



WS/WE100L-F2131

W100 Laser

PHOTOELECTRIC SENSORS





Ordering information

Туре	part no.
WS/WE100L-F2131	6030715

Other models and accessories → www.sick.com/W100_Laser

Illustration may differ



Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m 35 m
Sensing range	0 m 30 m
Type of light	Visible red light
Light source	Laser 1)
Light spot size (distance)	Ø 30 mm (30 m)
Wave length	650 nm
Laser class	1 ²⁾
Adjustment	Potentiometer, 270°
Special applications	Detecting small objects, Detection of objects moving at high speeds

 $^{^{1)}}$ Average service life: 50,000 h at T_U = +25 °C.

 $^{^{2)}\,\}mathrm{Do}$ not intentionally look into the laser beam. Never point the laser beam at people's eyes.

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Power consumption, sender	\leq 15 mA $^{3)}$
Power consumption, receiver	\leq 20 mA $^{3)}$
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Signal voltage PNP HIGH/LOW	$U_V - 1.8 \text{ V} / \text{ ca. 0 V}$
Output current I _{max} .	≤ 100 mA
Response time	< 0.25 ms ⁴⁾
Switching frequency	2,000 Hz ⁵⁾
Connection type	Connector M8, 3-pin
Circuit protection	A ⁶⁾ B ⁷⁾ D ⁸⁾
Weight	10 g
Housing material	Plastic, ABS/PC/POM
Optics material	Plastic, PMMA
Enclosure rating	IP65
Items supplied	2 Stainless steel mounting brackets (1.4301/304) BEF-W100-A
Ambient operating temperature	-10 °C +50 °C
Ambient temperature, storage	-40 °C +70 °C

 $^{^{1)}\,\}mathrm{Limit}$ values when operated in short-circuit protected network: max. 8 A.

Safety-related parameters

MTTFD	994 years
DC _{avg}	0 %

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cRUus certificate	✓
Laser safety (IEC 60825-1) certificate	✓

 $^{^{\}rm 2)}$ May not fall below or exceed UV 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.

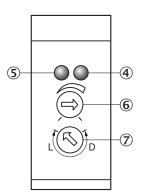
 $^{^{7)}}$ B = inputs and output reverse-polarity protected.

 $^{^{8)}}$ D = outputs overcurrent and short-circuit protected.

Classifications

ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments WS/WE100L

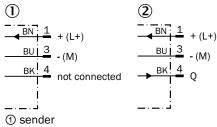


- ④ Orange LED indicator: switching output active
- ⑤ LED indicator green: power on
- 6 sensitivity control 270°
- ① Light/ dark rotary switch: L = light switching, D = dark switching

Connection type

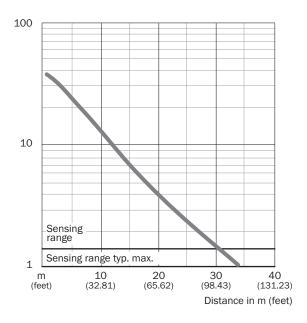


Connection diagram Cd-051

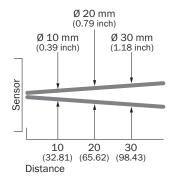


2 receiver

Characteristic curve WS/WE100L

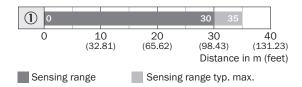


Light spot size WS/WE100L

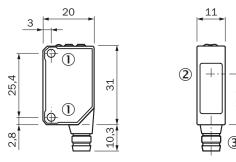


All dimensions in m (feet)

Sensing range diagram WS/WE100L



Dimensional drawing WS/WE100L



Dimensions in mm (inch)

- ① Threaded mounting hole M3
- 2 Center of optical axis
- 3 Connection

Recommended accessories

Other models and accessories → www.sick.com/W100_Laser

	Brief description	Туре	part no.
Mounting systems			
0,0	 Description: Mounting bracket for wall mounting Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S 	BEF-W100-A	5311520
6	 Description: Plate N08 for universal clamp bracket Material: Steel, zinc diecast Details: Zinc plated steel (sheet), Zinc die cast (clamping bracket) Items supplied: Universal clamp (5322626), mounting hardware Usable for: W100, W150, W4S, W4F, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W10, G6 Inox, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, MultiLine, LUT3, KT5, KT8, KT10, CS8 	BEF-KHS-N08	2051607
	 Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E 	BEF-KHS-N11N	2071081

	Brief description	Туре	part no.	
connectors ar	connectors and cables			
	 Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² 0.5 mm² 	STE-0803-G	6037322	
	 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, Uncontaminated zones 	YF8U13-050VA1XLEAX	2095884	
No.	 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, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-050UA1XLEAX	2094788	

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