



WL4SLG-3P3432V

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Type | Part no. |
|----------------|----------|
| WL4SLG-3P3432V | 1058264 |

Other models and accessories → www.sick.com/W4



Detailed technical data

Features

| | |
|------------------------------------|---|
| Functional principle | Photoelectric retro-reflective sensor |
| Functional principle detail | Autocollimation |
| Sensing range max. | 0 m ... 4.5 m ^{1) 2)} |
| Sensing range | 0 m ... 2 m ^{1) 2)} |
| Polarisation filters | Yes |
| Emitted beam | |
| Light source | Laser ³⁾ |
| Type of light | Visible red light |
| Light spot size (distance) | Ø 1 mm (500 mm) |
| Key laser figures | |
| Normative reference | EN 60825-1:2014, IEC 60825-1:2014 / CDRH 21 CFR 1040.10 & 1040.11 |
| Laser class | 1 |
| Wave length | 650 nm |
| Adjustment | Single teach-in button |

¹⁾ Reflective tape REF-AC1000.

²⁾ To ensure reliable operation, we recommend using REF-AC1000 reflective tape or reflective-tap reflectors such as P41F, PLV14-A, PLH25-M12, or PLH25-D12. Reflectors with large-scale triple structures must only be used if deemed suitable for the application.

³⁾ Average service life: 50,000 h at T_U = +25 °C.

⁴⁾ Difference between standard/washdown and hygiene: The essential difference between a standard/washdown product and a hygiene product is that where the process and contact with the medium (activity in the vicinity of the food) are concerned, a hygiene product is designed in accordance with the latest standards and hygiene design guidelines, and materials are selected accordingly.

| | |
|-----------------------------|---|
| Special applications | Hygienic and washdown zones, Detecting transparent objects, Detecting small objects |
| Housing design | Washdown ⁴⁾ |
| Mounting hole | M3 |

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Safety-related parameters

| | |
|-------------------------|--|
| MTTF_D | 647 years (EN ISO 13849-1) ¹⁾ |
| DC_{avg} | 0 % |

¹⁾ Mode of calculation: Parts-Count-calculation.

Electrical data

| | |
|--|---|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | $< 5 \text{ V}_{pp}$ ²⁾ |
| Current consumption | 30 mA ³⁾ |
| Protection class | III |
| Digital output | |
| Type | PNP ⁴⁾ |
| Switching mode | Light/dark switching ⁴⁾ |
| Output current I_{max} | $\leq 100 \text{ mA}$ |
| Response time | $\leq 0.5 \text{ ms}$ ⁵⁾ |
| Switching frequency | 1,000 Hz ⁶⁾ |
| Output function | Complementary |
| Circuit protection | A ⁷⁾ B ⁸⁾ C ⁹⁾ |

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

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ Q = light switching.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

Mechanical data

| | |
|-------------------------------|-----------------------------|
| Housing | Rectangular |
| Design detail | Slim |
| Dimensions (W x H x D) | 15.3 mm x 55.4 mm x 22.2 mm |

¹⁾ Max. tightening torque: 0.7 Nm.

²⁾ Do not bend below $0 \text{ }^\circ\text{C}$.

| | |
|--------------------------|---|
| Connection | Cable with M12 male connector, 4-pin ^{1) 2)} |
| Connection detail | |
| Conductor size | 0.14 mm ² |
| Length of cable (L) | 150 mm ²⁾ |
| Material | |
| Housing | Stainless steel, Stainless steel V4A (1.4404, 316L) |
| Front screen | Plastic, PMMA |
| Cable | PVC |
| Weight | 45 g |

¹⁾ Max. tightening torque: 0.7 Nm.

²⁾ Do not bend below 0 °C.

Ambient data

| | |
|---|---|
| Enclosure rating | IP66 IP67 IP68 IP69K ¹⁾ |
| Ambient operating temperature | -10 °C ... +50 °C |
| Ambient operating temperature extended | -30 °C ... +55 °C ^{2) 3)} |
| Ambient temperature, storage | -30 °C ... +70 °C |
| RoHS certificate | ✓ |

¹⁾ Only in case of correctly mounted IP69K connecting cable.

²⁾ As of T_a = 50 °C, a max. supply voltage V_{max.} = 24 V and a max. load current I_{max.} = 50 mA is permitted.

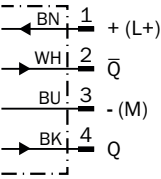
³⁾ Operation below Tu -10 °C is possible if the sensor is already switched on at Tu > -10 °C, then cools down, and the supply voltage is subsequently not switched off. Switching on below Tu -10 °C is not permissible.

Classifications

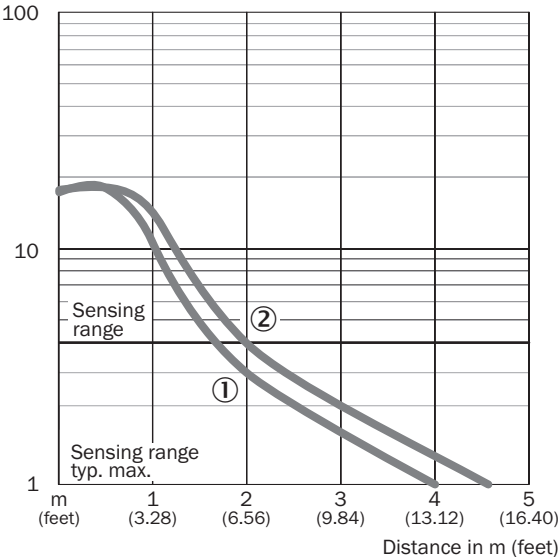
| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270902 |
| ECLASS 5.1.4 | 27270902 |
| ECLASS 6.0 | 27270902 |
| ECLASS 6.2 | 27270902 |
| ECLASS 7.0 | 27270902 |
| ECLASS 8.0 | 27270902 |
| ECLASS 8.1 | 27270902 |
| ECLASS 9.0 | 27270902 |
| ECLASS 10.0 | 27270902 |
| ECLASS 11.0 | 27270902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

Connection diagram

Cd-083



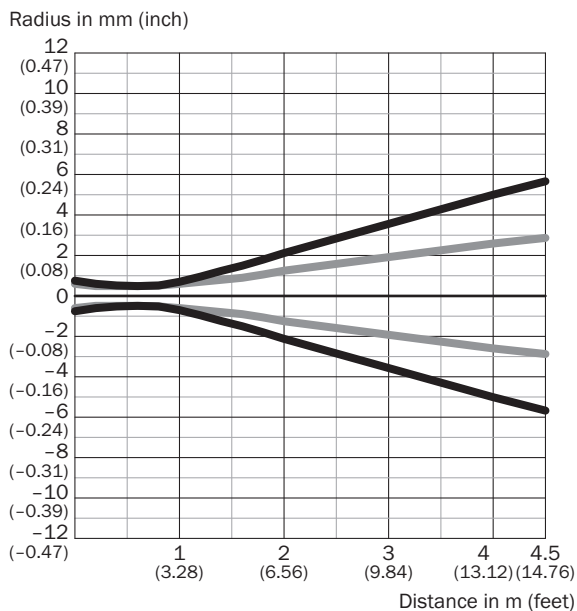
Characteristic curve



- ① Reflector PLV14-A / PLH25-M12 / PLH25-D12
- ② Reflector P41F / reflective tape REF-AC1000

Light spot size

Overview

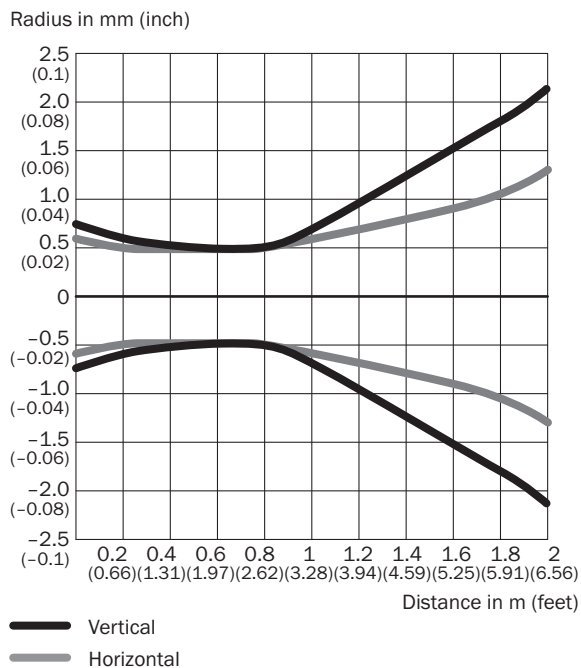


Dimensions in mm (inch)

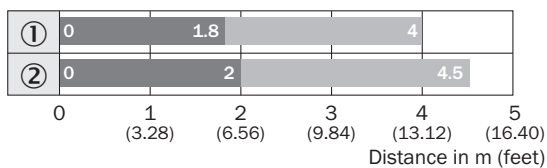
| Sensing range | Vertical | Horizontal |
|-------------------------------------|-----------------|-----------------|
| 0.5 m (1.64 feet) | < 1.0 (0.04) | < 1.0 (0.04) |
| 1 m (3.28 feet) | 1.5 (0.06) | 1.2 (0.05) |
| 2 m (6.56 feet) | 4.3 (0.17) | 2.6 (0.10) |
| 4.5 m (14.76 feet) | 11.3 (0.44) | 5.6 (0.22) |

— Vertical
 — Horizontal

Light spot size (detailed view)



Sensing range diagram

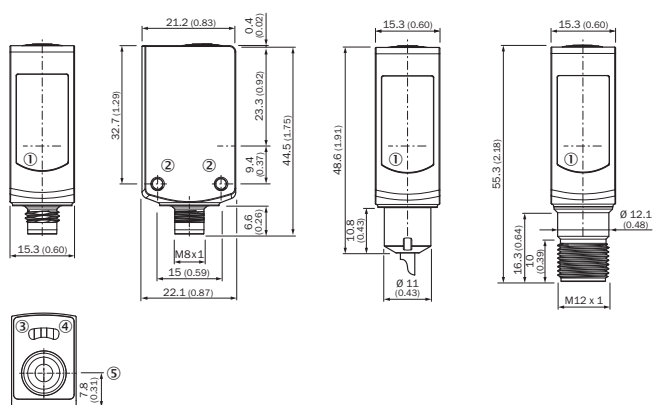


■ Sensing range ■ Sensing range max.

- ① Reflector PLV14-A / PLH25-M12 / PLH25-D12
- ② Reflector P41F / reflective tape REF-AC1000

Dimensional drawing (Dimensions in mm (inch))


WSE4SL-3, WL4SLG-3





- ① Center of optical axis
- ② Threaded mounting hole M3
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: Supply voltage active
- ⑤ Single teach-in button

Recommended accessories

Other models and accessories → www.sick.com/W4

| | Brief description | Type | Part no. |
|---|---|----------|----------|
| Mounting brackets and plates | | | |
|  | Mounting bracket for floor mounting, Stainless steel 1.4571, mounting hardware included | BEF-W4-B | 2051630 |

| | Brief description | Type | Part no. |
|---|---|-----------------|----------|
| Plug connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones | DOL-1204-G05MNI | 6052615 |
| Reflectors | | | |
|  | Stainless steel reflector, washdown design, chemically resistant, IP 69K enclosure rating, screw connection, PMMA front screens, 14 mm, Stainless steel V4A (1.4404, 316L), Screw-on, 2 hole mounting | PLV14-A | 2063405 |

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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