



WTB8-N1111V

W8 Inox

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------|----------|
| WTB8-N1111V | 6041453 |

Other models and accessories → www.sick.com/W8_Inox

Detailed technical data

Features

| | |
|--|--|
| Sensor/ detection principle | Photoelectric proximity sensor, Background suppression |
| Dimensions (W x H x D) | 11 mm x 33.3 mm x 21 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 5 mm ... 150 mm ¹⁾ |
| Sensing range | 5 mm ... 100 mm ¹⁾ |
| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 8 mm (100 mm) |
| Wave length | 650 nm |
| Adjustment | Potentiometer, 4 turns |

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

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

Mechanics/electronics

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

¹⁾ Limit values, reverse-polarity protected, operation 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.

¹⁰⁾ At an air humidity of 35 ... 95%.

| | |
|---|--|
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark selector |
| Signal voltage NPN HIGH/LOW | Approx. $V_S / < 1.8 \text{ V}$ |
| Output current I_{max} | 100 mA |
| Response time | $\leq 0.5 \text{ ms}^{4)}$ |
| Switching frequency | 1,000 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⁾ |
| Protection class | III |
| Weight | 83.6 g |
| Housing material | Stainless steel, Stainless steel V4A (1.4404, 316L) |
| Enclosure rating | IP69K |
| Items supplied | Stainless steel mounting bracket (1.4301/304) BEF-W100-A |
| Ambient operating temperature | -30 °C ... +60 °C ¹⁰⁾ |
| Ambient storage temperature | -40 °C ... +70 °C |
| UL File No. | FDA |

1) Limit values, reverse-polarity protected, operation 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.

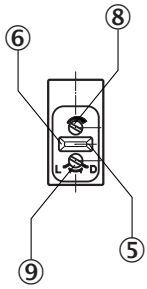
10) At an air humidity of 35 ... 95%.

Classifications

| | |
|-----------------------|----------|
| ECl@ss 5.0 | 27270904 |
| ECl@ss 5.1.4 | 27270904 |
| ECl@ss 6.0 | 27270904 |
| ECl@ss 6.2 | 27270904 |
| ECl@ss 7.0 | 27270904 |
| ECl@ss 8.0 | 27270904 |
| ECl@ss 8.1 | 27270904 |
| ECl@ss 9.0 | 27270904 |
| ETIM 5.0 | EC002719 |
| ETIM 6.0 | EC002719 |
| UNSPSC 16.0901 | 39121528 |

Adjustments possible

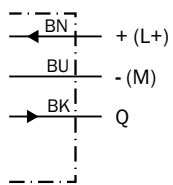
WTB8



- ⑤ Orange LED indicator : switching output active
- ⑥ LED indicator green: Stability indicator light up when the light received is < 0.9 or > 1.1 (based on switching threshold $Q = 1$)
- ⑧ Setting of the sensing range: potentiometer, 4 revolutions
- ⑨ Light/ dark rotary switch: L = light switching, D = dark switching

Connection diagram

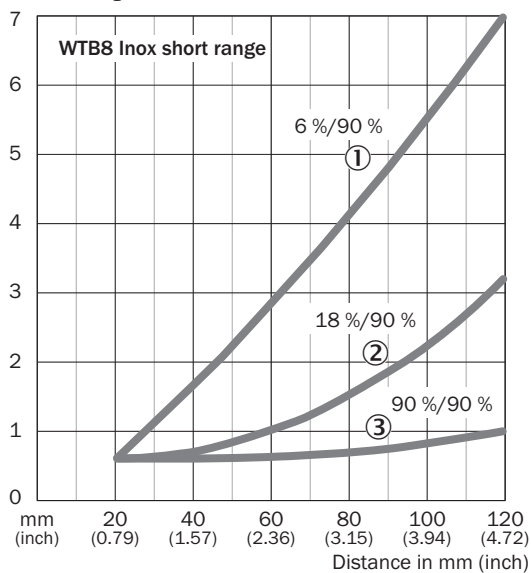
Cd-043



Characteristic curve

WTB8, 150 mm

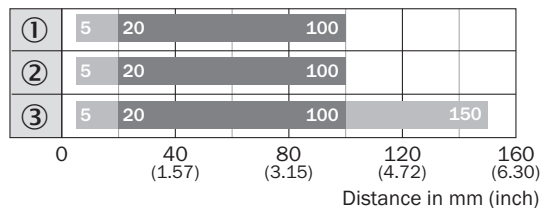
% of sensing distance



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

Sensing range diagram

WTB8, 150 mm

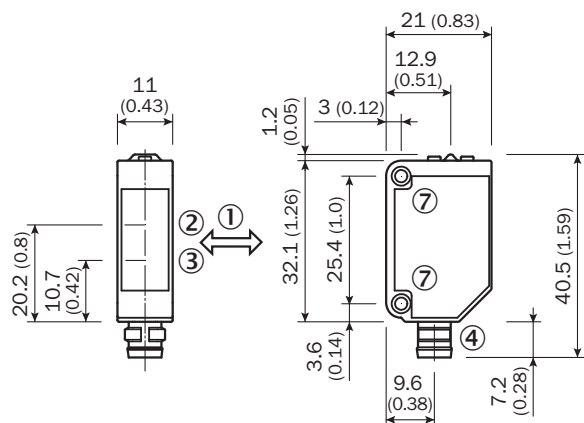


■ Sensing range ■ Sensing range max.

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

Dimensional drawing (Dimensions in mm (inch))


WTB8, 150 mm






- ① Standard direction
- ② Center of optical axis, receiver
- ③ Center of optical axis, sender
- ④ Connection
- ⑦ Threaded mounting hole M3, max. tightening torque of 1.8 Nm for M3 screw with washer, spring ring and mounting bracket (2 x 3.2 mm bore-hole)

Recommended accessories

Other models and accessories → www.sick.com/W8_Inox

| | Brief description | Type | Part no. |
|---|--|--------------|----------|
| Universal bar clamp systems | | | |
|  | Plate N08N for universal clamp bracket, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322626), mounting hardware | BEF-KHS-N08N | 2051616 |

| | Brief description | Type | Part no. |
|---|---|------------|----------|
| Device protection (mechanical) | | | |
|  | Safety bracket for floor mounting, Stainless steel 1.4571, mounting hardware included | BEF-SW-W4S | 2051497 |
| 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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