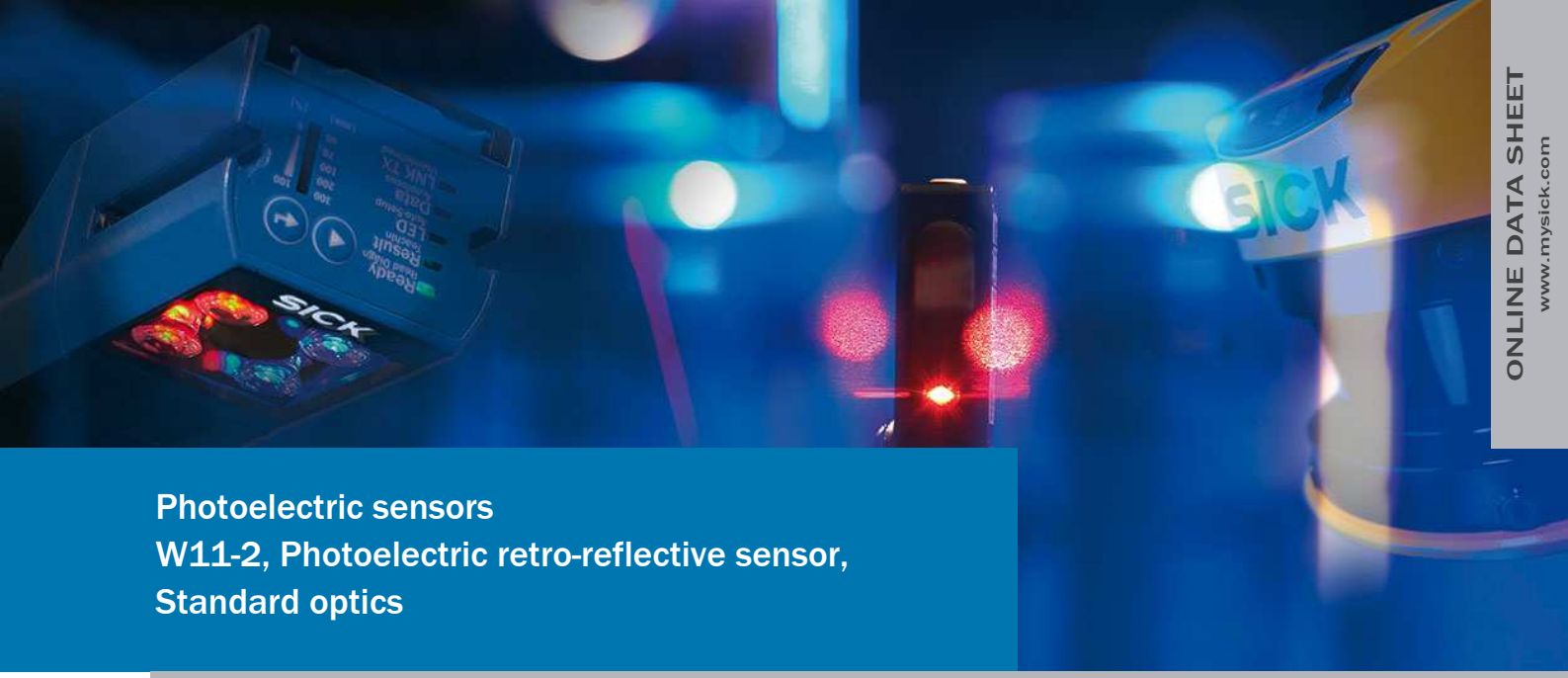



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# Photoelectric sensors
# W11-2, Photoelectric retro-reflective sensor, Standard optics

WL11-2P2432




SICK
Sensor Intelligence.

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

**Model Name** > WL11-2P2432
**Part No.** > 1048542





*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 |
| Teach-in: | Single teach-in button |
| Angle of dispersion: | Ca. 2.2 ° |
| Adjustment: | Teach-in |
| Light spot size (distance): | Ø 50 mm (3 m) |


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

## Mechanics/electronics

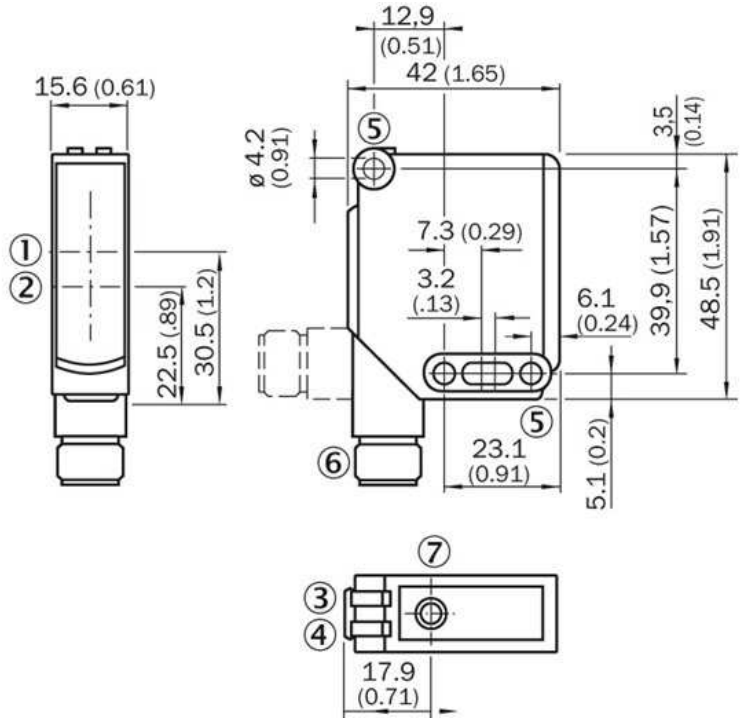
| | |
|---|---|
| Supply voltage: | 10 V DC ... 30 V DC [1] |
| Power consumption: | ≤ 30 mA [2] |
| Output type: | PNP |
| Output function: | Complementary |
| Switching mode: | Light/dark switching |
| Signal voltage PNP HIGH/LOW: | Uv - 2.5 V/approx. 0 V |
| Output current Imax.: | 100 mA |
| Response time: | ≤ 2.5 ms [3] |
| Switching frequency: | 200 Hz [4] |
| Connection type: | Connector M12, 4-pin |
| Circuit protection::: | A, C, D [5] [6] [7] |
| Protection class: | II [8] |
| Weight: | 120 g |
| Polarisation filter: | ✓ |
| Housing material: | ABS, Plastic |
| Optics material: | PMMA |
| Enclosure rating: | IP 66<br>IP 67<br>IP 69K |
| Ambient operating temperature: | -30 °C ... 60 °C |
| Ambient storage temperature: | -40 °C ... 75 °C |
| UL File No.: | NRKH.E181493 & NRKH7.E181493 |

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 = $V_S$ connections reverse-polarity protected [6] C = interference suppression [7] D = outputs overcurrent and short-circuit protected [8] Reference voltage DC 50 V

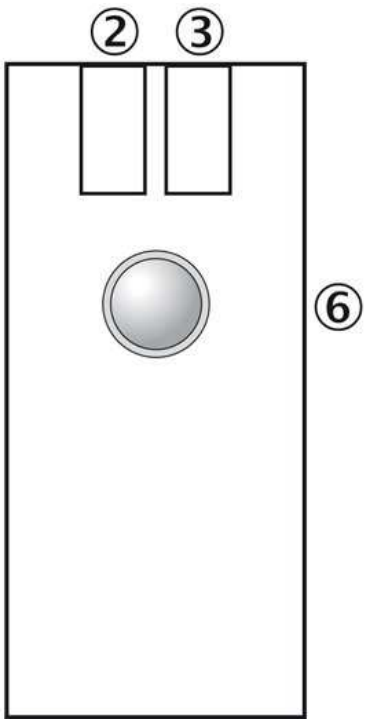

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## Dimensional drawing




|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 ø 4.2 mm
|6| Connector M12, 4-pin

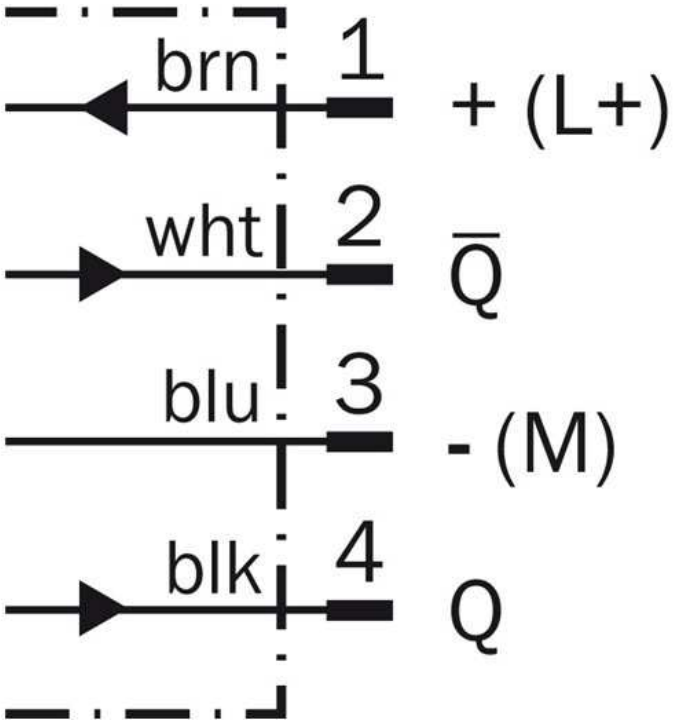
## Adjustments possible



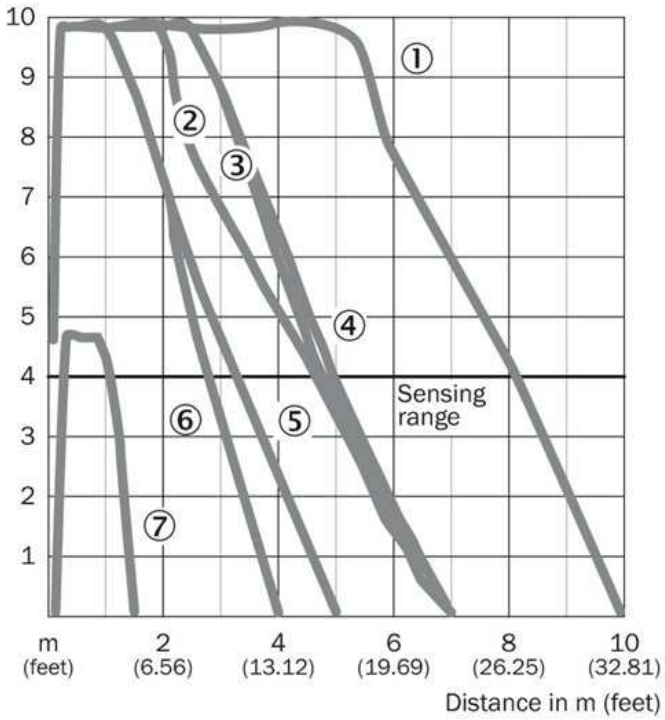
|2| LED indicator yellow: Light received
|3| LED indicator, green: power on,
teach-in mode I,LED indicator, blue: teach-in mode II
|6| Single teach button, function 1:
teach-in sensitivity on reflector,
function 2: change operation/teach-in mode


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## Connection diagram



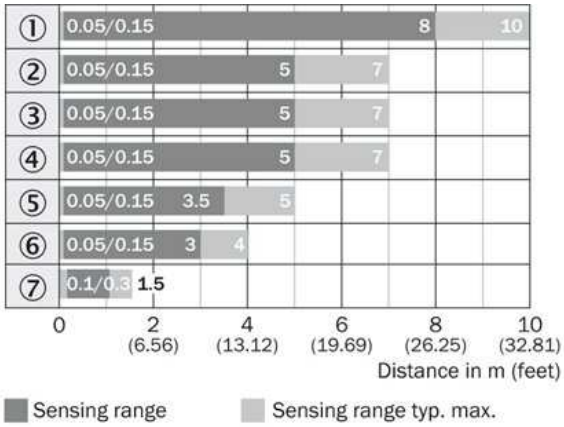

## Characteristic curve




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


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## Sensing range diagram

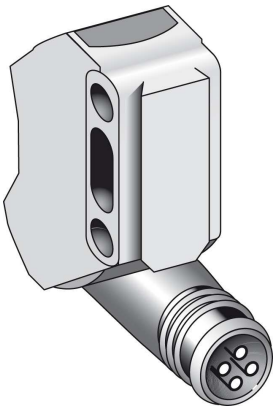



|1| PL80A
|2| C110A
|3| PL50A
|4| PL40A
|5| PL30A
|6| PL20A
|7| Reflective tape Diamond Grade

### 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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