WTB8L-P1111
W8 Laser

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WTB8L-P1111 | W8 Laser

MINIATURE PHOTOELECTRIC SENSORS

Illustration may differ

Ordering information

Type	Part no.
WTB8L-P1111	6033223

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

Other models and accessories ➜ www.sick.com/W8_Laser

Detailed technical data

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.	5 mm ... 100 mm [1]
Sensing range	20 mm ... 100 mm [1]
Type of light	Visible red light
Light source	Laser [2]
Light spot size (distance)	Ø 1 mm (100 mm)
Wave length	650 nm
Laser class	1
Adjustment	Potentiometer, 4 turns
Special applications	Detecting small objects, Detection of objects moving at high speeds
Test input sender off	TE to +Vs

[1] Object with 90 % reflectance (referred to 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]
Power 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	Approx. V_S – 1.8 V / 0 V
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 0.25 ms [4]
Switching frequency	2,000 Hz [5]
Connection type	Cable, 4-wire, 2 m [6]
Cable material	PVC
Circuit protection	A [7] B [8] D [9]
Weight	50 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Stainless steel mounting bracket (1.4301/304) BEF-W100-A
Ambient operating temperature	–10 °C … +50 °C
Ambient storage temperature	–40 °C … +70 °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.

[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.

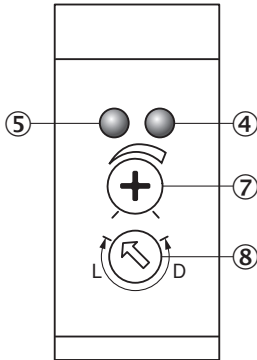[9] D = outputs overcurrent and short-circuit protected.

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
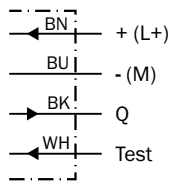
WTB8

④ Orange LED indicator : switching output active
⑤ LED indicator green: stability indicator
⑦ Adjustment of sensing range
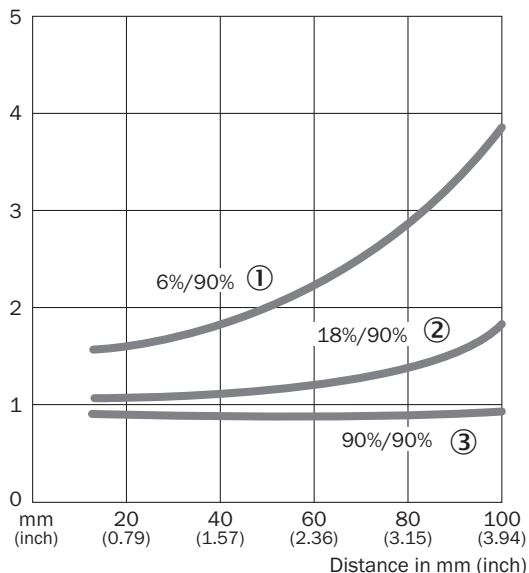⑧ Light/ dark rotary switch: L = light switching, D = dark switching

Connection diagram
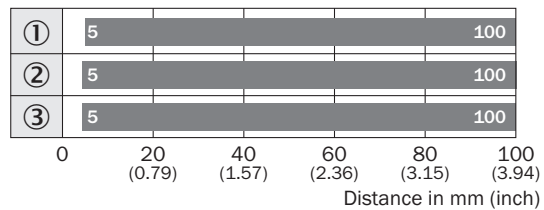
Cd-116

Characteristic curve

WTB8L, 100 mm

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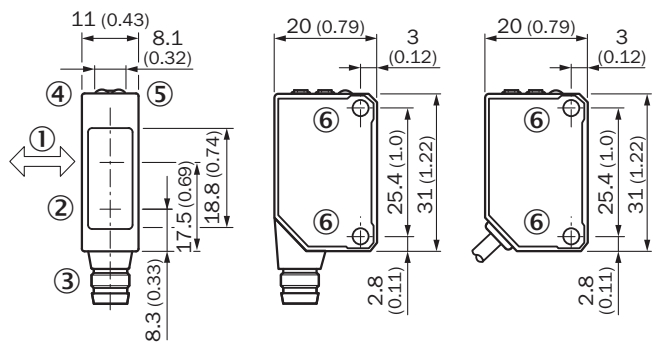③ Sensing range on white, 90% remission

Sensing range diagram

WTB8, 100 mm

Sensing range

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))

① Standard direction
② Center of optical axis, sender
③ Connection
④ Orange LED indicator : switching output active
⑤ LED indicator green: stability indicator
⑥ Threaded mounting hole M3

Recommended accessories

Other models and accessories ➜ www.sick.com/W8_Laser

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N08	2051607
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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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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