



Photoelectric sensors
W12-3, Photoelectric retro-reflective sensor,
Standard optics

WL12-3P2432S01



Model Name > [WL12-3P2432S01](#)
Part No. > [1059691](#)



Illustration may differ

At a glance

- Retro-reflective with autocollimation principle
- Rugged housing designed to withstands harsh environments
- PinPoint LED technology with highly visible light spot
- Rugged die-cast zinc housing, optional Teflon® coating
- Dovetail mounting - mounting holes and oblong holes
- Highly visible status LEDs
- Sensing range adjustment via potentiometer

Your benefits

High immunity to ambient light and crosstalk ensures fewer false readings and less downtime

Quick and easy setup due to highly visible PinPoint LED light spot

Highly visible status LEDs simplify sensitivity adjustments and reduce installation time

Rugged metal housing (optional Teflon® coating available) requires fewer maintenance costs due to its resistance to high-pressure cleaning

Increased reliability in harsh wash down environments

Easy installation using SICK accessories



Features

| | |
|----------------------------------|--|
| Sensor/detection principle: | Photoelectric retro-reflective sensor, Standard optics |
| Dimensions (W x H x D): | 15.6 mm x 48.5 mm x 42 mm |
| Housing design (light emission): | Rectangular |
| Sensing range max.: | 0 m ... 2 m ¹⁾ |
| Sensing range: | 0 m ... 1 m ²⁾ |
| Type of light: | Visible red light |
| Light source: | LED ³⁾ |
| Wave length: | 640 nm |
| Angle of dispersion: | Ca. 5 ° |
| Adjustment: | Teach-in button |
| Light spot size (distance): | Ø 2 mm (90 mm) |

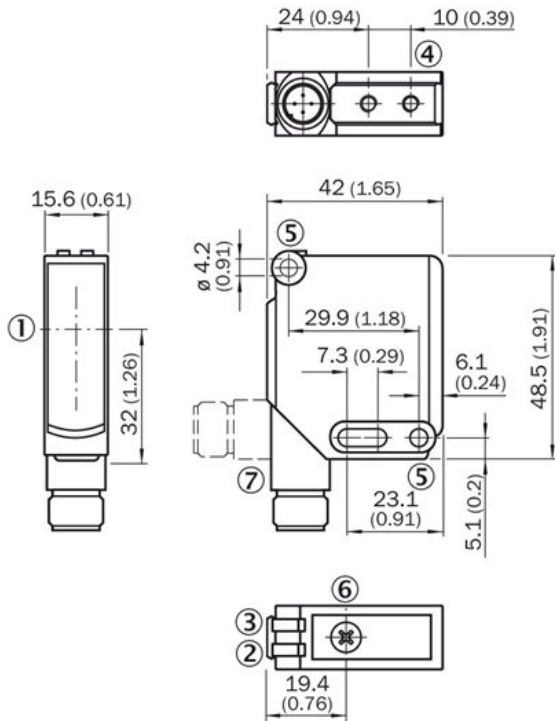
^{1) 2)} PL80A ³⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

| | |
|------------------------------------|------------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Power consumption: | ≤ 30 mA ²⁾ |
| Output type: | PNP |
| Output function: | Complementary |
| Switching mode: | Light/dark-switching |
| Signal voltage PNP HIGH/LOW: | > U _v - 2,5 V / ca. 0 V |
| Output current I _{max.} : | 100 mA |
| Response time: | ≤ 330 μs ³⁾ |
| Switching frequency: | ± 1,500 Hz ⁴⁾ |
| Connection type: | Connector M12, 4-pin |
| Circuit protection::: | A, C, D ^{5) 6) 7)} |
| Protection class: | II |
| Weight: | 120 g |
| Polarisation filter: | ✓ |
| Special device: | - |
| Housing material: | Metal |
| Enclosure rating: | IP 66 IP 67 IP 69K |
| Special feature: | Focused optics |
| Ambient operating temperature: | -40 °C ... 60 °C |
| Ambient storage temperature: | -40 °C ... 75 °C |
| UL File No.: | NRKH.E181493 & NRKH7.E181493 |

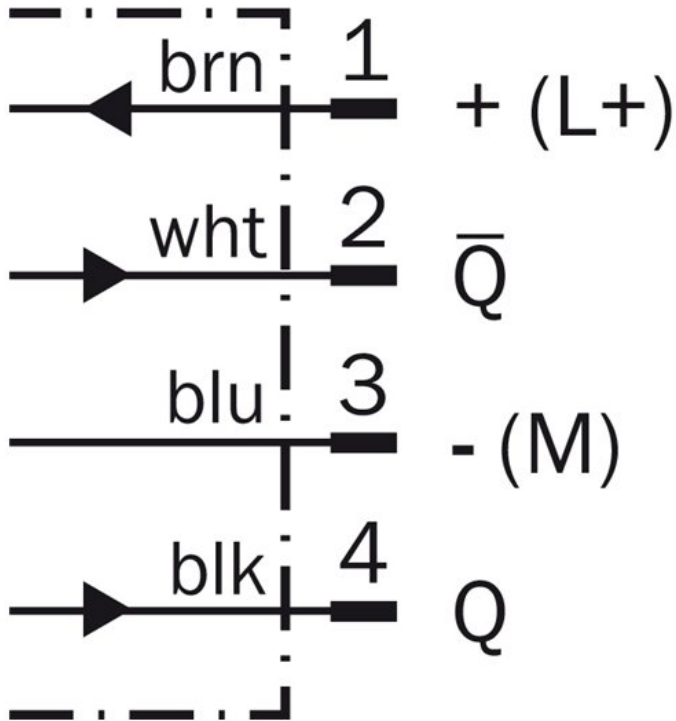
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ A = V_S
connections reverse-polarity protected ⁶⁾ C = interference suppression ⁷⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing

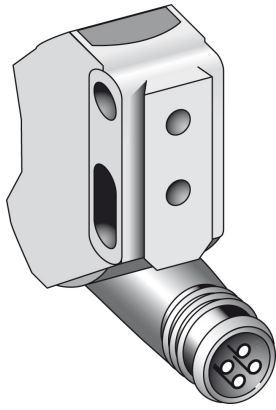


- [1] Optical axis
- [2] LED indicator yellow: Light received
- [3] Green LED indicator: supply voltage active
- [4] M4 threaded mounting hole, 4 mm deep
- [5] Mounting hole, $\varnothing 4.2$ mm
- [6] Sensitivity adjustment: poti
- [7] Connection

Connection diagram



Connection type



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