



Photoelectric sensors  
W14-2, Photoelectric retro-reflective sensor,  
Standard optics

WL14-2P431P07



**Model Name** > [WL14-2P431P07](#)  
**Part No.** > [1050676](#)



*Illustration may differ*

**At a glance**

- PinPoint LED with small, bright and precise light spot
- Polarizing filter
- High immunity to ambient light
- Rugged plastic housing

**Your benefits**

- Very long sensing ranges due to high-energy PinPoint LED
- Quick and easy installation due to highly visible red light
- Reliable object detection, even on shiny objects due to a polarizing filter
- Crosstalk and ambient light immunity reduces false readings and downtime
- High availability in the field



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.15 m ... 17 m <sup>1)</sup>
Sensing range:	0.15 m ... 12 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	637 nm
Teach-in:	Single teach-in button
Angle of dispersion:	Ca. 0.9 °
Adjustment:	Teach-in
Light spot size (distance):	Ø 30 mm (2 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**

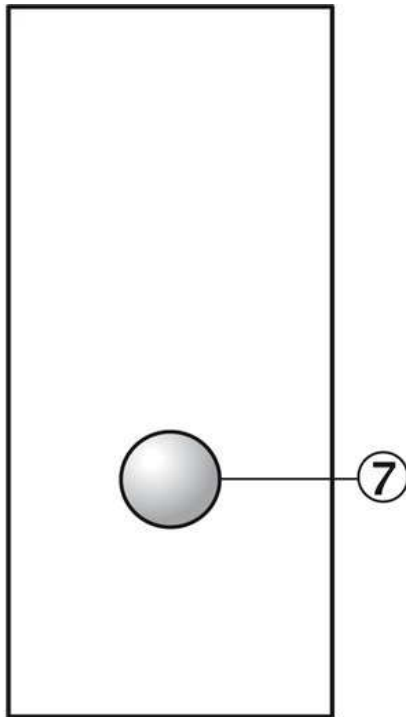
Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Power consumption:	≤ 35 mA <sup>2)</sup>
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I <sub>max.</sub> :	≤ 100 mA
Response time:	≤ 2.5 ms <sup>3)</sup>

Switching frequency:	200 Hz <sup>4)</sup>
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D <sup>5) 6) 7)</sup>
Weight:	40 g
Polarisation filter:	✓
Special device:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Reflector P250
Ambient operating temperature:	-25 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

<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> A = V<sub>S</sub>  
 connections reverse-polarity protected <sup>6)</sup> C = interference suppression <sup>7)</sup> D = outputs overcurrent and short-circuit protected

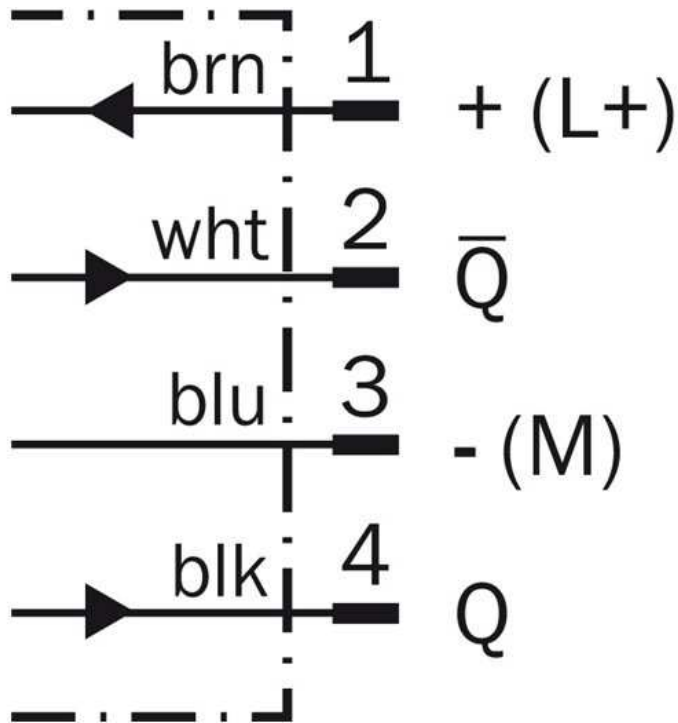
### Adjustments possible

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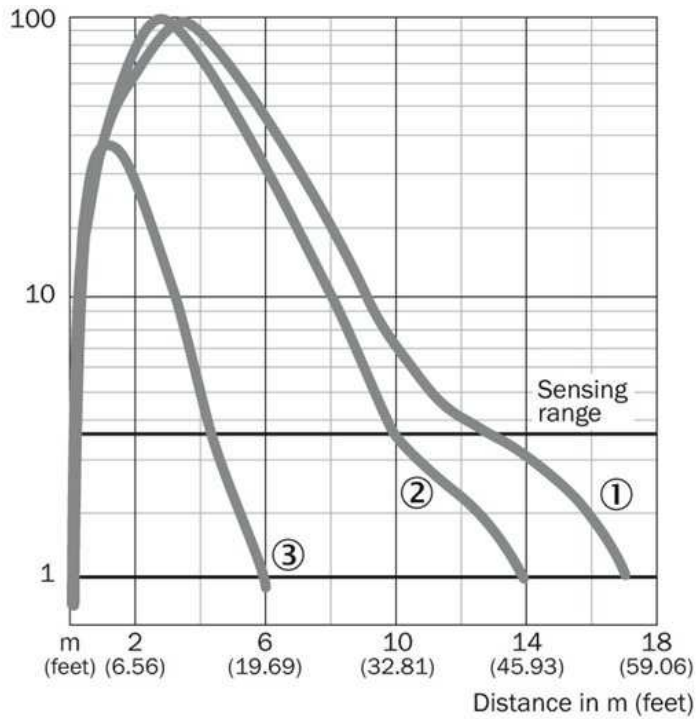


|1| Teach-in button

Connection diagram



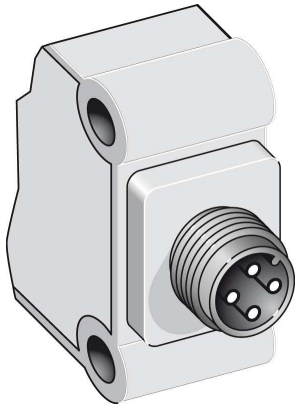
Characteristic curve



- |1| PL80A
- |2| PL40A
- |3| Reflective tape REF-IRF-56

Connection type

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