



WT100-2P1412S01

W100-2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-----------------|----------|
| WT100-2P1412S01 | 6052402 |

Other models and accessories → www.sick.com/W100-2

Detailed technical data

Features

| | |
|--|--------------------------------|
| Functional principle | Photoelectric proximity sensor |
| Functional principle detail | Background blanking |
| Dimensions (W x H x D) | 11 mm x 31 mm x 20 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 10 mm ... 170 mm ¹⁾ |
| Sensing range | 10 mm ... 150 mm ¹⁾ |
| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 8 mm (90 mm) |
| Wave length | 632 nm |
| Adjustment | None |

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

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⁾ |

¹⁾ Limit values.

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 = output reverse-polarity protected.

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

| | |
|---|---|
| Current consumption | 30 mA ³⁾ |
| Switching output | PNP |
| Switching mode | Dark switching |
| Signal voltage PNP HIGH/LOW | $U_V - 1,8 \text{ V} / \text{ca. } 0 \text{ V}$ |
| 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 with Stocko-connector, 260 mm ⁶⁾ |
| Cable material | PVC |
| Circuit protection | A ⁷⁾ B ⁸⁾ D ⁹⁾ |
| Protection class | III |
| Housing material | Plastic, ABS/PC/POM |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Ambient operating temperature | $-25 \text{ }^\circ\text{C} \dots +55 \text{ }^\circ\text{C}$ |
| Ambient temperature, storage | $-40 \text{ }^\circ\text{C} \dots +70 \text{ }^\circ\text{C}$ |

- 1) Limit values.
- 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 $0 \text{ }^\circ\text{C}$.
- 7) A = V_S connections reverse-polarity protected.
- 8) B = output reverse-polarity protected.
- 9) D = outputs overcurrent and short-circuit protected.

Classifications

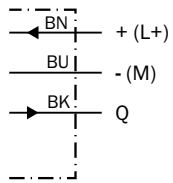
| | |
|---------------------|----------|
| eCl@ss 5.0 | 27270903 |
| eCl@ss 5.1.4 | 27270903 |
| eCl@ss 6.0 | 27270903 |
| eCl@ss 6.2 | 27270903 |
| eCl@ss 7.0 | 27270903 |
| eCl@ss 8.0 | 27270903 |
| eCl@ss 8.1 | 27270903 |
| eCl@ss 9.0 | 27270903 |
| eCl@ss 10.0 | 27270904 |
| eCl@ss 11.0 | 27270904 |
| eCl@ss 12.0 | 27270903 |
| ETIM 5.0 | EC001821 |
| ETIM 6.0 | EC001821 |
| ETIM 7.0 | EC002719 |
| ETIM 8.0 | EC002719 |

UNSPSC 16.0901

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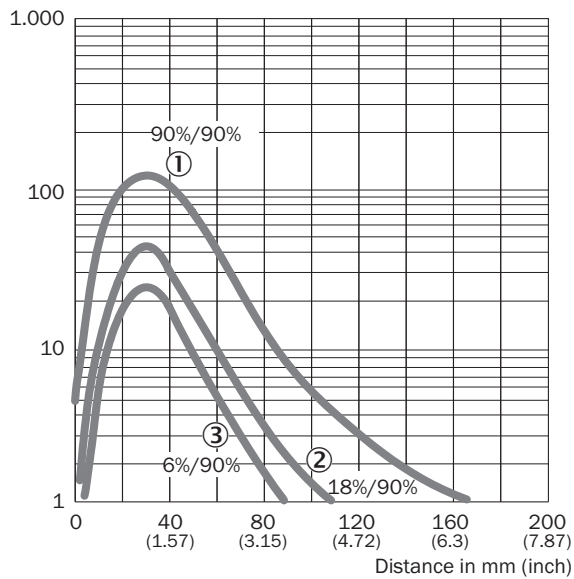
Connection diagram

Cd-043



Characteristic curve

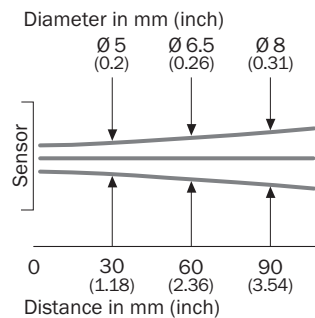
Operating reserve



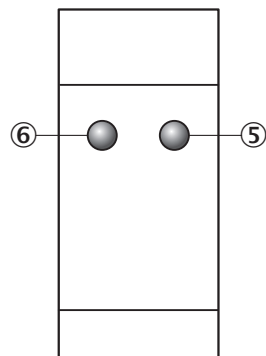
- ① Sensing range on white, 90% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on black, 6% remission

Light spot size

Light spot size

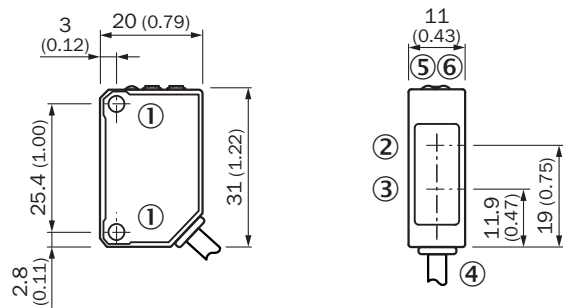


Adjustments



- ⑤ LED indicator orange: output active
- ⑥ LED indicator green: stability indicator



Dimensional drawing (Dimensions in mm (inch))



- 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/W100-2

| | Brief description | Type | Part no. |
|---|---|------------|----------|
| Mounting brackets and 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 |

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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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