



WT100-2P3419

W100-2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|--------------|----------|
| WT100-2P3419 | 6052379 |

Included in delivery: BEF-W100-A (1)

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. | 4 mm ... 140 mm ¹⁾ |
| Sensing range | 10 mm ... 100 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 | Potentiometer (Sensing range) |

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

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

Mechanics/electronics

| | |
|-------------------------------------|-----------------------------------|
| Supply voltage U_B | 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⁾ A = V_S connections reverse-polarity protected.

⁷⁾ B = output reverse-polarity protected.

⁸⁾ D = outputs overcurrent and short-circuit protected.

| | |
|---|---|
| Current consumption | 30 mA ³⁾ |
| Switching output | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark rotary switch |
| 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 Hz ⁵⁾ |
| Connection type | Connector M8, 3-pin |
| Circuit protection | A ⁶⁾ B ⁷⁾ D ⁸⁾ |
| Protection class | III |
| Housing material | Plastic, ABS/PC/POM |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Items supplied | Mounting bracket BEF-W100-A |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °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) A = V_S connections reverse-polarity protected.

7) B = output reverse-polarity protected.

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

Safety-related parameters

| | |
|-------------------------|-----------|
| MTTF_D | 954 years |
| DC_{avg} | 0 % |

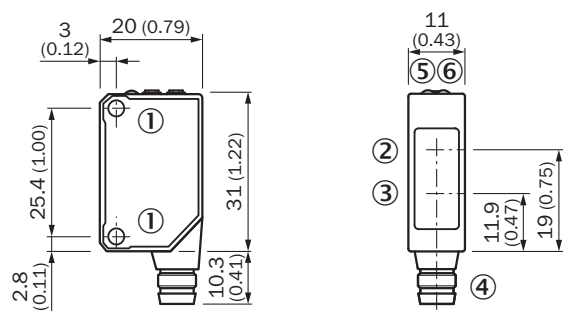
Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270903 |
| ECLASS 5.1.4 | 27270903 |
| ECLASS 6.0 | 27270903 |
| ECLASS 6.2 | 27270903 |
| ECLASS 7.0 | 27270903 |
| ECLASS 8.0 | 27270903 |
| ECLASS 8.1 | 27270903 |
| ECLASS 9.0 | 27270903 |
| ECLASS 10.0 | 27270904 |
| ECLASS 11.0 | 27270904 |
| ECLASS 12.0 | 27270903 |

| | |
|-----------------------|----------|
| ETIM 5.0 | EC001821 |
| ETIM 6.0 | EC001821 |
| ETIM 7.0 | EC002719 |
| ETIM 8.0 | EC002719 |
| UNSPSC 16.0901 | 39121528 |

Dimensional drawing (Dimensions in mm (inch))

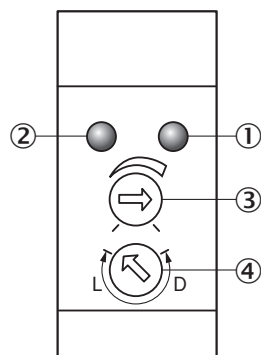
WT100, WL100



- 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

Adjustments

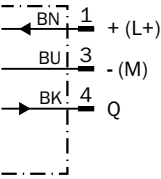
W100-2



- 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

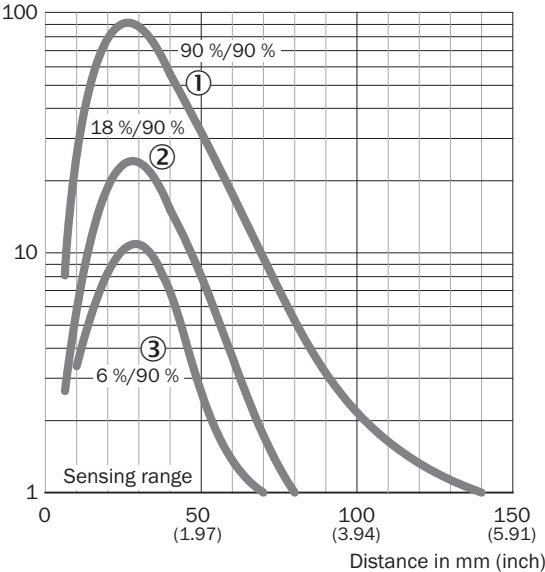
Cd-045



Characteristic curve

WT100-2, BGB

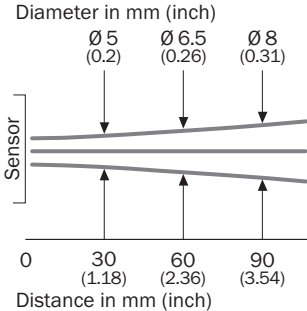
Function reserve



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

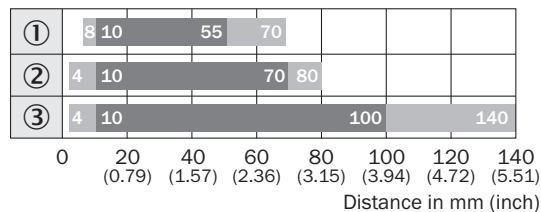
Light spot size

Light spot size



Sensing range diagram





WT100-2, BGB



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

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 |
| Plug connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M8, 3-pin, straight • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0803-G | 6037322 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U13-050VA1XLEAX | 2095884 |

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.

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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