



Photoelectric sensors
W8, Photoelectric proximity sensor, Background
suppression

WTB8-P1131S06



Model Name > [WTB8-P1131S06](#)
Part No. > [6038620](#)



Illustration may differ

At a glance

- Background suppression
- Standard miniature housing with M3 threaded mounting holes
- Light/dark switching selectable via rotary switch

Your benefits

- Reliable detection of objects regardless of color or surface qualities
- Background suppression provides a high level of precision and repeatability
- Highly visible light spot simplifies alignment
- M3 mounting holes ensure quick installation



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	11 mm x 31 mm x 20 mm
Housing design (light emission):	Rectangular
Sensing range max.:	40 mm ... 300 mm ¹⁾
Sensing range:	30 mm ... 300 mm ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	650 nm
Alarm output:	-
Focus adjustable:	-
Adjustment:	Potentiometer, 4-turn
Light spot size (distance):	Ø 20 mm (300 mm)

^{1) 2)} Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C

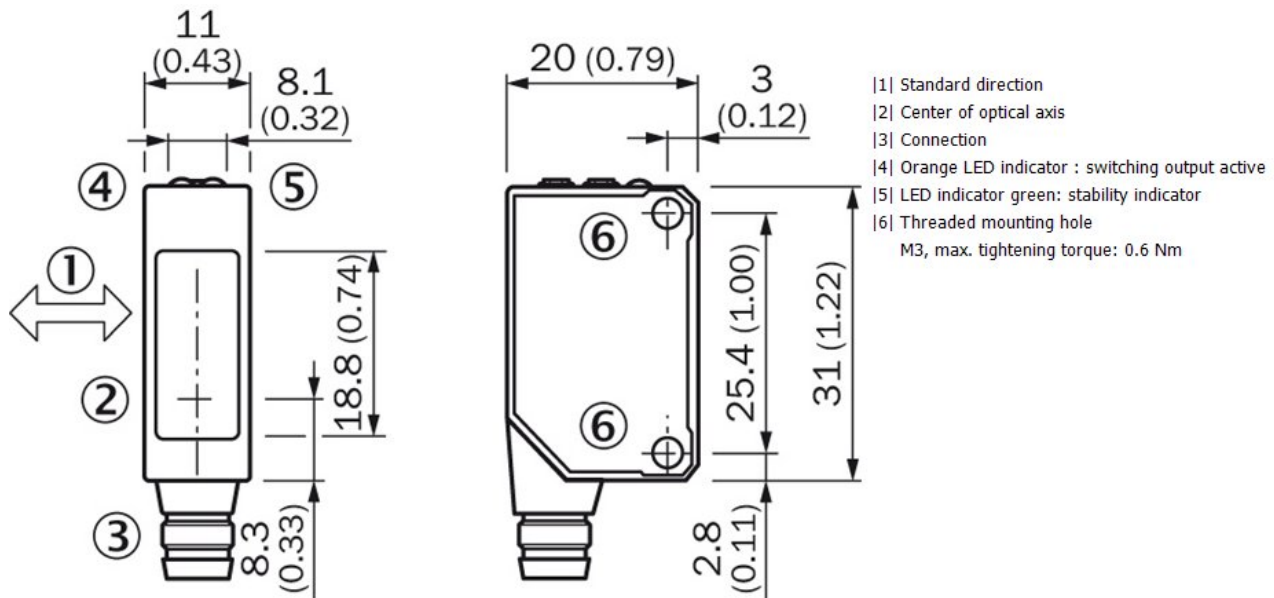
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 %
Power consumption:	≤ 30 mA ²⁾
Output type:	PNP, open collector
Switching mode:	Light/dark-switching
Switching mode selector:	Manually selectable
Signal voltage PNP HIGH/LOW:	Approx. VS - 1.8 V / 0 V
Output current I _{max.} :	≤ 100 mA
Response time:	≤ 0.5 ms ³⁾

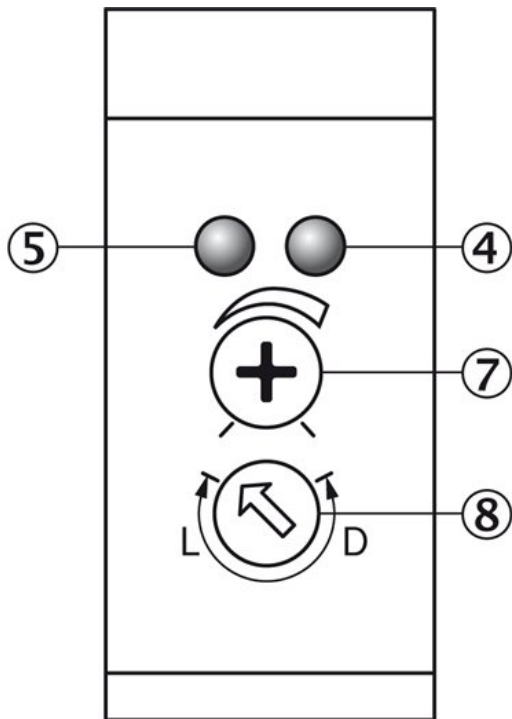
Switching frequency:	1,000 Hz ⁴⁾
Connection type:	Cable with connector M8, 3-pin, 200 mm ⁵⁾
Cable material:	PVC
Circuit protection:::	A, B, D ^{6) 7) 8)}
Weight:	50 g
Polarisation filter:	-
Front screen heating:	-
AS-Interface-Chip:	-
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Stainless steel mounting bracket (1.4301/304) BEF-W100-A
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ Do not bend below 0 °C ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity protected ⁸⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing

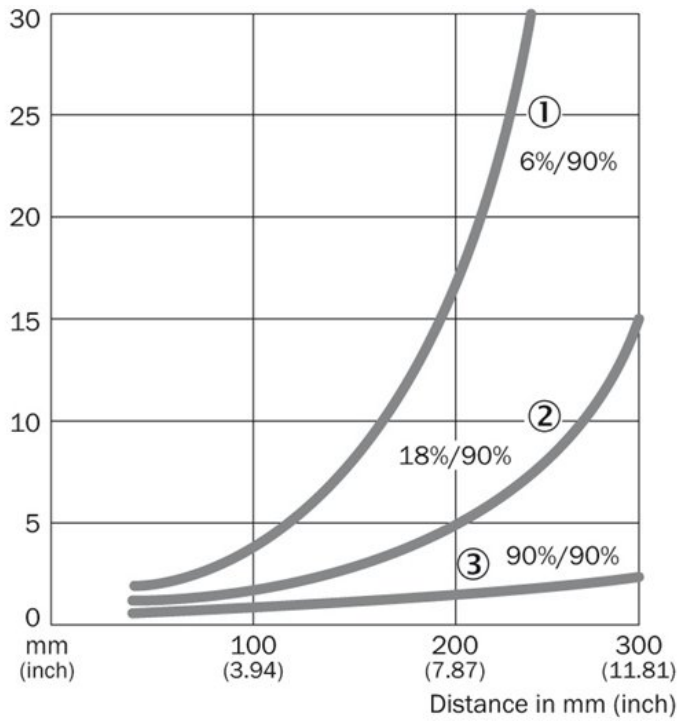


Adjustments possible



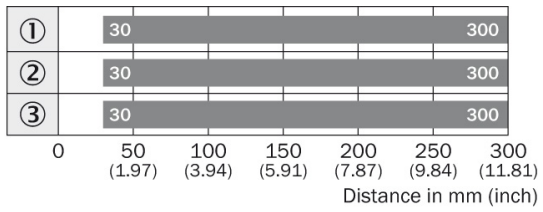
- |4| Orange LED indicator : switching output active
- |5| LED indicator green: stability indicator
- |7| Sensing range adjustment
- |8| Light/ dark rotary switch L = light switching, D = dark switching

Characteristic curve



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

Sensing range diagram



■ Sensing range

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

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