



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

WL11-2N1130



**Type** > [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, Dual lens
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

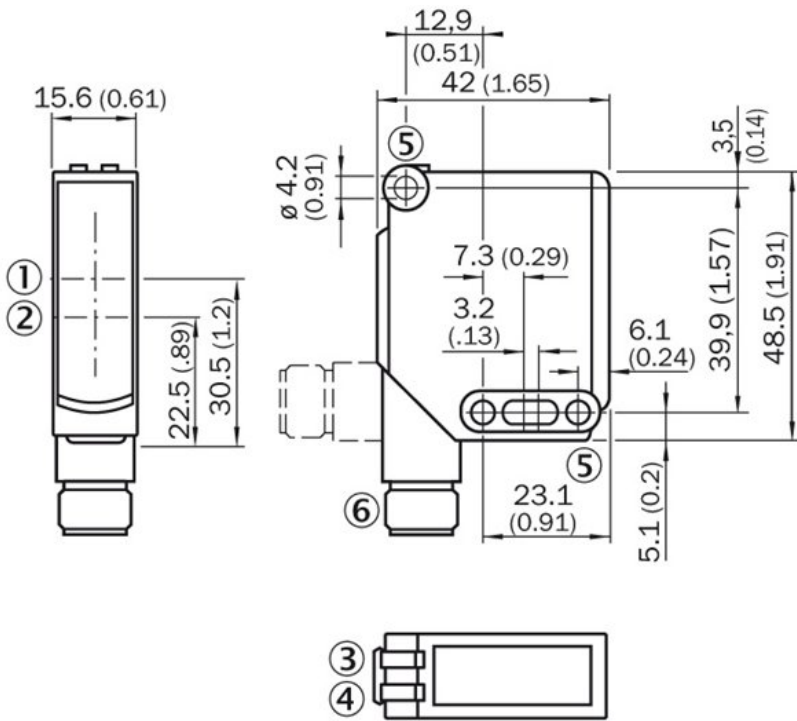
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Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Power consumption:	≤ 40 mA <sup>2)</sup>
Output type:	NPN
Output function:	Complementary
Switching mode:	Light/dark switching
Signal voltage NPN HIGH/LOW:	Approx. VS / < 2.5 V
Output current I <sub>max.</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:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67 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;

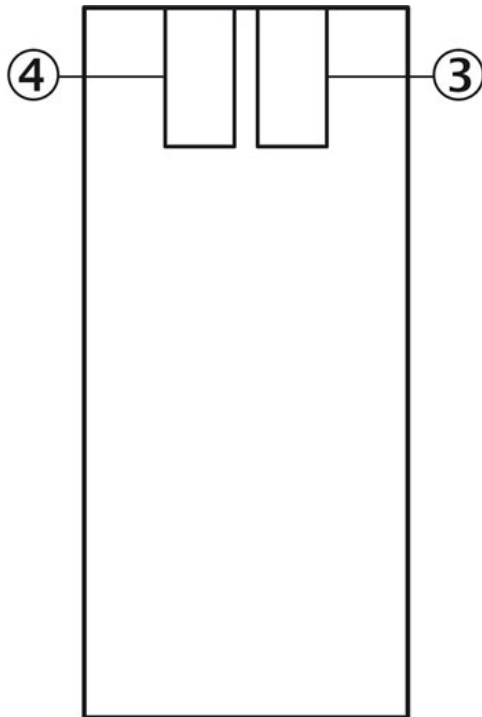
<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> Without load <sup>3)</sup> Signal transit time with resistive load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> Do not bend below 0 °C <sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity 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**



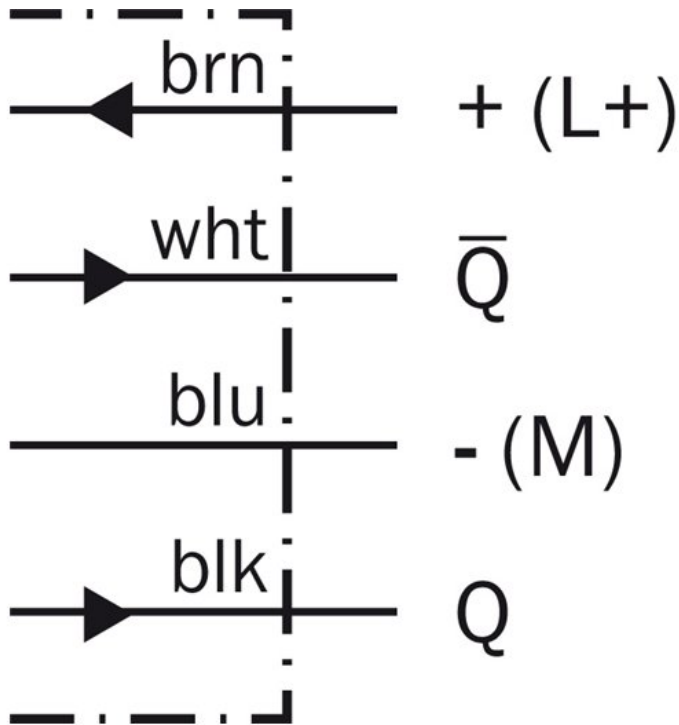
- |1| Optical axis, sender
- |2| Optical axis, receiver
- |3| Status indicator LED green: power on
- |4| Status indicator LED,  
yellow: Status of received light beam
- |5| Mounting hole  $\varnothing 4.2$  mm
- |6| M12 connector, 4-pin or cable

**Adjustments possible**

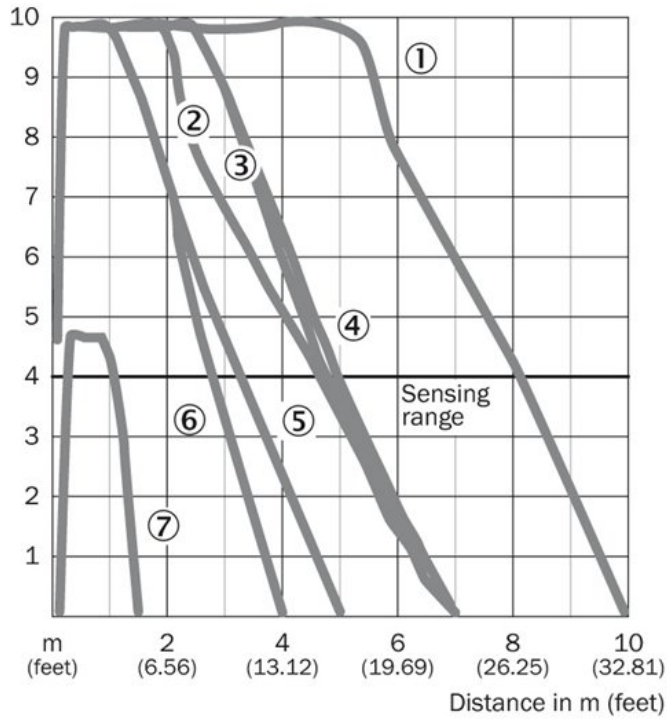


- |3| Status indicator LED green: power on
- |4| Status indicator LED,  
yellow: Status of received light beam

Connection diagram

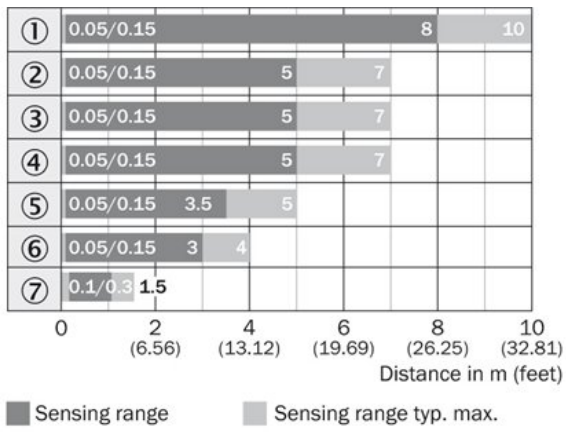


Characteristic curve



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

## Sensing range diagram

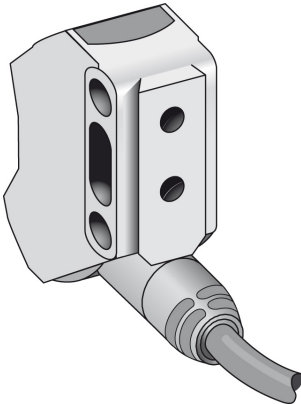


- |1| PL80A
- |2| C110A
- |3| PL50A
- |4| PL40A
- |5| PL30A
- |6| PL20A
- |7| Reflective tape Diamond Grade

### 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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