



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

WL14-2P930



Model Name > [WL14-2P930](#)
Part No. > [1041825](#)



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

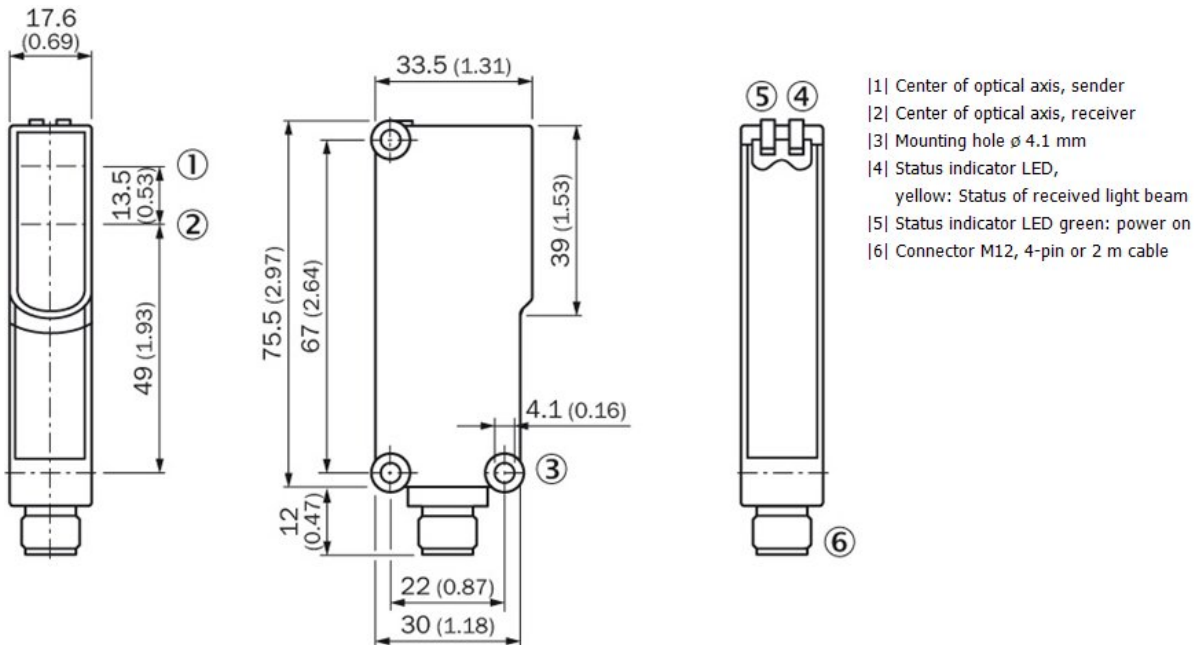
Mechanics/electronics

| | |
|------------------------------------|---|
| 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 I _{max.} : | ≤ 100 mA |
| Response time: | ≤ 2.5 ms ³⁾ |
| Switching frequency: | 200 Hz ⁴⁾ |
| Connection type: | Cable with connector M12, 4-pin, 0.29 m ⁵⁾ |
| Cable material: | PVC |

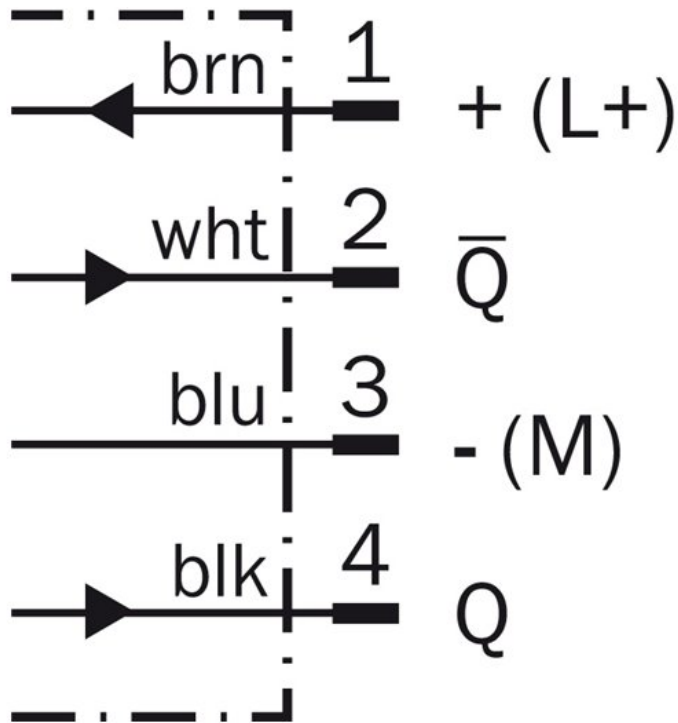
| | |
|--------------------------------|------------------------------|
| Circuit protection:: | A, C, D ^{6) 7) 8)} |
| Weight: | 90 g |
| Polarisation filter: | ✓ |
| Housing material: | ABS, Plastic |
| Optics material: | PMMA |
| Enclosure rating: | IP 67 |
| Ambient operating temperature: | -25 °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) Do not bend below 0 °C 6) A = V connections reverse-polarity protected 7) C = interference suppression 8) D = outputs overcurrent and short-circuit protected

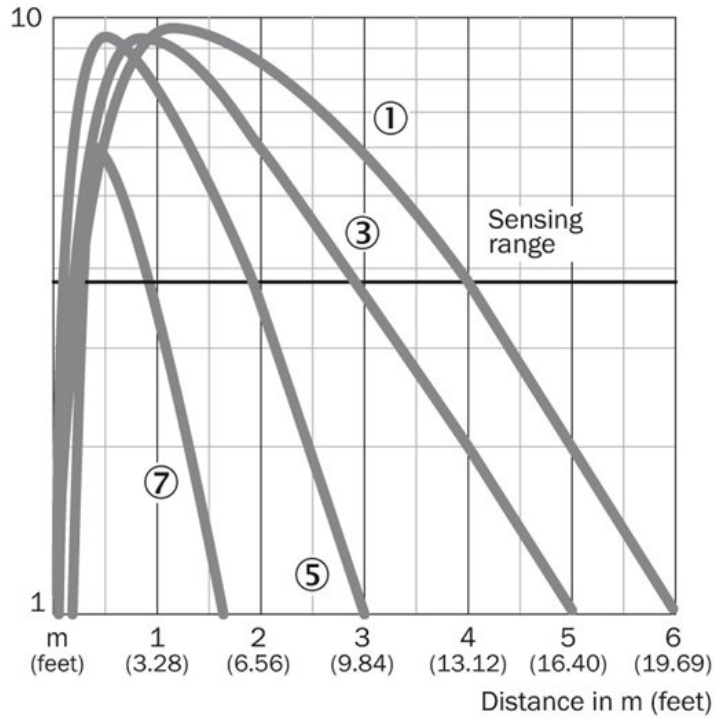
Dimensional drawing



Connection diagram

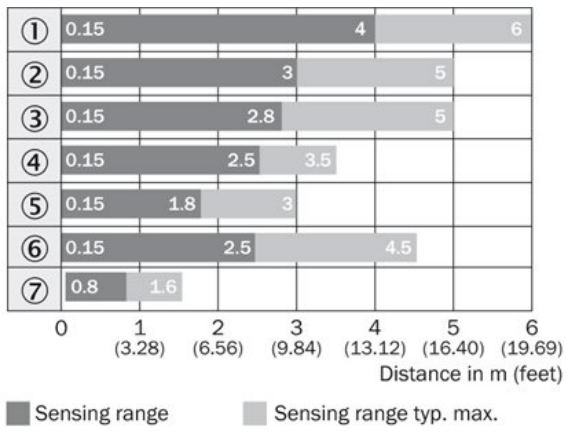


Characteristic curve



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

Sensing range diagram

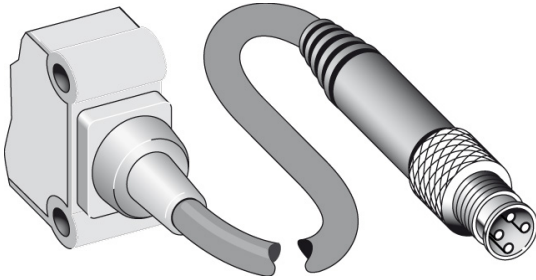


- |1| PL80A
- |2| PL50A
- |3| PL40A
- |4| PL30A
- |5| PL20A
- |6| C110A
- |7| Reflective tape Diamond Grade

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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