



Photoelectric sensors
W11-2, Photoelectric retro-reflective sensor,
Standard optics

WL11-2K2432



Model Name > [WL11-2K2432](#)
Part No. > [1054233](#)



Illustration may differ

At a glance

- Retro-reflective with standard lens principle
- Rugged housing for industrial use
- PinPoint LED technology with highly visible light spot
- Space-saving plastic housing in chemically, thermally or mechanically resistant designs
- Dovetail mounting - standard mounting holes and oblong holes
- Highly visible 360° status LEDs
- Optional sensing range adjustment via teach-in pushbutton
- Operating distance up to 10 m

Your benefits

- Custom ASIC provides reliable object detection
- High immunity to optical interference reduces false readings and downtime
- PinPoint LED technology provides a bright, small and precise light spot that enables quick and easy sensor alignment
- Precise switching characteristics ensure high performance even in changing application conditions
- Rugged housing design withstands harsh environments, reducing downtime and maintenance effort
- Highly visible 360° status LEDs provide quick and easy setup without additional personnel or costly training
- 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.: | 0.15 m ... 10 m ¹⁾ |
| Sensing range: | 0.15 m ... 8 m ²⁾ |
| Type of light: | Visible red light |
| Light source: | LED ³⁾ |
| Wave length: | 640 nm |
| Angle of dispersion: | Ca. 2.2 ° |
| Light spot size (distance): | Ø 50 mm (3 m) |

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

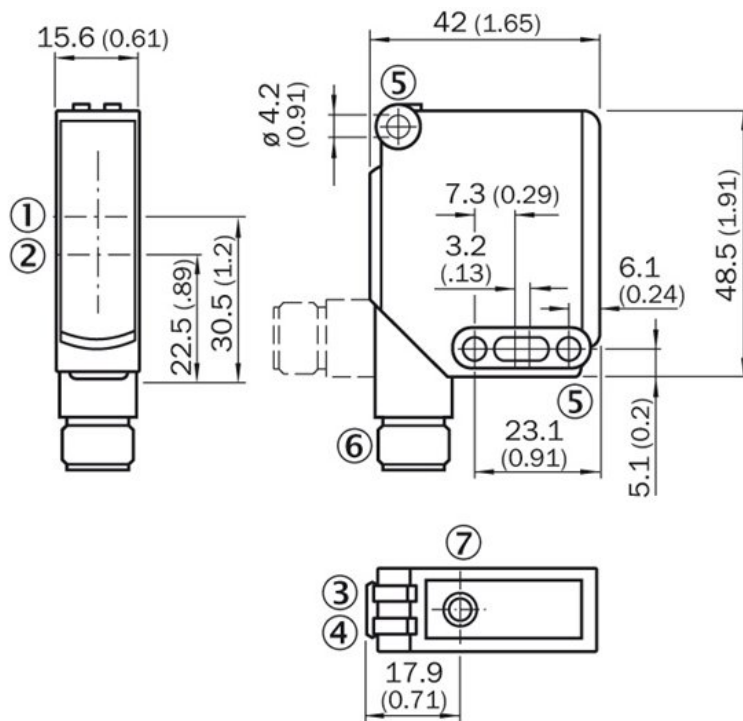
Mechanics/electronics

| | |
|------------------------------------|--------------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Power consumption: | ≤ 30 mA ²⁾ |
| Output type: | PNP |
| Output function: | Complementary |
| Switching mode: | Light/dark-switching |
| Signal voltage PNP HIGH/LOW: | U _v - 2.5 V / approx. 0 V |
| Output current I _{max.} : | 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)} |
| Protection class: | II ⁸⁾ |
| Weight: | 120 g |
| Polarisation filter: | ✓ |
| Special device: | - |
| Housing material: | ABS, Plastic |
| Optics material: | PMMA |
| Enclosure rating: | IP 66 IP 67 IP 69K |
| Ambient operating temperature: | -30 °C ... 60 °C |
| Ambient storage temperature: | -40 °C ... 75 °C |

May not exceed or fall short of V_S tolerances;

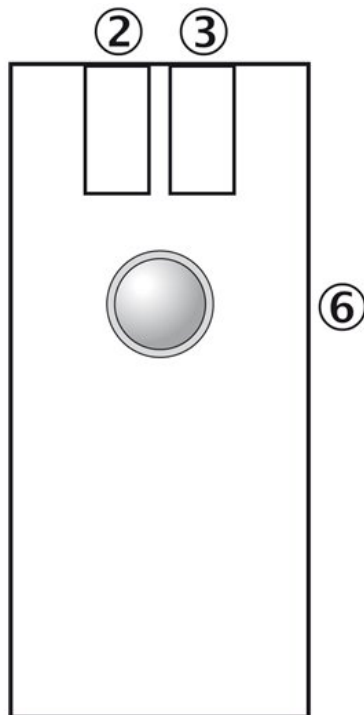
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ A = V_S
⁶⁾ C = interference suppression ⁷⁾ D = outputs overcurrent and short-circuit protected ⁸⁾ Reference voltage DC 50 V

Dimensional drawing



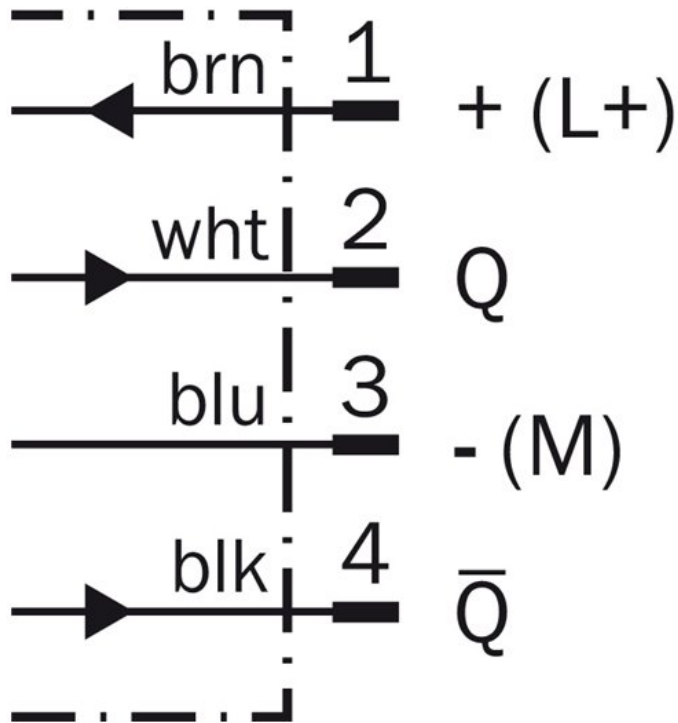
- |1| Optical axis, sender
- |2| Optical axis, receiver
- |3| Status indicator LED,
yellow: Status of received light beam
- |4| Status indicator LED green: power on
- |5| Mounting hole \varnothing 4.2 mm
- |6| Connector M12, 4-pin

Adjustments possible

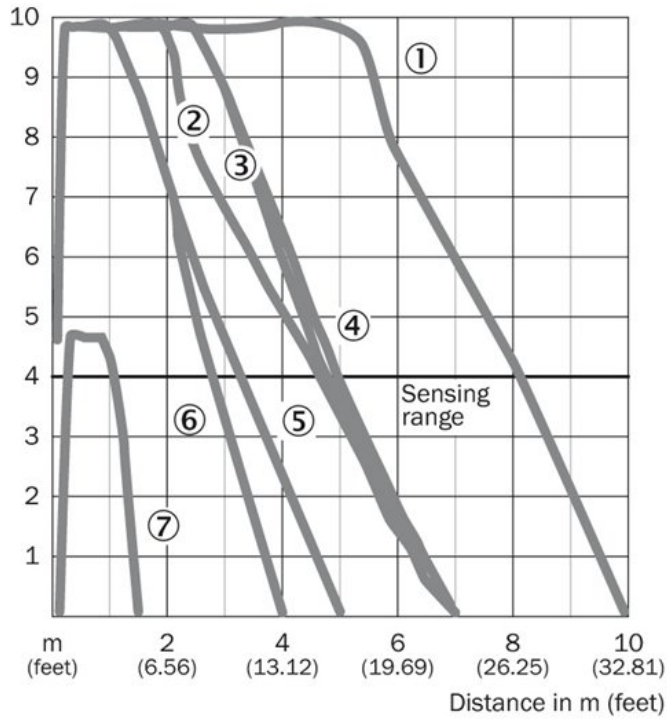


- |2| LED indicator yellow: Light received
- |3| LED indicator, green: power on,
teach-in mode I, LED indicator, blue: teach-in mode II
- |6| Single teach button, function 1:
teach-in sensitivity on reflector,
function 2: change operation/teach-in mode

Connection diagram

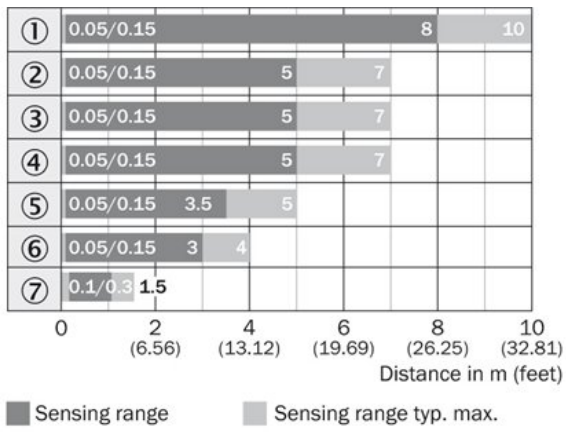


Characteristic curve



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

Sensing range diagram

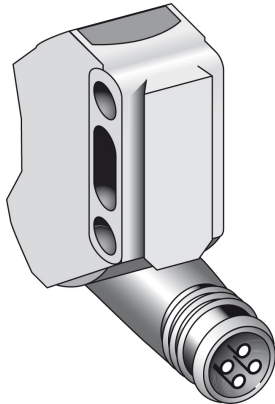


- |1| PL80A
- |2| C110A
- |3| PL50A
- |4| PL40A
- |5| PL30A
- |6| PL20A
- |7| Reflective tape Diamond Grade

Reflector type

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

Connection type



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