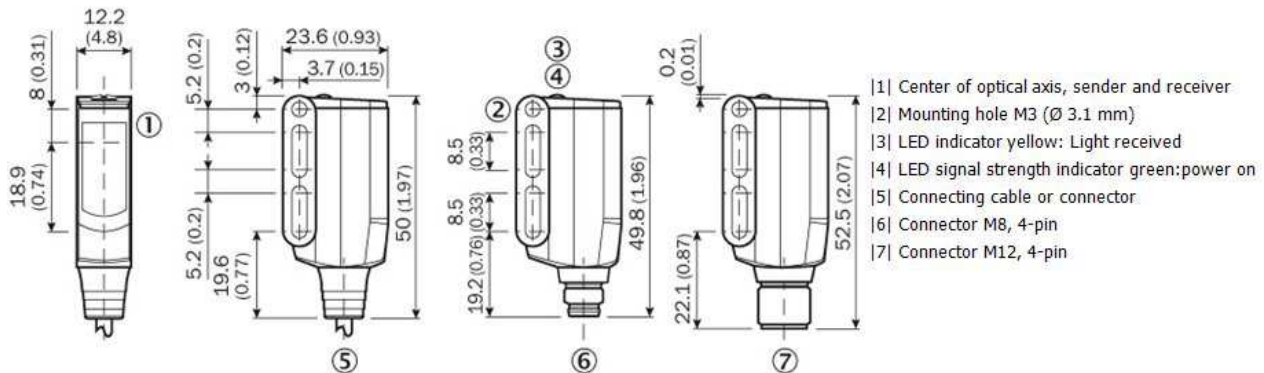
**Mechanics/electronics**

|                                    |                                    |
|------------------------------------|------------------------------------|
| Supply voltage:                    | 10 V DC ... 30 V DC <sup>1)</sup>  |
| Ripple:                            | < 5 V <sub>pp</sub> <sup>2)</sup>  |
| Power consumption:                 | 30 <sup>3)</sup>                   |
| Output type:                       | NPN <sup>4)</sup>                  |
| Output function:                   | Complementary                      |
| Switching mode:                    | Light/dark switching <sup>5)</sup> |
| Output current I <sub>max.</sub> : | 100 <sup>6)</sup>                  |

|                                       |  |
|---------------------------------------|--|
| Response time:                        | < 0.5 ms <sup>7)</sup>                                     |
| Switching frequency:                  | 1,000 Hz <sup>8)</sup>                                     |
| Connection type:                      | Cable, 4-wire, 2 m <sup>9)</sup>                           |
| Cable material:                       | PVC  |
| Conductor cross-section:              | 0.14 mm <sup>2</sup>                                       |
| Circuit protection:::                 | A, B, C <sup>10)</sup> <sup>11)</sup> <sup>12)</sup>       |
| Protection class:                     | III  |
| Weight:                               | 80 g   |
| Polarisation filter:                  | -  |
| 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, WE9-3N1130, 2055820, Sender, WS9-3D1130, 2055818 |
| UL File No.:                          | NRKH.E181493   |
| Housing material:                     | Plastic, VISTAL  |

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<sub>max</sub> = 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> Do not bend below 0 °C <sup>10)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>11)</sup> B = inputs and output reverse-polarity protected <sup>12)</sup> C = interference suppression

## Dimensional drawing



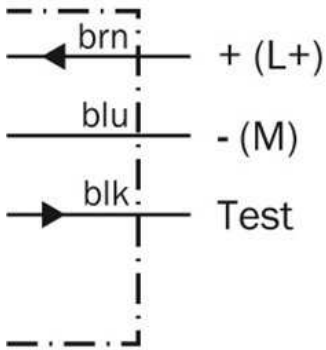
Adjustments possible



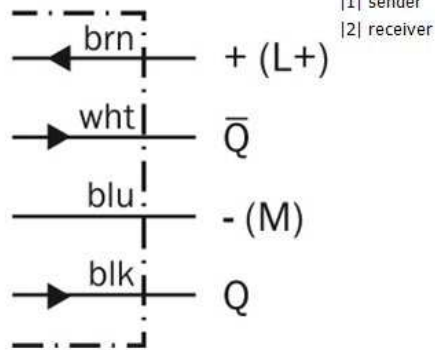
|3| LED indicator yellow: Light received  
|4| LED signal strength indicator green:power on

Connection diagram

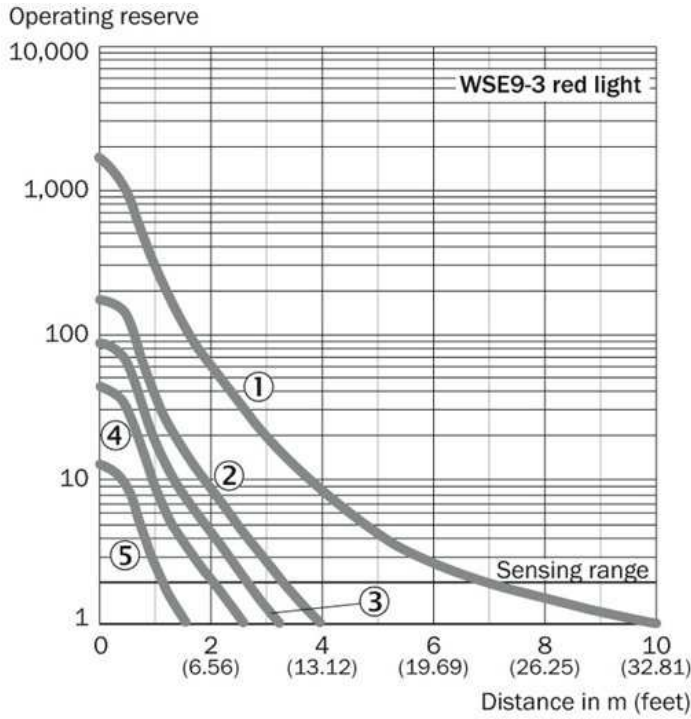
①



②

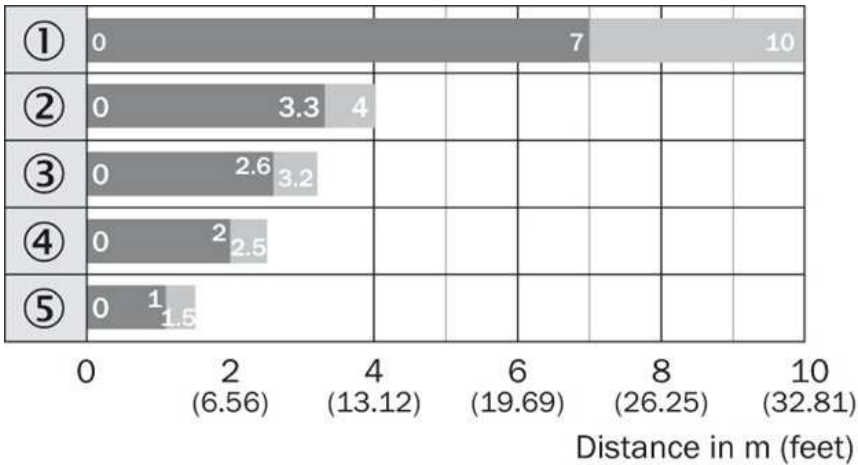


**Characteristic curve**



- |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

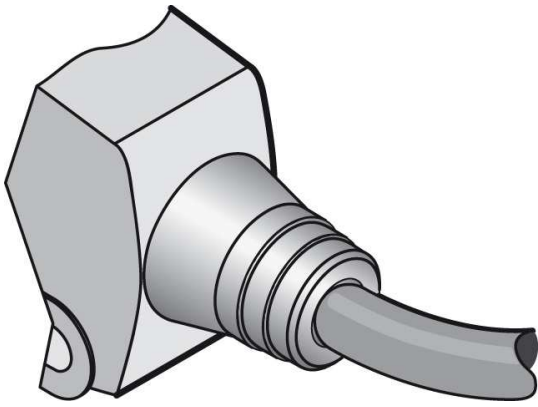
**Sensing range diagram**



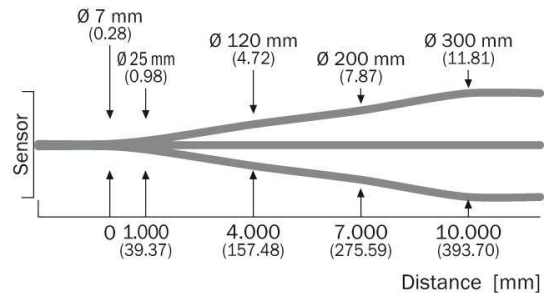
- |1| Without masks
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- |3| With slotted mask, width 1.5 mm
- |4| With slotted mask, width 1.0 mm
- |5| With slotted mask, width 0.5 mm

■ Sensing range      ■ Sensing range, max. typ.

### Connection type



### Light spot size



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