

ONLINE DATA SHEET
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Photoelectric sensors
W14-2, Photoelectric retro-reflective sensor, Standard optics

WL14-2P430



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

Model Name > WL14-2P430
Part No. > 1026049





Illustration may differ

At a glance

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

Your benefits

- Highly visible red light provides quick and easy installation
- Reliable detection, even of shiny targets due to polarizing filters
- 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 ... 6 m [1]
Sensing range:	0.15 m ... 4 m [2]
Type of light:	Visible red light
Light source:	LED [3]
Wave length:	645 nm
Angle of dispersion:	Ca. 2 °
Light spot size (distance):	Ø 140 mm (4 m)

1) 2) PL80A 3) Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

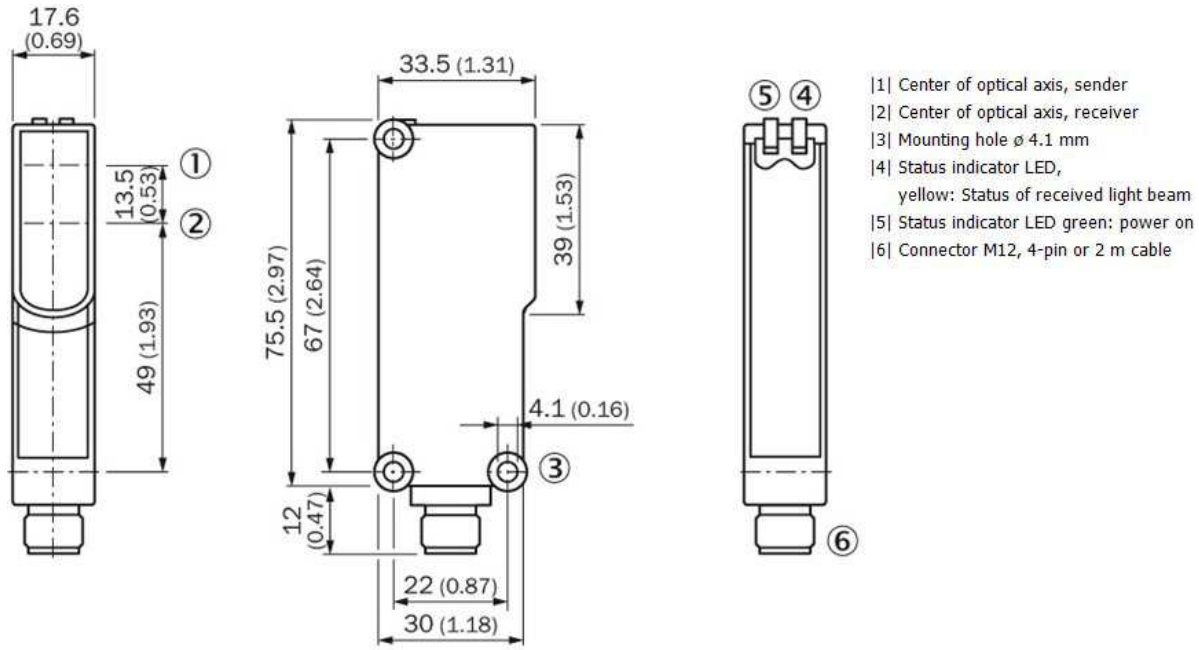
Supply voltage:	10 V DC ... 30 V DC [1]
Power consumption:	≤ 35 mA [2]
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current Imax.:	≤ 100 mA
Response time:	≤ 2.5 ms [3]
Switching frequency:	200 Hz [4]
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D [5] [6] [7]

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Weight:	40 g
Polarisation filter:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

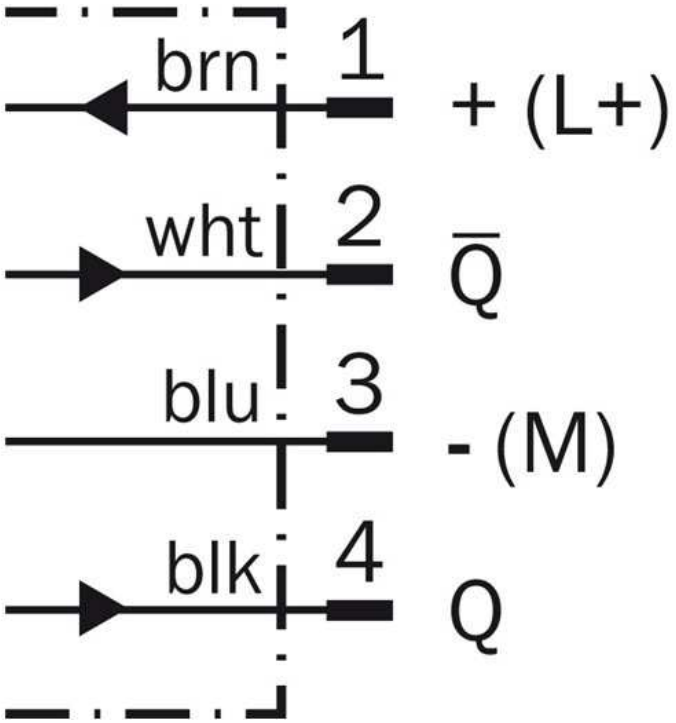
[1] Limit values, operation in short-circuit protected network max. 8 A [2] Without load [3] Signal transit time with resistive load [4] With light/dark ratio 1:1 [5] A = V_S connections reverse-polarity protected [6] C = interference suppression [7] D = outputs overcurrent and short-circuit protected

Dimensional drawing

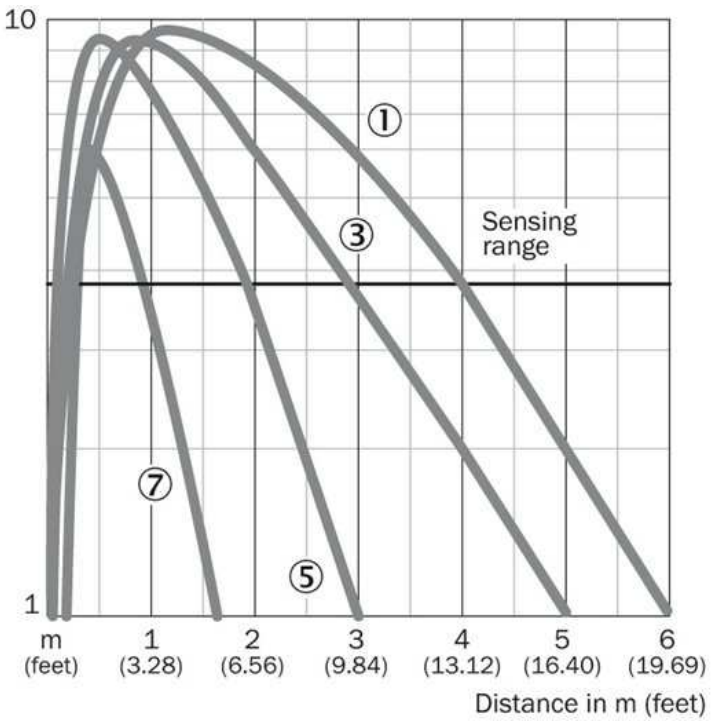


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Connection diagram



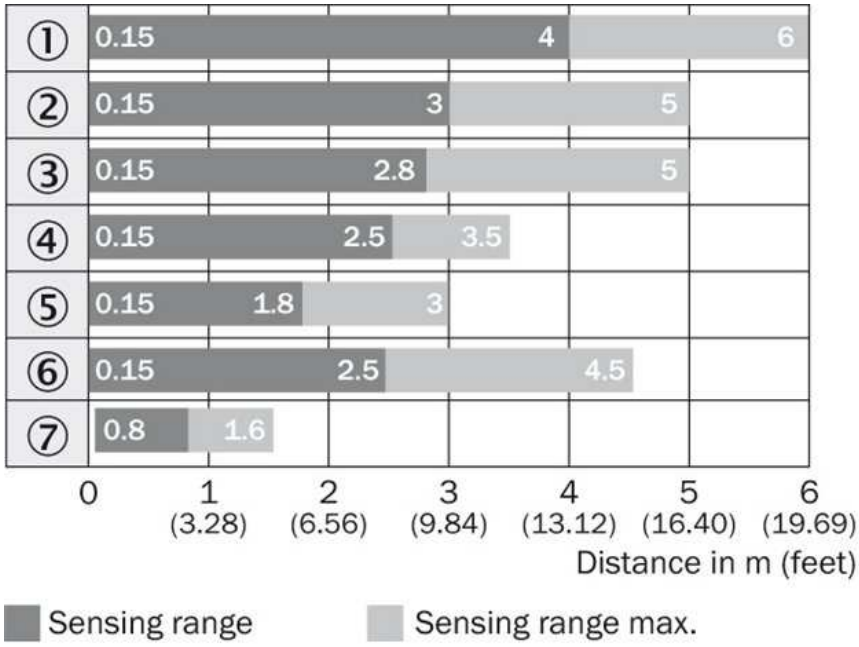
Characteristic curve



|1| PL80A
|3| PL40A
|5| PL20A
|7| Reflective tape Diamond Grade

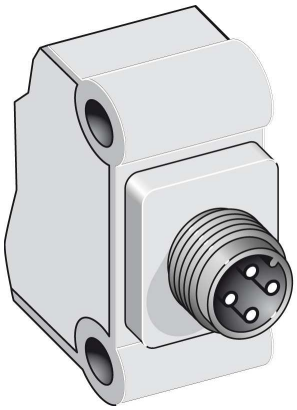
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Sensing range diagram



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

Connection type



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