# WLG4S-3P3432

W4

**SICK**
Sensor Intelligence.

**PHOTOELECTRIC SENSORS**

Illustration may differ

## Ordering information

| Type | part no. |
| --- | --- |
| WLG4S-3P3432 | 1051097 |

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

## Detailed technical data

### Features

| | |
| --- | --- |
| **Functional principle** | Photoelectric retro-reflective sensor |
| **Functional principle detail** | Without reflector minimum distance (autocollimation/coaxial optics) |
| **Sensing range max.** | 0.01 m … 5 m [1] |
| **Sensing range** | 0 m … 3 m [1] |
| **Polarisation filters** | Yes |
| **Emitted beam** | |
| Light source | PinPoint LED [2] |
| Type of light | Visible red light |
| Light spot size (distance) | Ø 45 mm (1.5 m) |
| **Key LED figures** | |
| Wave length | 650 nm |
| **Adjustment** | Single teach-in button |
| **Special applications** | Detecting transparent objects |
| **AutoAdapt** | ✔ |

[1] Reflector PL80A.
[2] Average service life: 100,000 h at $T_U$ = +25 °C.

### Safety-related parameters

| | |
| --- | --- |
| **$MTTF_D$** | 1,215 years |
| **$DC_{avg}$** | 0 % |
| **$T_M$ (mission time)** | 20 years |

## Electronics

| | |
|---|---|
| **Supply voltage $U_B$** | 10 V DC … 30 V DC [1] |
| **Ripple** | < 5 $V_{pp}$ [2] |
| **Current consumption** | 20 mA [3] |
| **Protection class** | III |
| **Digital output** | |
| Type | PNP |
| Switching mode | Light/dark switching |
| Output current $I_{max.}$ | ≤ 100 mA |
| Response time | < 0.5 ms [4] |
| Switching frequency | 1,000 Hz [5] |
| **Attenuation along light beam** | > 8 % |
| **Output function** | Complementary |
| **Circuit protection** | A [6] |
| | C [7] |
| | D [8] |

[1] Limit values.

[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.

## Mechanics

| | |
|---|---|
| **Housing** | Rectangular |
| **Design detail** | Slim |
| **Dimensions (W x H x D)** | 12.2 mm x 41.8 mm x 17.3 mm |
| **Connection** | Cable with M12 male connector, 4-pin [1] |
| **Connection detail** | |
| Conductor size | 0.14 mm² |
| Cable diameter | Ø 3.4 mm |
| Length of cable (L) | 150 mm [1] |
| **Material** | |
| Housing | Plastic, ABS |
| Front screen | Plastic, PMMA |
| Cable | Plastic, PVC |
| **Weight** | 30 g |

[1] Do not bend below 0 °C.

## Ambient data

| | |
|---|---|
| **Enclosure rating** | IP67 |
| | IP66 |
| **Ambient operating temperature** | −40 °C … +60 °C |

| | |
|---|---|
| **Ambient temperature, storage** | −40 °C ... +75 °C |
| **UL File No.** | NRKH.E181493 & NRKH7.E181493 |

## Certificates

| | |
|---|---|
| **EU declaration of conformity** | ✓ |
| **UK declaration of conformity** | ✓ |
| **ACMA declaration of conformity** | ✓ |
| **Moroccan declaration of conformity** | ✓ |
| **China RoHS** | ✓ |
| **ECOLAB certificate** | ✓ |
| **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 |

## Connection type
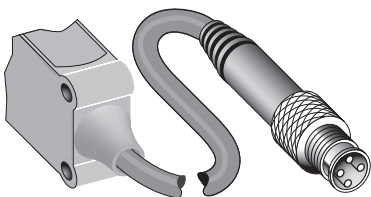
## Connection diagram Cd-083

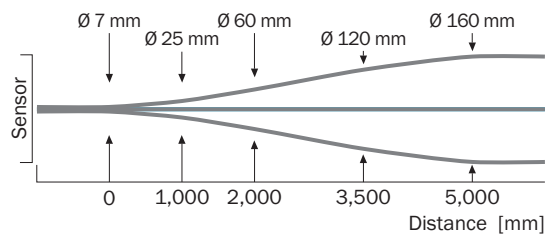| | | |
|---|---|---|
| BN | 1 | + (L+) |
| WH | 2 | $\overline{Q}$ |
| BU | 3 | - (M) |
| BK | 4 | Q |
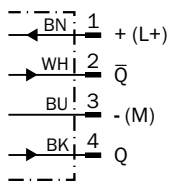
## Characteristic curve WL4S-3, WLG4S-3, 5 m

Operating reserve



Distance in m (feet)
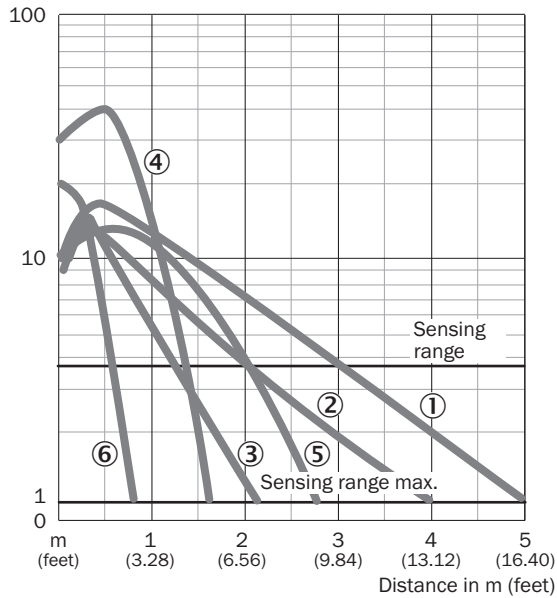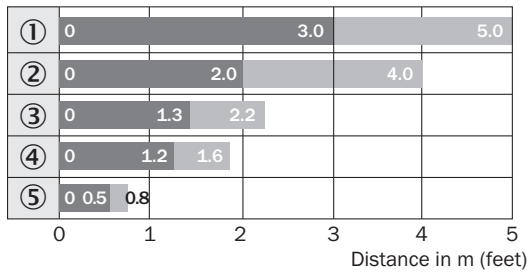
① Reflector PL80A
② Reflector PL40A
③ Reflector PL20A
④ PL10F reflector
⑤ Reflector P250 CHEM
⑥ Reflective tape REF-IRF-56

## Light spot size



Distance [mm]

## Sensing range diagram WL4S-3, WLG4S-3, 5 m



■ Sensing range
■ Sensing range max.
① Reflector PL80A
② Reflector PL40A
③ Reflector PL20A
④ PL10F reflector
⑤ Reflective tape REF-IRF-56

## Dimensional drawing WL4S-3, WLG4S-3, single teach-in button
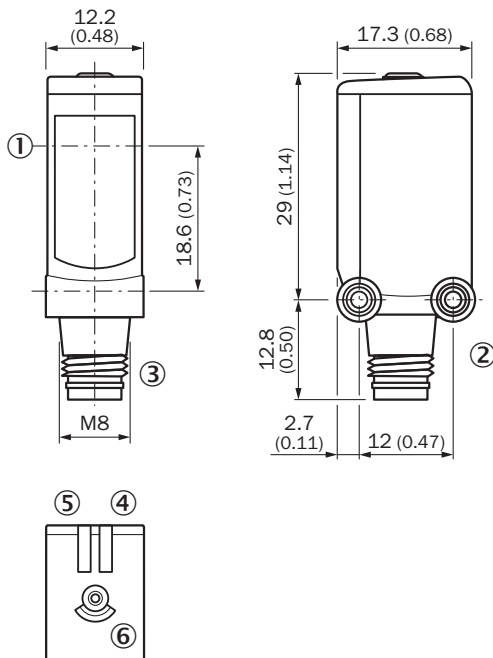


Dimensions in mm (inch)
① Center of optical axis
② Threaded mounting hole M3
③ Connection
④ LED indicator green: Supply voltage active
⑤ Orange LED indicator: status of received light beam
⑥ Teach-in button

## Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|---|---|
| **Mounting systems** | | | |
| | • **Description:** Universal mounting bracket for reflectors<br>• **Dimensions (W x H x L):** 85 mm x 90 mm x 35 mm<br>• **Material:** Steel<br>• **Details:** Steel, zinc coated<br>• **Suitable for:** C110A, P250, PL20, PL30A, PL40A, PL80A | BEF-WN-REFX | 2064574 |
| | • **Description:** Mounting bracket for wall mounting<br>• **Material:** Stainless steel<br>• **Details:** Stainless steel 1.4571<br>• **Items supplied:** Mounting hardware included<br>• **Suitable for:** W4S, W4F, W4S | BEF-W4-A | 2051628 |
| | • **Description:** Plate N08 for universal clamp bracket<br>• **Material:** Steel, zinc diecast<br>• **Details:** Zinc plated steel (sheet), Zinc die cast (clamping bracket)<br>• **Items supplied:** Universal clamp (5322626), mounting hardware<br>• **Usable for:** W100, W150, W4S, W4F, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W10, G6 Inox, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, MultiLine, LUT3, KT5, KT8, KT10, CS8 | BEF-KHS-N08 | 2051607 |
| | • **Description:** Plate N02N for universal clamp bracket<br>• **Material:** Stainless steel, stainless steel<br>• **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)<br>• **Items supplied:** Universal clamp (5322627), mounting hardware<br>• **Usable for:** W4S-3 Glass, W10, W4SLG-3, W4S-3 Inox, W4S-3 Inox Glass, W9, W11-2, W12-3, W12-2 Laser, W12G, W12 Teflon, W16, W250, W250-2, PowerProx, W11G-2, TranspaTect, WTT12, UC12, P250, G6 Inox, W4S, W4SL-3V, W4SLG-3V, W4SL-3H | BEF-KHS-N02N | 2051618 |
| | • **Description:** Plate N11N for universal clamp bracket<br>• **Material:** Stainless steel<br>• **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)<br>• **Items supplied:** Universal clamp (5322627), mounting hardware<br>• **Usable for:** DeltaPac, Glare, WTD20E | BEF-KHS-N11N | 2071081 |
| **reflectors and optics** | | | |
| | • **Description:** Fine triple reflector, screw connection, suitable for laser sensors<br>• **Dimensions:** 20 mm 32 mm<br>• **Ambient operating temperature:** –30 °C … +65 °C | PL10F | 5311210 |

| Brief description | Type | part no. |
|---|---|---|
| **connectors and cables** | | |
| • **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** ≤ 0.75 mm² | STE-1204-G | 6009932 |
| • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 4-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with chemicals, Uncontaminated zones | YF2A14-050VB3XLEAX | 2096235 |
| • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A14-050UB3XLEAX | 2095608 |

# SICK AT A GLANCE

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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.

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**For us, that is "Sensor Intelligence."**

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