



## Photoelectric sensors W9-3, Photoelectric retro-reflective sensor, autocollimation

WL9-3P3130



**Model Name** > [WL9-3P3130](#)  
**Part No.** > [1065065](#)



*Illustration may differ*

#### At a glance

- High-performance retro-reflective sensor in ultra-rugged VISTAL™ housing
- PinPoint LED for highly visible and precise light spot
- Autocollimation optics
- 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 technology
- 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:      | Photoelectric retro-reflective sensor, autocollimation |
| 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 ... 4 m <sup>1)</sup>                              |
| Sensing range:                   | 0 m ... 2.5 m <sup>2)</sup>                            |
| Type of light:                   | Visible red light                                      |
| Light source:                    | PinPoint LED <sup>3)</sup>                             |
| Light spot size (distance):      | Ø 45 mm (1.5 m)                                        |

<sup>1) 2)</sup> PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

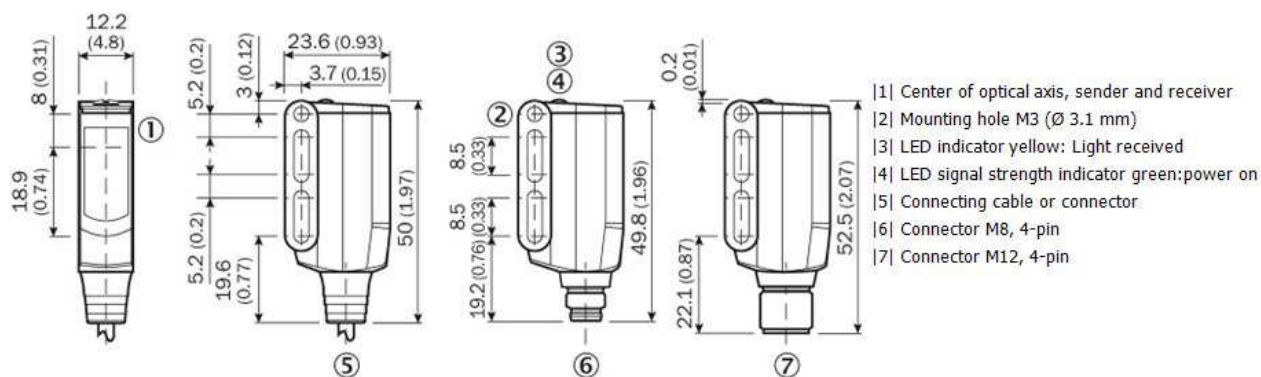
#### Mechanics/electronics

|                                    |                                   |
|------------------------------------|-----------------------------------|
| 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>                 |
| Output function:                   | Complementary                     |
| Switching mode:                    | Light switching <sup>5)</sup>     |
| Output current I <sub>max.</sub> : | ≤ 100 mA <sup>6)</sup>            |

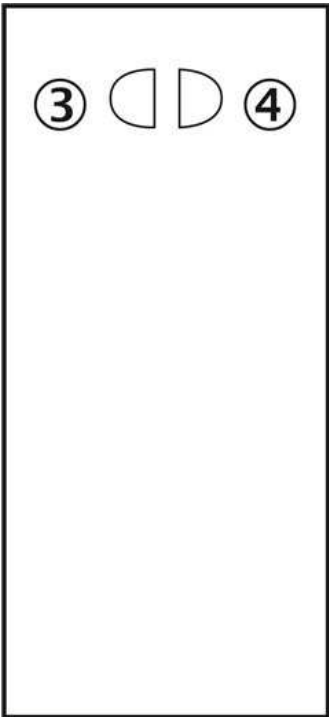
|                                |                                                      |
|--------------------------------|------------------------------------------------------|
| Response time:                 | < 0.5 ms <sup>7)</sup>                               |
| Switching frequency:           | 1,000 Hz <sup>8)</sup>                               |
| Connection type:               | Cable with connector M8, 3-pin, 120 mm <sup>9)</sup> |
| Cable material:                | PVC                                                  |
| Conductor cross-section:       | 0.14 mm <sup>2</sup>                                 |
| Circuit protection:::          | A, B, C <sup>10)</sup> 11) 12)                       |
| Protection class:              | III                                                  |
| Weight:                        | 80 g                                                 |
| Polarisation filter:           | ✓                                                    |
| Optics material:               | PMMA                                                 |
| Enclosure rating:              | IP 66<br>IP 67<br>IP 69K                             |
| Ambient temperature operation: | -40 °C ... +60 °C                                    |
| Ambient storage temperature:   | -40 °C ... +75 °C                                    |
| 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 = dark-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

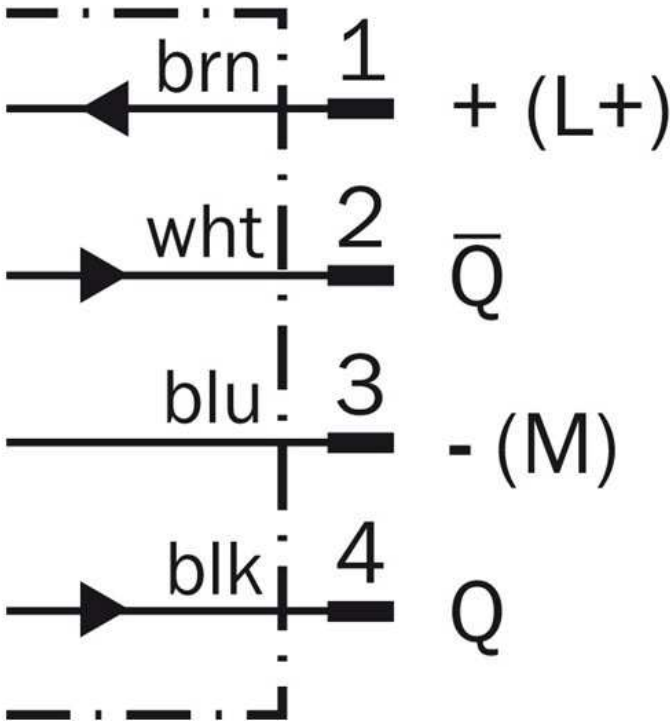


Adjustments possible

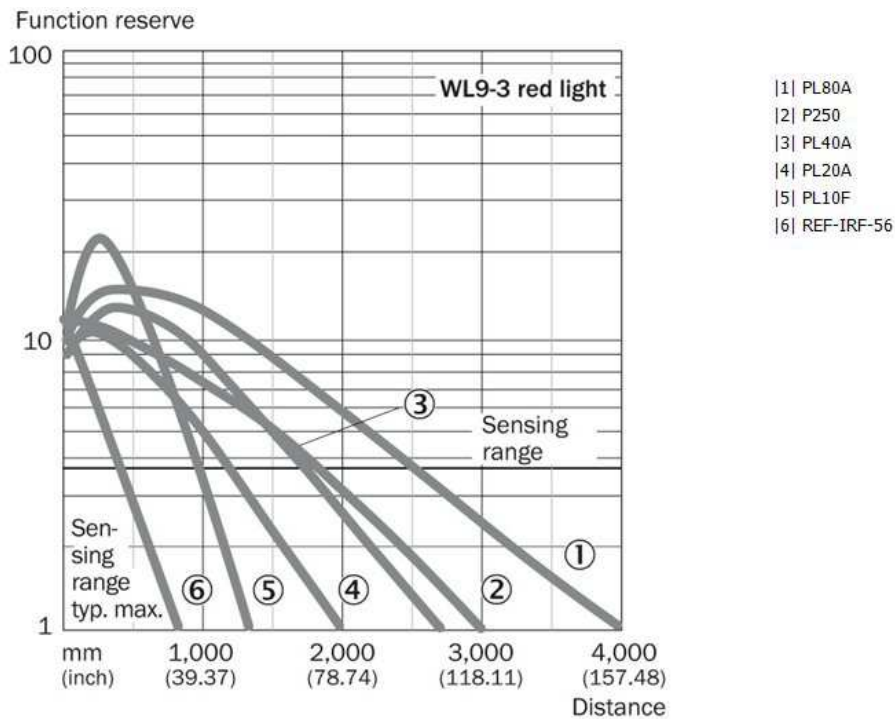


- |3| LED indicator yellow: Light received
- |4| LED signal strength indicator green:power on

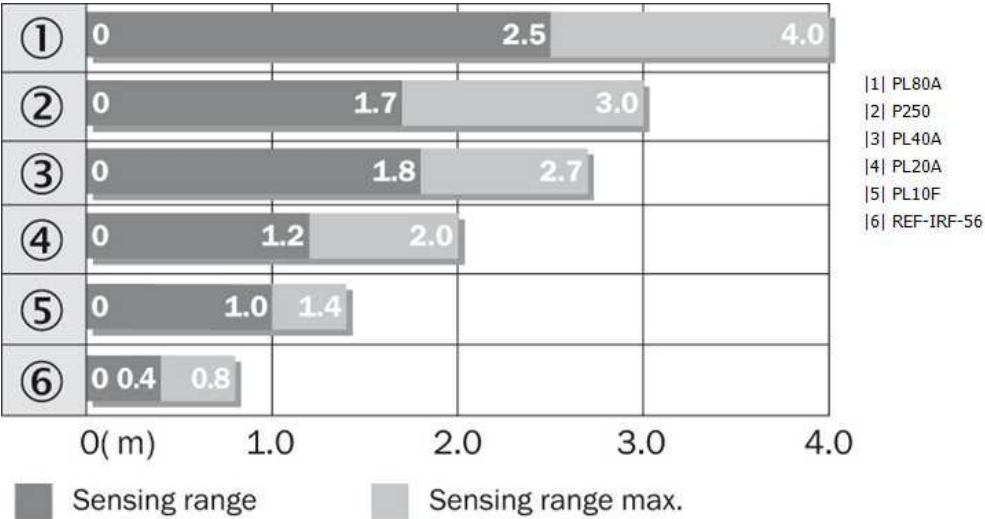
Connection diagram



Characteristic curve



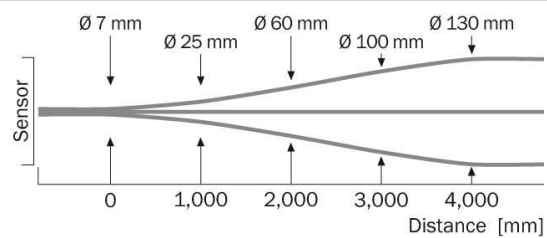
Sensing range diagram



## Connection type



## Light spot size



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