



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

WL14-2P430P03



Model Name > [WL14-2P430P03](#)
Part No. > [1029438](#)



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, Standard optics
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.:	0.15 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

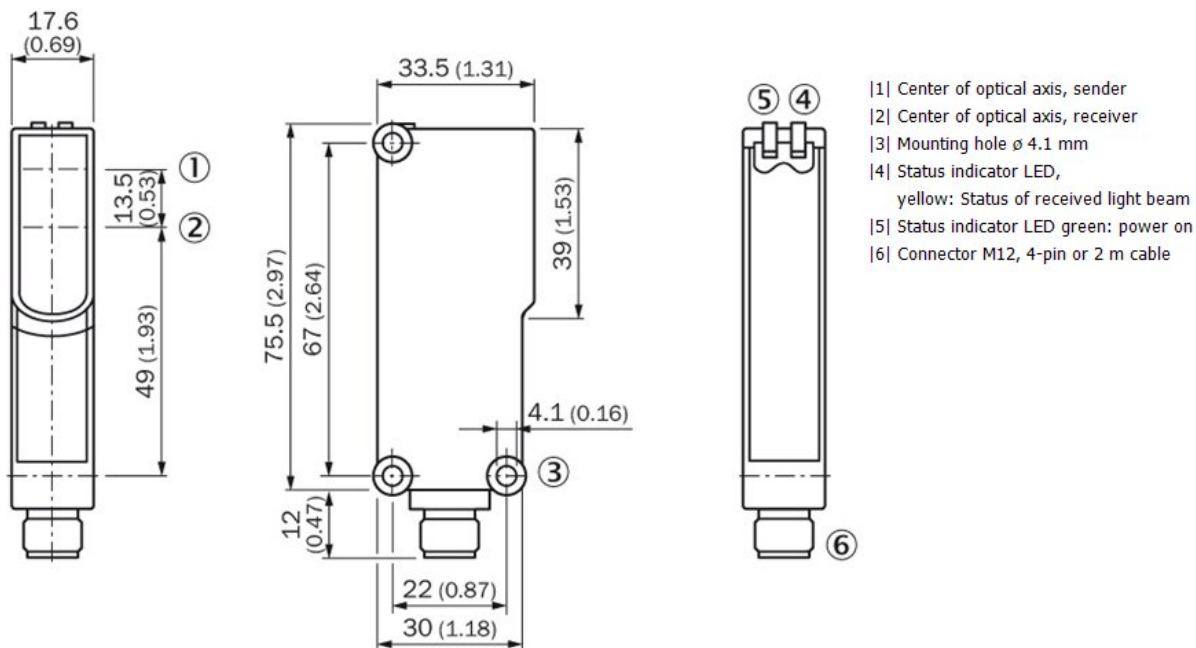
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	5 Vpp ²⁾
Power consumption:	≤ 35 mA ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I _{max} ..:	≤ 100 mA
Response time:	≤ 2.5 ms ⁴⁾
Switching frequency:	200 Hz ⁵⁾
Connection type:	Connector M12, 4-pin

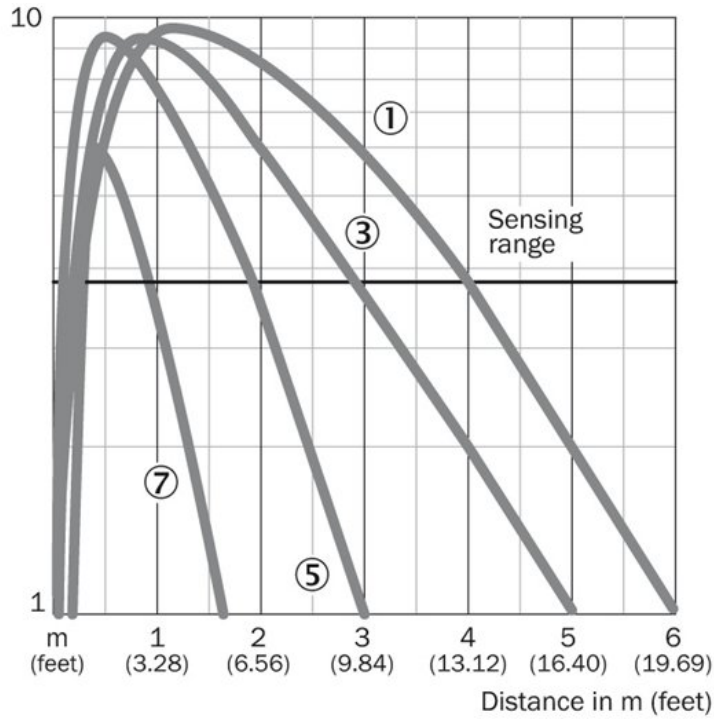
Circuit protection:::	A, C, D ^{6) 7) 8)}
Weight:	40 g
Polarisation filter:	✓
Special device:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Reflector PL40A
Ambient operating temperature:	-25 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ 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

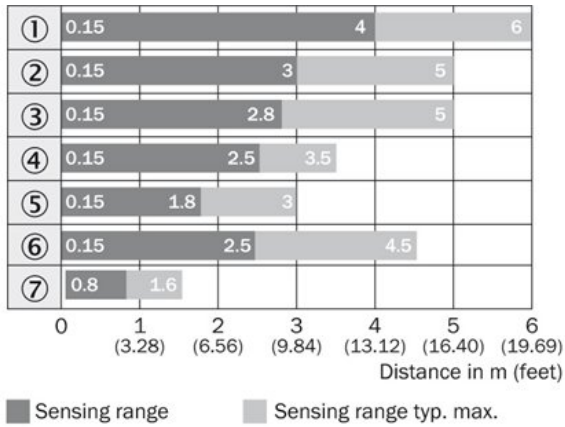


Characteristic curve



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

Sensing range diagram

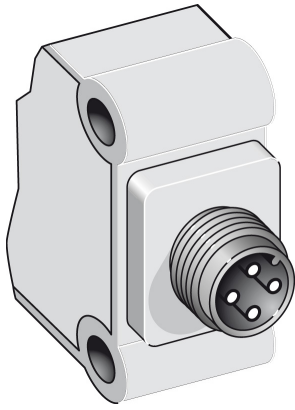


- |1| PL80A
- |2| PL50A
- |3| PL40A
- |4| PL30A
- |5| PL20A
- |6| C110A
- |7| Reflective tape Diamond Grade

Reflector type

- ① PL80A
- ② PL50A
- ③ PL40A
- ④ PL30A
- ⑤ PL20A
- ⑥ C110
- ⑦ Reflective tape Diamond Grade

Connection type



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