



Photoelectric sensors  
W11-2, Photoelectric retro-reflective sensor,  
Standard optics

WL11-2N1130



**Model Name** > [WL11-2N1130](#)  
**Part No.** > [1041388](#)



Illustration may differ

**At a glance**

- Retro-reflective with standard lens principle
- Rugged housing for industrial use
- PinPoint LED technology with highly visible light spot
- Space-saving plastic housing in chemically, thermally or mechanically resistant designs
- Dovetail mounting - standard mounting holes and oblong holes
- Highly visible 360° status LEDs
- Optional sensing range adjustment via teach-in pushbutton
- Operating distance up to 10 m

**Your benefits**

- Custom ASIC provides reliable object detection
- High immunity to optical interference reduces false readings and downtime
- PinPoint LED technology provides a bright, small and precise light spot that enables quick and easy sensor alignment
- Precise switching characteristics ensure high performance even in changing application conditions
- Rugged housing design withstands harsh environments, reducing downtime and maintenance effort
- Highly visible 360° status LEDs provide quick and easy setup without additional personnel or costly training
- Easy installation using SICK accessories



**Features**

|                                  |  |
|----------------------------------|--|
| Sensor/detection principle:      | Photoelectric retro-reflective sensor, Standard optics |
| Dimensions (W x H x D):          | 15.6 mm x 48.5 mm x 42 mm                              |
| Housing design (light emission): | Rectangular  |
| Sensing range max.:              | 0.15 m ... 10 m <sup>1)</sup>                          |
| Sensing range:                   | 0.15 m ... 8 m <sup>2)</sup>                           |
| Type of light:                   | Visible red light                                      |
| Light source:                    | LED <sup>3)</sup>                                      |
| Wave length:                     | 640 nm   |
| Angle of dispersion:             | Ca. 2.2 °  |
| Light spot size (distance):      | Ø 50 mm (3 m)  |

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

## Mechanics/electronics

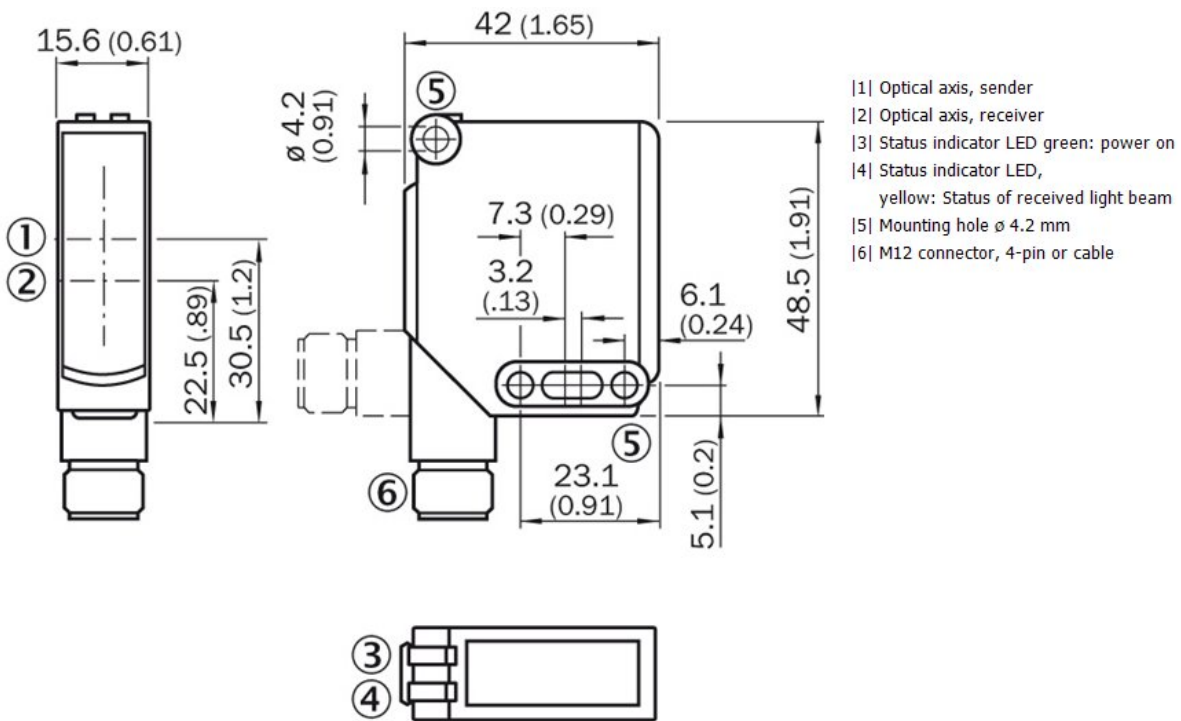
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|                                    |   |
|------------------------------------|---|
| Supply voltage:                    | 10 V DC ... 30 V DC <sup>1)</sup>                 |
| Power consumption:                 | ≤ 40 mA <sup>2)</sup>                             |
| Output type:                       | NPN   |
| Output function:                   | Complementary                                     |
| Switching mode:                    | Light/dark-switching                              |
| Signal voltage NPN HIGH/LOW:       | Approx. VS / < 2.5 V                              |
| Output current I <sub>max.</sub> : | 100 mA  |
| Response time:                     | ≤ 2.5 ms <sup>3)</sup>                            |
| Switching frequency:               | 200 Hz <sup>4)</sup>                              |
| Connection type:                   | Cable, 4-wire, 2 m <sup>5)</sup>                  |
| Cable material:                    | PVC   |
| Conductor cross-section:           | 0.25 mm <sup>2</sup>                              |
| Circuit protection:::              | A, C, D <sup>6)</sup> <sup>7)</sup> <sup>8)</sup> |
| Protection class:                  | II <sup>9)</sup>                                  |
| Weight:                            | 200 g   |
| Polarisation filter:               | ✓   |
| Special device:                    | -   |
| Housing material:                  | ABS, Plastic                                      |
| Optics material:                   | PMMA  |
| Enclosure rating:                  | IP 66<br>IP 67<br>IP 69K                          |
| Ambient operating temperature:     | -30 °C ... 60 °C                                  |
| Ambient storage temperature:       | -40 °C ... 75 °C                                  |
| UL File No.:                       | NRKH.E181493 & NRKH7.E181493                      |

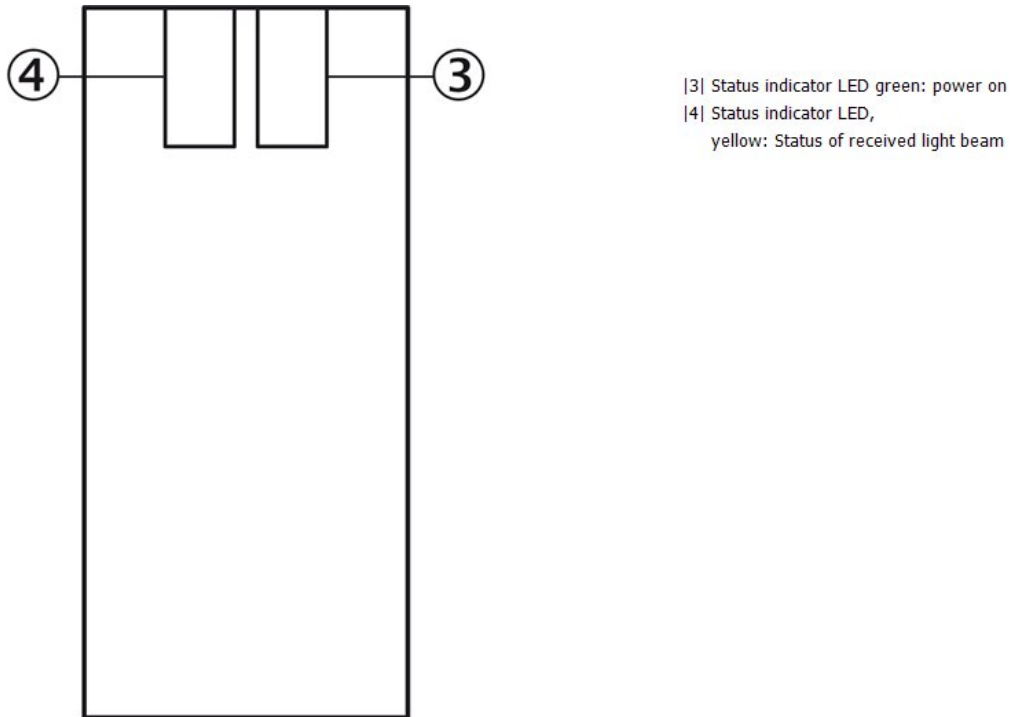
May not exceed or fall short of V<sub>S</sub> tolerances;

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> Without load <sup>3)</sup> Signal transit time with resistive load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> Do not bend below 0 °C <sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>7)</sup> C = interference suppression <sup>8)</sup> D = outputs overcurrent and short-circuit protected <sup>9)</sup> Reference voltage DC 50 V

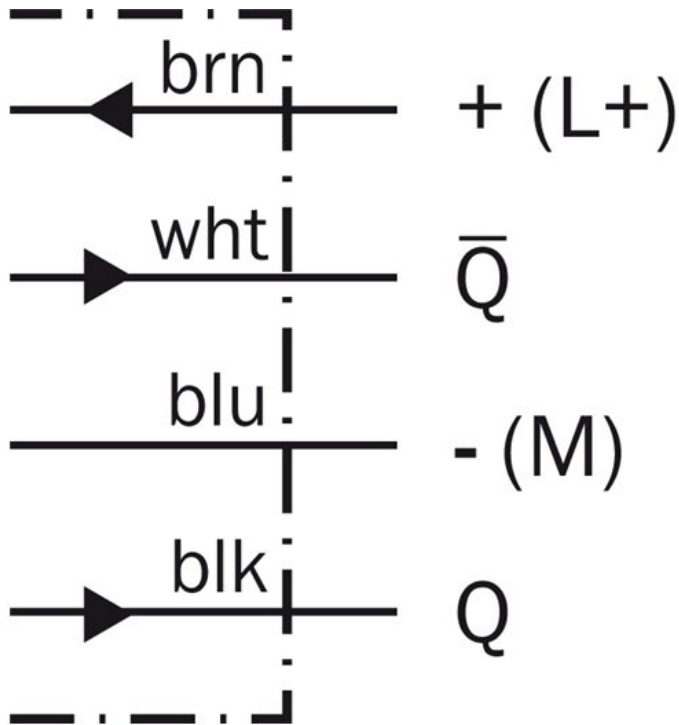
**Dimensional drawing**



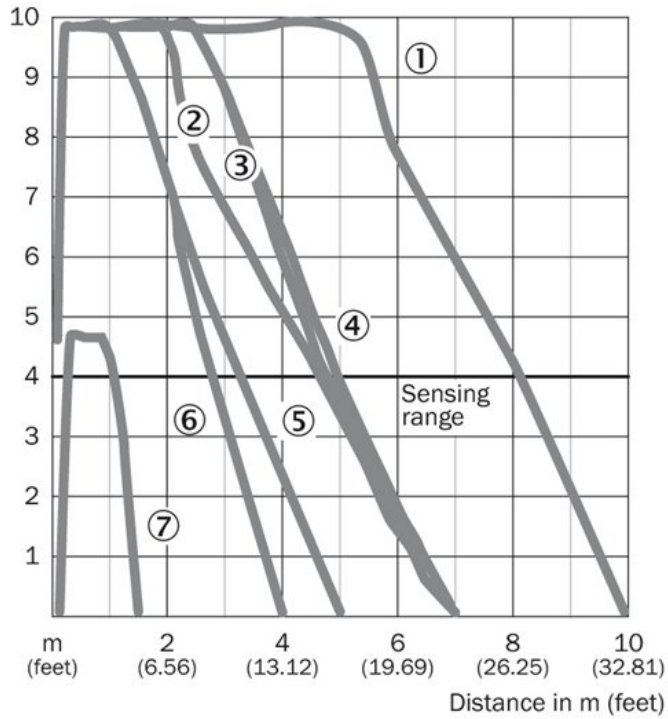
**Adjustments possible**



Connection diagram

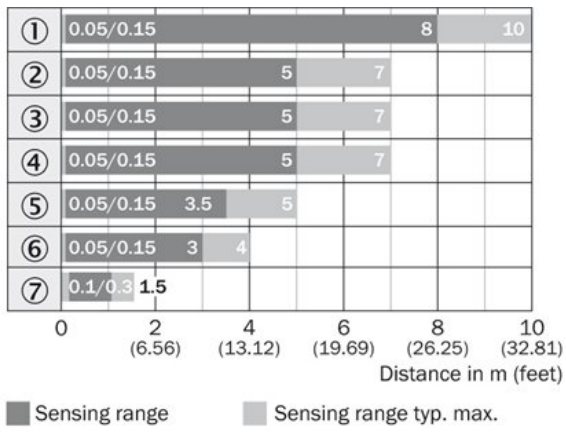


Characteristic curve



- [1] PL80A
- [2] C110A
- [3] PL50A
- [4] PL40A
- [5] PL30A
- [6] PL20A
- [7] Reflective tape Diamond Grade

## Sensing range diagram

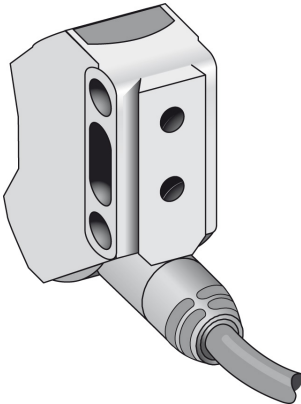


- |1| PL80A
- |2| C110A
- |3| PL50A
- |4| PL40A
- |5| PL30A
- |6| PL20A
- |7| Reflective tape Diamond Grade

### Reflector type

- ① PL80A
- ② C110A
- ③ PL50A
- ④ PL40A
- ⑤ PL30A
- ⑥ PL20A
- ⑦ Reflective tape  
Diamond Grade

### Connection type



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