



WL100-N1432

W100

PRODUCT PORTFOLIO

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------|----------|
| WL100-N1432 | 6026052 |

Other models and accessories → www.sick.com/W100

Detailed technical data

Features

| | |
|--|--|
| Sensor/detection principle | Photoelectric retro-reflective sensor, Dual lens |
| Dimensions (W x H x D) | 11 mm x 31 mm x 20 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0.01 m ... 6 m ¹⁾ |
| Sensing range | 0.01 m ... 5 m ¹⁾ |
| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 250 mm (3.5 m) |
| Angle of dispersion | Approx. 4° |
| Wave length | 680 nm |
| Adjustment | Potentiometer, 270° |

¹⁾ Reflector PL80A.

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

Mechanics/electronics

| | |
|--------------------------|-----------------------------------|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ± 10 % ²⁾ |
| Power consumption | ≤ 30 mA ³⁾ |

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⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

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

⁹⁾ D = outputs overcurrent and short-circuit protected.

| | |
|---|---|
| Output type | NPN, Open Collector |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark rotary switch |
| Signal voltage NPN HIGH/LOW | Approx. $V_S / < 1.8 \text{ V}$ |
| Output current I_{max} | $\leq 100 \text{ mA}$ |
| Response time | $\leq 0.5 \text{ ms}^{4)}$ |
| Switching frequency | $1,000 \text{ Hz}^{5)}$ |
| Connection type | Cable, 3-wire, 2 m ⁶⁾ |
| Cable material | PVC |
| Conductor cross-section | 0.18 mm^2 |
| Circuit protection | A ⁷⁾ B ⁸⁾ D ⁹⁾ |
| Weight | 53 g |
| Polarisation filter | ✓ |
| Housing material | ABS/PC/POMplastic |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP 65 |
| Ambient operating temperature | $-25 \text{ °C} \dots +55 \text{ °C}$ |
| Ambient storage temperature | $-40 \text{ °C} \dots +70 \text{ °C}$ |

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) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) Do not bend below 0 °C .

7) A = V_S connections reverse-polarity protected.

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

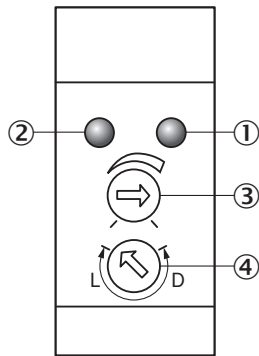
9) D = outputs overcurrent and short-circuit protected.

Classifications

| | |
|-----------------------|----------|
| ECI@ss 5.0 | 27270902 |
| ECI@ss 5.1.4 | 27270902 |
| ECI@ss 6.0 | 27270902 |
| ECI@ss 6.2 | 27270902 |
| ECI@ss 7.0 | 27270902 |
| ECI@ss 8.0 | 27270902 |
| ECI@ss 8.1 | 27270902 |
| ECI@ss 9.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |

Adjustments possible

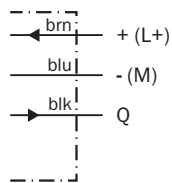
W100-2



- ① LED indicator orange: switching output active
- ② LED indicator green: power on
- ③ Sensing range adjustment: potentiometer
- ④ Light/ dark rotary switch: L = light switching, D = dark switching

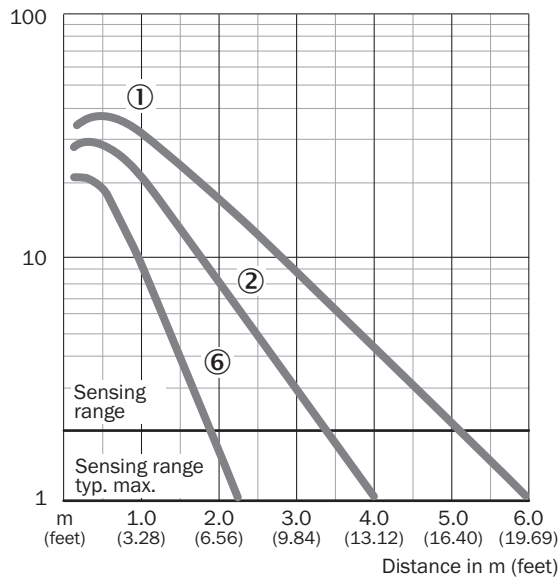
Connection diagram

Cd-043



Characteristic curve

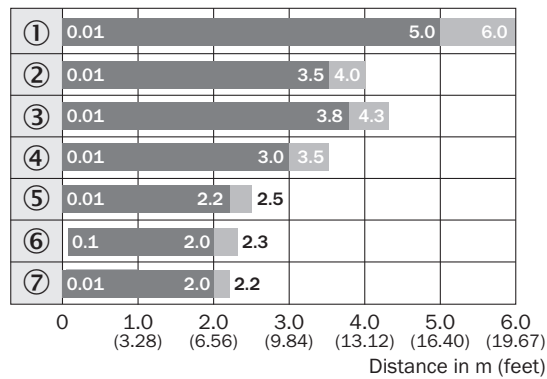
WL100, 6 m



- ① Reflector PL80A
- ② P250
- ⑥ Reflective tape Diamond Grade

Sensing range diagram

WL100, 6 m

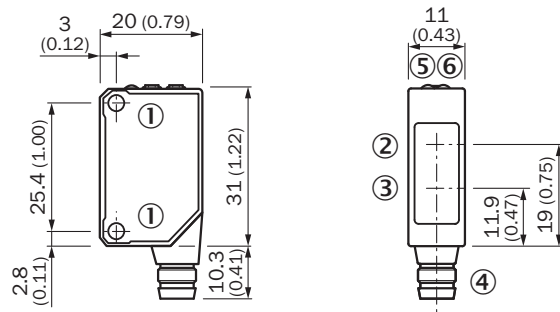


■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
- ② P250
- ③ Reflector PL50A, PL40A
- ④ Reflector PL30A, PL31A
- ⑤ Reflector PL20A
- ⑥ Reflective tape Diamond Grade
- ⑦ P45

Dimensional drawing (Dimensions in mm (inch))








WT100, WL100







- ① Threaded mounting hole M3
- ② Center of optical axis, receiver
- ③ Center of optical axis, sender
- ④ Connection
- ⑤ LED indicator orange: switching output active
- ⑥ LED indicator green: power on

Recommended accessories

Other models and accessories → www.sick.com/W100

| | 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 |
| Device protection (mechanical) | | | |
|  | Safety bracket for floor mounting, Stainless steel 1.4571, mounting hardware included | BEF-SW-W4S | 2051497 |
| Mounting brackets and mounting plates | | | |
|  | Mounting bracket for wall mounting, Stainless steel, mounting hardware included | BEF-W100-A | 5311520 |
|  | Mounting bracket for floor mounting, steel, zinc coated, mounting hardware included | BEF-W100-B | 5311521 |
| Reflectors | | | |
|  | Rectangular, screw connection, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting | P250 | 5304812 |
|  | Rectangular, screw connection, 38 mm x 15 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL20A | 1012719 |
|  | Rectangular, screw connection, 56 mm x 28 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL30A | 1002314 |

| | Brief description | Type | Part no. |
|---|---|------------|----------|
|  | Rectangular, screw connection, 37 mm x 56 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL40A | 1012720 |
|  | Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL80A | 1003865 |
|  | Self-adhesive | REF-IRF-56 | 5314244 |
|  | Round, plugable for metal plates, PMMA/ABS, Plug-in for sheets | PL22-3 | 1004488 |

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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