



Photoelectric sensors  
W14-2, Photoelectric retro-reflective sensor,  
autocollimation

WL14-2P430S02



**Model Name** > [WL14-2P430S02](#)  
**Part No.** > [1028719](#)



Illustration may differ

**At a glance**

- Emitter LED with visible red light
- Polarizing filter
- High immunity to ambient light
- Rugged plastic housing

**Your benefits**

- Fast 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, autocollimation
Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission):	Rectangular, Slim
Sensing range max.:	0 m ... 7 m <sup>1)</sup>
Sensing range:	0 m ... 5 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Wave length:	645 nm
Angle of dispersion:	Ca. 1.8 °
Adjustment:	Potentiometer, 1 turn
Light spot size (distance):	Ø 40 mm (2 m)

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

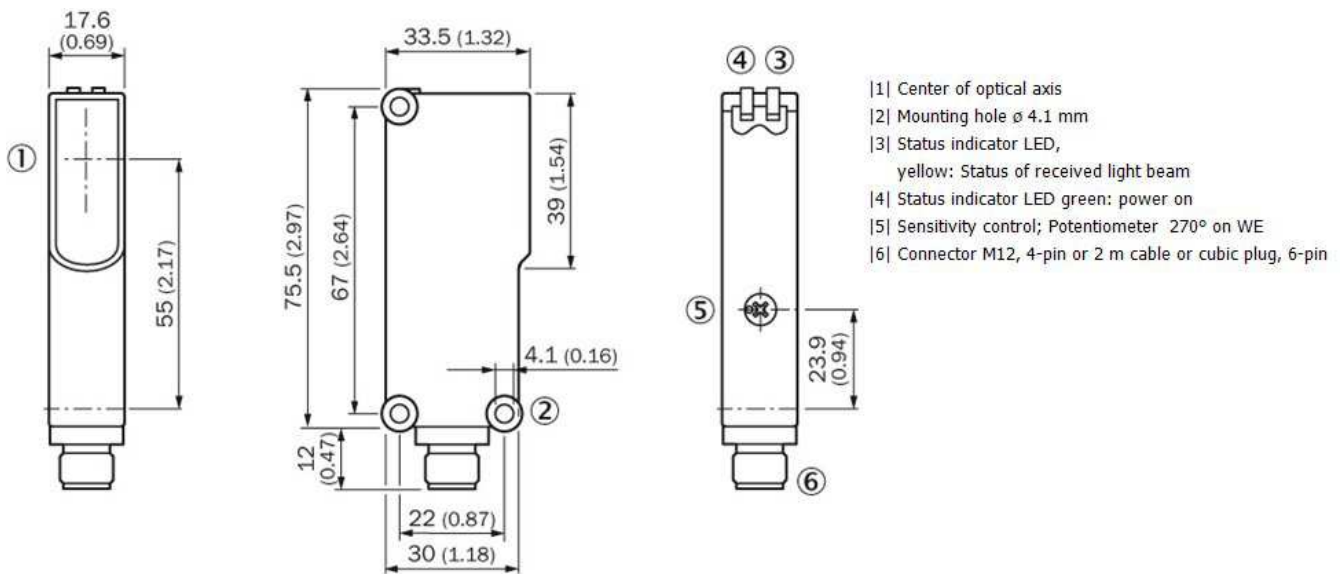
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	5 Vpp <sup>2)</sup>
Power consumption:	≤ 40 mA <sup>3)</sup>
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I <sub>max.</sub> :	≤ 100 mA
Response time:	≤ 0.5 ms <sup>4)</sup>
Switching frequency:	1,000 Hz <sup>5)</sup>

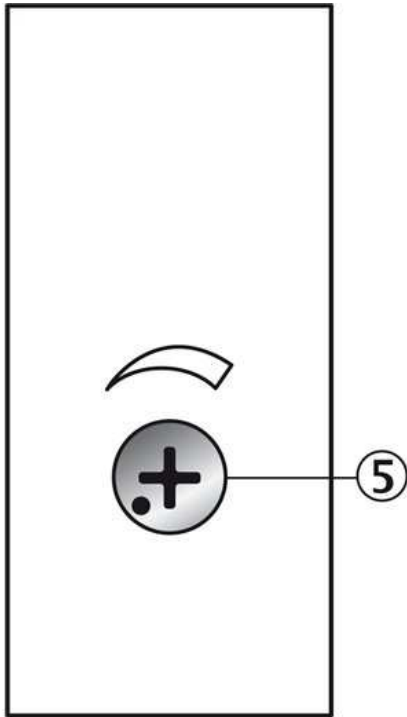
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D <sup>6) 7) 8)</sup>
Weight:	40 g
Polarisation filter:	✓
Special device:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

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) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) A =  $V_S$  connections reverse-polarity protected 7) C = interference suppression 8) D = outputs overcurrent and short-circuit protected

## Dimensional drawing

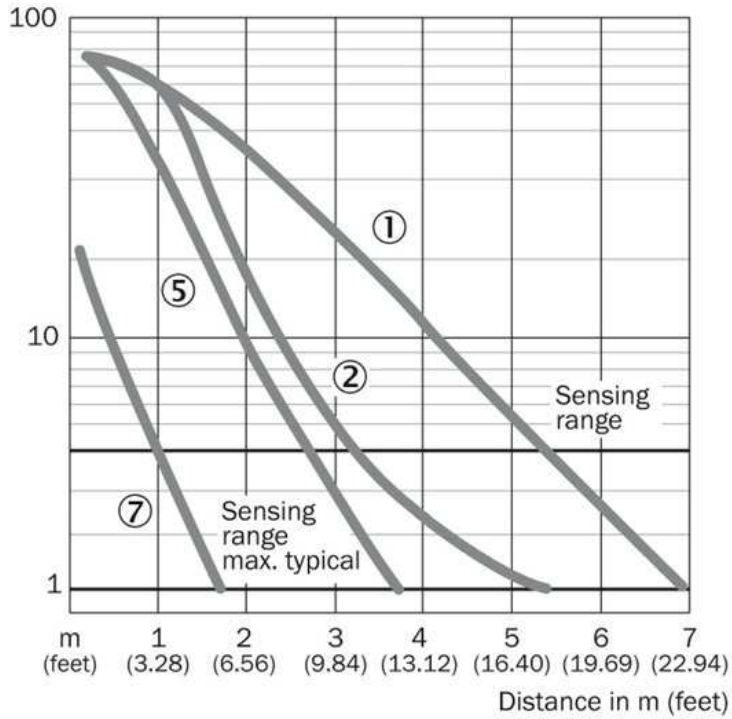


Adjustments possible



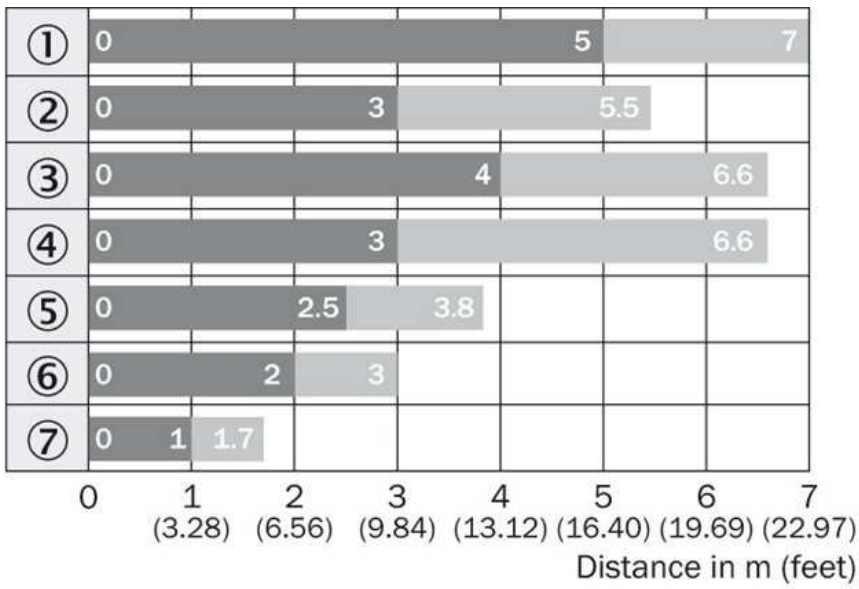
|5| Sensitivity control; Potentiometer 270°

Characteristic curve



- |1| PL80A
- |2| C110A
- |5| PL30A
- |7| Reflective tape Diamond Grade

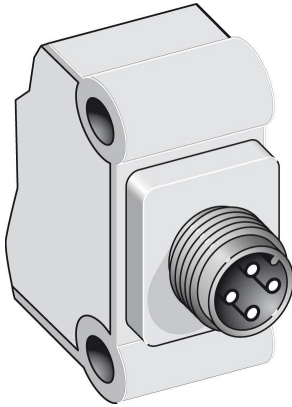
## Sensing range diagram



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

■ Sensing range      ■ Sensing range max.

## Connection type



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