

WL11-2P2430S02

W11-2

PHOTOELECTRIC SENSORS





Ordering information

| Туре | part no. |
|----------------|----------|
| WL11-2P2430S02 | 1047578 |

Other models and accessories → www.sick.com/W11-2

Illustration may differ



Detailed technical data

Features

| Functional principle | Photoelectric retro-reflective sensor |
|---------------------------------|---|
| Functional principle detail | With minimum distance to reflector (dual lens system) |
| Dimensions (W x H x D) | 15.6 mm x 48.5 mm x 42 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0.05 m 10 m ¹⁾ |
| Sensing range | 0.15 m 8 m ¹⁾ |
| Focus | Approx. 2.2° |
| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 50 mm (3 m) |
| Angle of dispersion | Approx. 2.2° |
| Wave length | 640 nm |
| Adjustment | None |

¹⁾ Reflector PL80A.

 $^{^{2)}}$ Average service life: 100,000 h at TU = +25 °C.

Mechanics/electronics

| Supply voltage U _B | 10 V DC 30 V DC ¹⁾ |
|----------------------------------|---|
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption | 30 mA ³⁾ |
| Switching output | PNP |
| Switching mode | Light switching |
| Signal voltage PNP HIGH/LOW | Uv - 2.5 V / approx. 0 V |
| Output current I _{max.} | ≤ 100 mA |
| Response time | \leq 2.5 ms $^{4)}$ |
| Switching frequency | 200 Hz ⁵⁾ |
| Connection type | Male connector M12, 4-pin |
| Circuit protection | A ⁶⁾ C ⁷⁾ D ⁸⁾ |
| Protection class | III |
| Weight | 120 g |
| Polarisation filter | ✓ |
| Special device | ✓ |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 IP68 IP69K |
| Ambient operating temperature | -30 °C +60 °C |
| Ambient temperature, storage | -40 °C +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

 $^{^{1)}}$ Limit values when operated in short-circuit protected network: max. 8 A.

Certificates

| EU declaration of conformity | ✓ |
|------------------------------------|---|
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| ECOLAB certificate | ✓ |
| cULus certificate | ✓ |
| EAC certificate / DoC | ✓ |

 $^{^{2)}}$ May not fall below or exceed U_V 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.

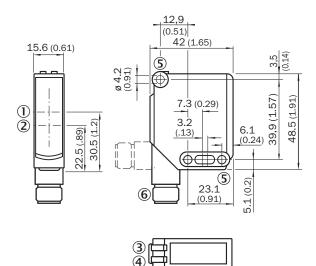
⁸⁾ D = outputs overcurrent and short-circuit protected.

| Photobiological safety (DIN EN 62471) cer- | ✓ |
|--|---|
| tificate | |

Classifications

| ECLASS 5.0 | 27270902 |
|----------------|----------|
| ECLASS 5.1.4 | 27270902 |
| ECLASS 6.0 | 27270902 |
| ECLASS 6.2 | 27270902 |
| ECLASS 7.0 | 27270902 |
| ECLASS 8.0 | 27270902 |
| ECLASS 8.1 | 27270902 |
| ECLASS 9.0 | 27270902 |
| ECLASS 10.0 | 27270902 |
| ECLASS 11.0 | 27270902 |
| ECLASS 12.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| ETIM 7.0 | EC002717 |
| ETIM 8.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |
| | |

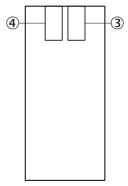
Dimensional drawing WL11-2



Dimensions in mm (inch)

- ① Optical axis, sender
- ② Optical axis, receiver
- 3 LED indicator green: Supply voltage active
- 4 LED indicator yellow: Status of received light beam
- 5 Mounting hole g 4.2 mm
- ⑥ M12 connector, 4-pin or cable

Adjustments WL11-2



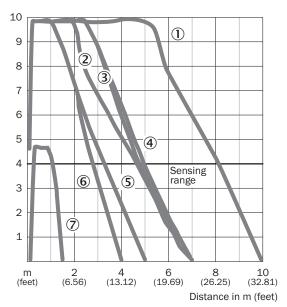
- $\ensuremath{\mathfrak{G}}$ LED indicator green: Supply voltage active
- ④ LED indicator yellow: Status of received light beam

Connection type



Connection diagram Cd-066

Characteristic curve



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

Recommended accessories

Other models and accessories → www.sick.com/W11-2

| outer medica and decessories v ministrationly will 2 | | | |
|--|--|--------------|----------|
| | Brief description | Туре | part no. |
| Mounting syst | tems | | |
| | Description: Mounting bracket, large Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W11-2, W12-3, W16 | BEF-WG-W12 | 2013942 |
| 00 1 10 | Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A | BEF-WN-REFX | 2064574 |
| 6 | Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E | BEF-KHS-N11N | 2071081 |

| | Brief description | Туре | part no. | |
|----------------|---|--------------------|----------|--|
| reflectors and | reflectors and optics | | | |
| | Description: Rectangular, screw connection Dimensions: 40 mm 60 mm Ambient operating temperature: -30 °C +65 °C | PL4OA | 1012720 | |
| connectors ar | connectors and cables | | | |
| P | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones | YF2A14-050VB3XLEAX | 2096235 | |
| | Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² | STE-1204-G | 6009932 | |
| | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A14-050UB3XLEAX | 2095608 | |

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For us, that is "Sensor Intelligence."

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