



WL9G-3P2232

W9-3 Glass

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------|----------|
| WL9G-3P2232 | 1049082 |

Other models and accessories → www.sick.com/W9-3_Glass

Detailed technical data

Features

| | |
|--|--|
| Sensor/detection principle | Photoelectric retro-reflective sensor, autocollimation |
| Dimensions (W x H x D) | 12.2 mm x 49.8 mm x 23.6 mm |
| Housing design (light emission) | Rectangular |
| Mounting hole | M3 |
| Sensing range max. | 0 m ... 5 m ¹⁾ |
| Sensing range | 0 m ... 3 m ¹⁾ |
| Type of light | Visible red light |
| Light source | PinPoint LED ²⁾ |
| Light spot size (distance) | Ø 45 mm (1.5 m) |
| Wave length | 650 nm |
| Adjustment | Single teach-in button |
| AutoAdapt | ✓ |

¹⁾ Reflector PL80A.

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

Mechanics/electronics

| | |
|--|--|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Power consumption | 20 ³⁾ |
| Output type | PNP ⁴⁾ |
| Output function | Complementary |
| Switching mode | Light/dark switching ⁴⁾ |
| Output current I_{max.} | 100 ⁵⁾ |
| Response time | < 0.5 ms ⁶⁾ |
| Switching frequency | 1,000 Hz ⁷⁾ |
| Connection type | Connector M8, 4-pin |
| Circuit protection | A ⁸⁾ B ⁹⁾ C ¹⁰⁾ |
| Protection class | III |
| Weight | 13 g |
| Polarisation filter | ✓ |
| Housing material | Plastic, VISTAL®, Plastic, PMMA |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP66 IP67 IP69K |
| Special feature | Detecting transparent objects |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient storage temperature | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 |

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⁾ At and above Tu 50 °C, a max. load current of I_{max.} = 50 mA is permitted.

⁶⁾ Signal transit time with resistive load.

⁷⁾ With light/dark ratio 1:1.

⁸⁾ A = V_S connections reverse-polarity protected.

⁹⁾ B = inputs and output reverse-polarity protected.

¹⁰⁾ C = interference suppression.

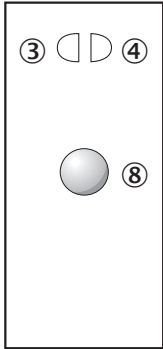
Classifications

| | |
|---------------------|----------|
| ECl@ss 5.0 | 27270902 |
| ECl@ss 5.1.4 | 27270902 |
| ECl@ss 6.0 | 27270902 |
| ECl@ss 6.2 | 27270902 |
| ECl@ss 7.0 | 27270902 |
| ECl@ss 8.0 | 27270902 |
| ECl@ss 8.1 | 27270902 |

| | |
|-----------------------|----------|
| ECl@ss 9.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |

Adjustments possible

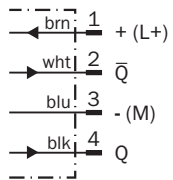
Single teach-in button



- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: power on
- ⑧ Teach-in button

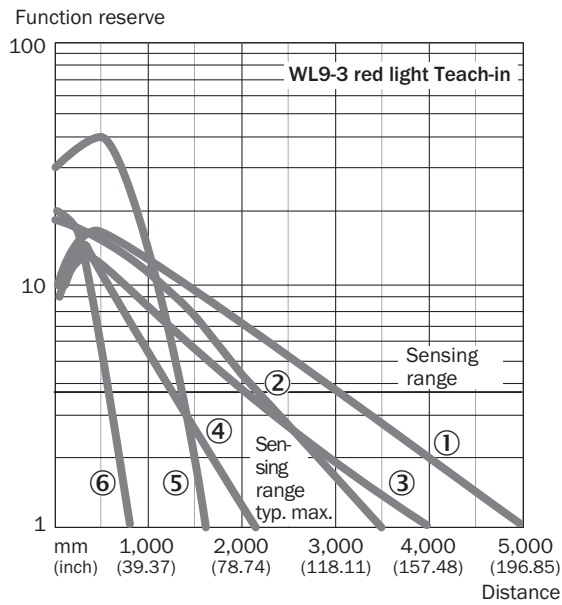
Connection diagram

Cd-084



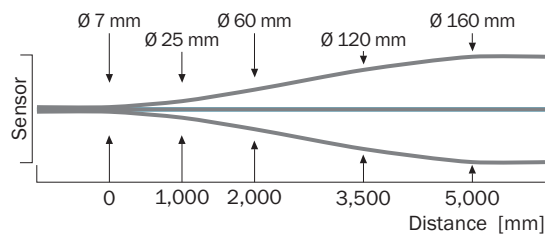
Characteristic curve

WL9G-3



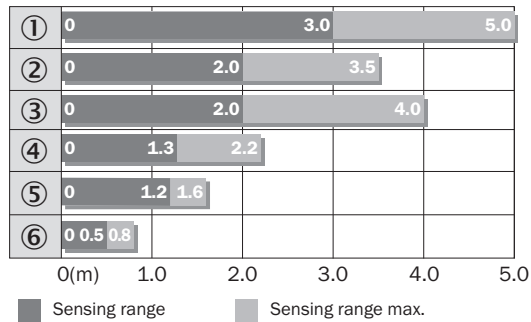
- ① Reflector PL80A
- ② Reflector P250F
- ③ Reflector PL40A
- ④ Reflector PL20F
- ⑤ PL10F reflector
- ⑥ Reflective tape REF-IRF-56

Light spot size



Sensing range diagram

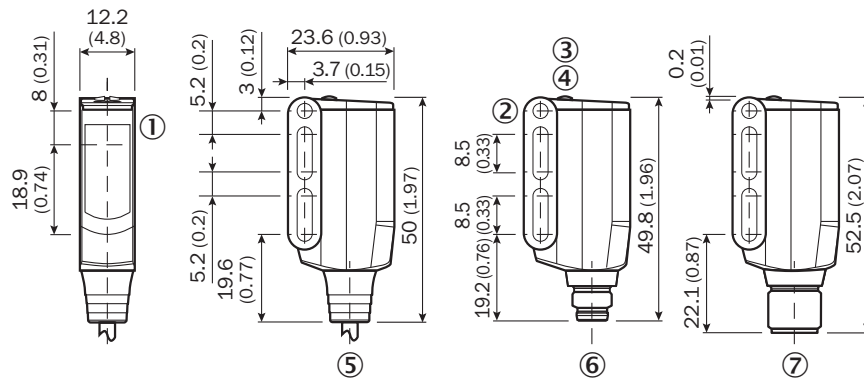
WL9G-3



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Dimensional drawing (Dimensions in mm (inch))













WL9-3, WSE9-3












- ① Center of optical axis, sender and receiver
- ② Mounting hole M3 (Ø 3.1 mm)
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: power on
- ⑤ Connecting cable or connector
- ⑥ Connector M8, 4-pin
- ⑦ Male connector M12, 4-pin

Recommended accessories

Other models and accessories → www.sick.com/W9-3_Glass

| | Brief description | Type | Part no. |
|---|--|---------------|----------|
| Universal bar clamp systems | | | |
|  | Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware | BEF-KHS-N08 | 2051607 |
| Mounting brackets and plates | | | |
|  | Mounting bracket, steel, zinc coated, mounting hardware included | BEF-WN-W9-2 | 2022855 |
|  | Adapter plate, Stainless steel | BEF-AP-W9 | 2022734 |
|  | Fastening plate with threaded sleeve M3, PMMA, Brass (Br) | BEF-GPM3-W9 | 4066039 |
| Plug connectors and cables | | | |
|  | Head A: female connector, M8, 4-pin, straight Head B: cable Cable: PVC, unshielded, 2 m | DOL-0804-G02M | 6009870 |
| | Head A: female connector, M8, 4-pin, straight Head B: cable Cable: PVC, unshielded, 5 m | DOL-0804-G05M | 6009872 |
|  | Head A: female connector, M8, 4-pin, angled Head B: cable Cable: PVC, unshielded, 2 m | DOL-0804-W02M | 6009871 |
| | Head A: female connector, M8, 4-pin, angled Head B: cable Cable: PVC, unshielded, 5 m | DOL-0804-W05M | 6009873 |
|  | Head A: female connector, M8, 4-pin, straight Head B: - Cable: unshielded | DOS-0804-G | 6009974 |
|  | Head A: female connector, M8, 4-pin, angled Head B: - Cable: unshielded | DOS-0804-W | 6009975 |
| Masks | | | |
|  | Mask card, vertical/horizontal slots, slot width: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm | BL-9-2 | 4033253 |
| Reflectors | | | |
|  | Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL80A | 1003865 |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting | P250F | 5308843 |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 18 mm x 18 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL10F | 5311210 |

| | Brief description | Type | Part no. |
|---|---|---------------|----------|
|  | Fine triple reflector, screw connection, suitable for laser sensors, 38 mm x 16 mm, PM-MA/ABS, Screw-on, 2 hole mounting | PL20F | 5308844 |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 56 mm x 28 mm, PM-MA/ABS, Screw-on, 2 hole mounting | PL30F | 5326523 |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 76 mm x 45 mm, PM-MA/ABS, Screw-on, 2 hole mounting | PL81-1F | 5325060 |
|  | Suitable for laser sensors, self-adhesive, cut, see alignment note, 56.3 mm x 56.3 mm, self-adhesive | REF-AC1000-56 | 4063030 |
|  | Fine triple reflector, chemically resistant, screw connection, 18 mm x 18 mm, Plastic, Screw-on, 2 hole mounting | PL10F CHEM | 5321636 |
|  | Chemically resistant, screw connection, suitable for laser sensors, 16 mm x 38 mm, Plastic, Screw-on, 2 hole mounting | PL20F-CHEM | 5326089 |
|  | Stainless steel reflector, hygienic design, chemically resistant, enclosure rating IP69K, D12 adapter shaft, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), D12-adapter shaft | PLH25-D12 | 2063404 |
|  | Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, M12-adapter thread, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), M12-adapter thread | PLH25-M12 | 2063403 |
|  | Stainless steel reflector, washdown design, chemically resistant, IP 69K enclosure rating, screw connection, 14 mm x 14 mm, Stainless steel V4A (1.4404, 316L), Screw-on, 2 hole mounting | PLV14-A | 2063405 |

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.”

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