



WL4S-3N2132V

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|--------------|----------|
| WL4S-3N2132V | 1046432 |

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 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 | Hygienic and washdown zones |
| Housing design | Washdown |

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_U = +25 °C.

Safety-related parameters

| | |
|-------------------------|-------------|
| MTTF_D | 1,530 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 | 30 mA ³⁾ |
| Protection class | III |
| Digital output | |
| Type | NPN |
| Switching mode | Light switching |
| Output current I _{max} | ≤ 100 mA |
| Response time | < 0.5 ms ⁴⁾ |
| Switching frequency | 1,000 Hz ⁵⁾ |
| Circuit protection | A ⁶⁾ B ⁷⁾ C ⁸⁾ |

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

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⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

Mechanics

| | |
|-------------------------------|---|
| Housing | Rectangular |
| Design detail | Slim |
| Dimensions (W x H x D) | 15.25 mm x 44.9 mm x 22.2 mm |
| Connection | Connector M8, 3-pin ¹⁾ |
| Material | |
| Housing | Metal, Stainless steel V4A (1.4404, 316L) |
| Front screen | Plastic, PMMA |
| Weight | 40 g |

¹⁾ Max. tightening torque: 0.6 Nm.

Ambient data

| | |
|--------------------------------------|--|
| Enclosure rating | IP66 IP67 IP68 IP69K ¹⁾ |
| Ambient operating temperature | -30 °C ... +70 °C ²⁾ -30 °C ... +60 °C |
| Ambient temperature, storage | -30 °C ... +75 °C |

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

²⁾ At U_V ≤ 24 V and I_A < 30 mA.

| | |
|--------------------|------------------------------|
| UL File No. | NRKH.E181493 & NRKH7.E181493 |
|--------------------|------------------------------|

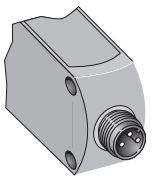
¹⁾ Only in case of correctly mounted IP69K connecting cable.

²⁾ At UV ≤ 24 V and IA < 30 mA.

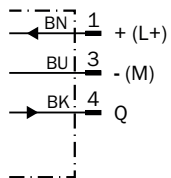
Classifications

| | |
|-----------------------|----------|
| 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

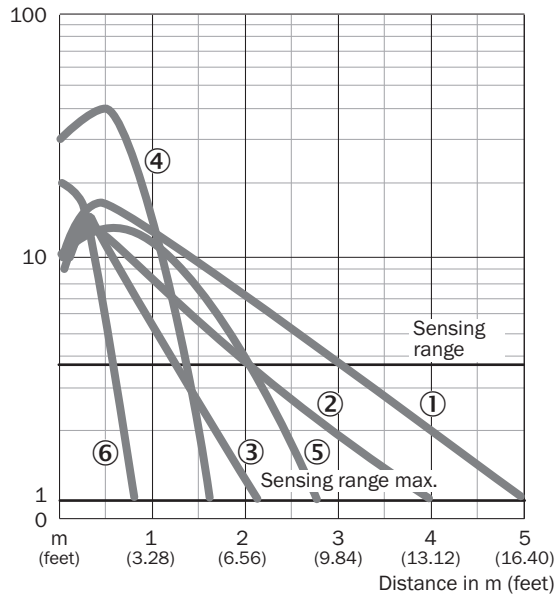


Connection diagram

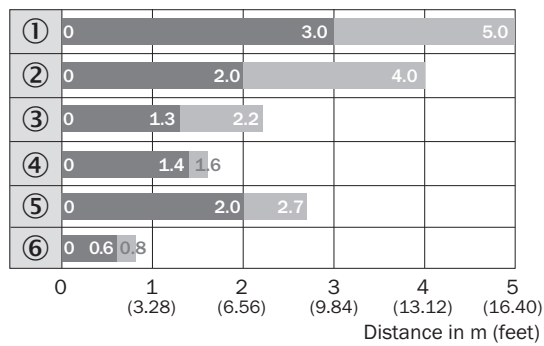


Characteristic curve

Operating reserve

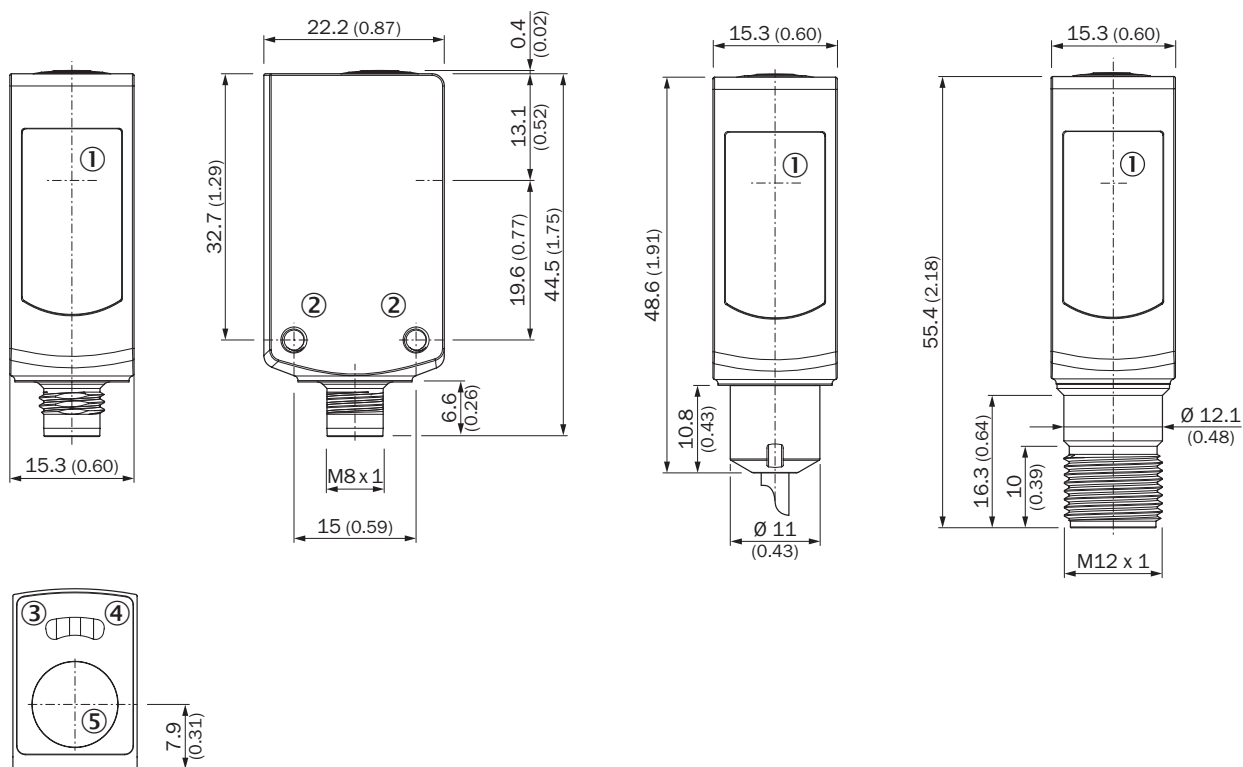


Sensing range diagram






■ Sensing range ■ Sensing range max.





Dimensional drawing (Dimensions in mm (inch))



Recommended accessories

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

| | Brief description | Type | Part no. |
|---|--|-----------------|----------|
| Mounting brackets and plates | | | |
|  | <ul style="list-style-type: none"> Description: Mounting bracket for floor mounting Material: Stainless steel Details: Stainless steel 1.4571 Items supplied: Mounting hardware included Suitable for: W4S, W4F, W4S | BEF-W4-B | 2051630 |
| Others | | | |
|  | <ul style="list-style-type: none"> Description: Chemically resistant, screw connection Dimensions: 52 mm 61 mm Ambient operating temperature: -20 °C ... +140 °C | P250 CHEM | 5321097 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M8, 3-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones, Drag chain operation | DOL-0803-G05MRN | 6058505 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 15 m, 4-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones, Drag chain operation | YF8P13-150PA1XLEAX | 2146839 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 20 m, 4-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones, Drag chain operation | YF8P13-200PA1XLEAX | 2146841 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 30 m, 4-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones, Drag chain operation | YF8P13-300PA1XLEAX | 2146842 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 40 m, 4-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones, Drag chain operation | YF8P13-400PA1XLEAX | 2146843 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

WORLDWIDE PRESENCE:

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