



WSE8-P2131S01

W8

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WSE8-P2131S01	6071912

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

Other models and accessories → www.sick.com/W8

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 ... 10 m
Sensing range	0 m ... 8 m
Type of light	Visible red light
Light source	LED ¹⁾
Light spot size (distance)	Ø 30 mm (1 m)
Wave length	650 nm
Adjustment	Potentiometer, 270°
Special applications	Detection of objects moving at high speeds
Special features	Mounting holes, Ø 3,2 mm un-threaded

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	± 10 % ²⁾

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_V 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.

Current 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. $V_S - 1.8 \text{ V} / 0 \text{ V}$
Output current $I_{\max.}$	$\leq 100 \text{ mA}$
Response time	$\leq 0.25 \text{ ms}$ 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
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	2 Stainless steel mounting brackets (1.4301/304) BEF-W100-A
Ambient operating temperature	-25 °C ... +55 °C
Ambient temperature, storage	-40 °C ... +70 °C

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_y 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.

Safety-related parameters

MTTF_D	739.3 years
DC_{avg}	0 %

Certificates

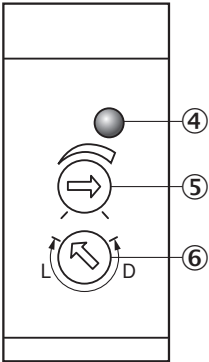
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901

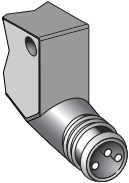
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments

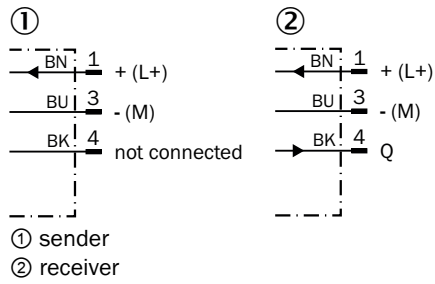


- ④ Orange LED indicator : switching output active
- ⑤ sensitivity control
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Connection type

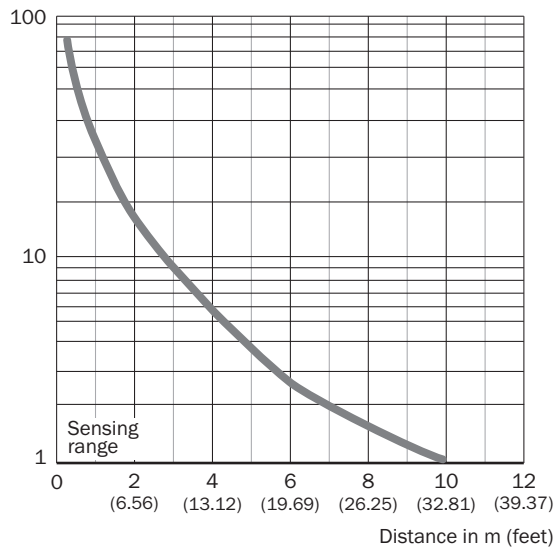


Connection diagram Cd-051

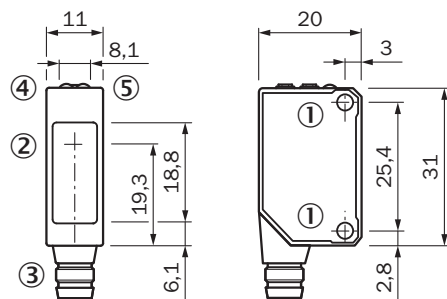


Operating reserve

Operating reserve



Dimensional drawing WL8



Dimensions in mm (inch)

- ① Threaded mounting hole M3, max. tightening torque: 0.6 Nm
- ② Center of optical axis
- ③ Connection
- ④ Orange LED indicator : switching output active
- ⑤ LED indicator green: stability indicator

Recommended accessories

Other models and accessories → www.sick.com/W8

	Brief description	Type	part no.
Mounting systems			
	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
	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
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
	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

SICK AT A GLANCE

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com