WTB8-N1131 | W8
PHOTOELECTRIC SENSORS

Ordering information

<table>
<thead>
<tr>
<th>Type</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTB8-N1131</td>
<td>6033204</td>
</tr>
</tbody>
</table>

Other models and accessories: [www.sick.de/W8](http://www.sick.de/W8)

Illustration may differ

Detailed technical data

Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor/detection principle</td>
<td>Photoelectric proximity sensor, Background suppression</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>11 mm x 31 mm x 20 mm</td>
</tr>
<tr>
<td>Housing design (light emission)</td>
<td>Rectangular</td>
</tr>
<tr>
<td>Sensing range max.</td>
<td>30 mm ... 300 mm</td>
</tr>
<tr>
<td>Sensing range</td>
<td>40 mm ... 300 mm</td>
</tr>
<tr>
<td>Type of light</td>
<td>Visible red light</td>
</tr>
<tr>
<td>Light source</td>
<td>LED</td>
</tr>
<tr>
<td>Light spot size (distance)</td>
<td>Ø 20 mm (300 mm)</td>
</tr>
<tr>
<td>Wave length</td>
<td>650 nm</td>
</tr>
<tr>
<td>Adjustment</td>
<td>Potentiometer, 4 turns</td>
</tr>
</tbody>
</table>

1) Object with 90 % reflectance (referred to standard white, DIN 5033)
2) Average service life: 100,000 h at Tu = +25 °C.

Mechanics/electronics

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>10 V DC ... 30 V DC</td>
</tr>
<tr>
<td>Ripple</td>
<td>± 10 %</td>
</tr>
<tr>
<td>Power consumption</td>
<td>≤ 30 mA</td>
</tr>
<tr>
<td>Output type</td>
<td>NPN, open collector</td>
</tr>
</tbody>
</table>

1) Limit values when operated in short-circuit protected network: max. 8 A.
2) May not exceed or fall below Uv tolerances.
3) Without load.
4) Signal transit time with resistive load.
6) Do not bend below 0 °C.
7) A = V5 connections reverse-polarity protected.
8) B = inputs and output reverse-polarity protected.
9) D = outputs overcurrent and short-circuit protected.
### Switching mode
- **Light/dark switching**

### Switching mode selector
- **Manually selectable**

### Signal voltage NPN HIGH/LOW
- Approx. $V_S / < 1.8 \, \text{V}$

### Output current $I_{\text{max.}}$
- $\leq 100 \, \text{mA}$

### Response time
- $\leq 0.5 \, \text{ms} \, ^4$

### Switching frequency
- $1,000 \, \text{Hz} \, ^5$

### Connection type
- Cable, 3-wire, 2 m

### Cable material
- PVC

### Circuit protection
- A $^7$
- B $^8$
- D $^9$

### Weight
- 50 g

### Housing material
- ABS plastic

### Optics material
- PMMA

### Enclosure rating
- IP 67

### Items supplied
- Stainless steel mounting bracket (1.4301/304) BEF-W100-A

### Ambient operating temperature
- $-25 \, ^\circ \text{C} \ldots +55 \, ^\circ \text{C}$

### Ambient storage temperature
- $-40 \, ^\circ \text{C} \ldots +70 \, ^\circ \text{C}$

---

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.
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.

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**Dimensional drawing** (dimensions in mm (inch))

![Dimensional Drawing](image)
Adjustments possible

WTB8

① Orange LED indicator: switching output active
② LED indicator green: stability indicator
⑦ Sensing range adjustment
⑧ Light/dark rotary switch: L = light switching, D = dark switching

Connection diagram

Cd-043

brn — + (L+)
blu — (M)
blk | Q

brn — — — — — —
### Characteristic curve

WTB8, 300 mm

![Characteristic curve graph]

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

### Sensing range diagram

WTB8, 300 mm

![Sensing range diagram]

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

### Recommended accessories

Other models and accessories → [www.sick.de/W8](http://www.sick.de/W8)

<table>
<thead>
<tr>
<th>Brief description</th>
<th>Type</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal bar clamp systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Diecast zinc (clamp), Universal clamp (5322626), mounting hardware</td>
<td>BEF-KHS-N08</td>
<td>2051607</td>
</tr>
<tr>
<td>Device protection (mechanical)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brief description</td>
<td>Type</td>
<td>Part no.</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>Safety bracket for floor mounting, Stainless steel 1.4571, mounting hardware included</td>
<td>BEF-SW-W4S</td>
<td>2051497</td>
</tr>
<tr>
<td>Mounting brackets and mounting plates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting bracket for wall mounting, Stainless steel, mounting hardware included</td>
<td>BEF-W100-A</td>
<td>5311520</td>
</tr>
<tr>
<td>Mounting bracket for floor mounting, steel, zinc coated, mounting hardware included</td>
<td>BEF-W100-B</td>
<td>5311521</td>
</tr>
</tbody>
</table>


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