



WSE4S-3P2230

W4S-3

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WSE4S-3P2230	1067843

Other models and accessories → www.sick.com/W4S-3

Detailed technical data

Features

Sensor/ detection principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	12.2 mm x 41.8 mm x 17.3 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 5 m
Sensing range	0 m ... 4.5 m
Type of light	Visible red light
Light source	PinPoint LED ¹⁾
Light spot size (distance)	Ø 50 mm (2 m)
Wave length	650 nm
Adjustment	None

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
-----------------------	-----------------------------------

- ¹⁾ Limit values.
- ²⁾ May not exceed or fall below U_V tolerances.
- ³⁾ Sender.
- ⁴⁾ Receiver.
- ⁵⁾ Signal transit time with resistive load.
- ⁶⁾ With light/dark ratio 1:1.
- ⁷⁾ A = V_S connections reverse-polarity protected.
- ⁸⁾ C = interference suppression.
- ⁹⁾ D = outputs overcurrent and short-circuit protected.

Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA ³⁾ 20 mA ⁴⁾ 20 mA ⁴⁾
Power consumption, sender	4) 4)
Power consumption, receiver	4) 4)
Switching output	PNP
Switching mode	Light/dark switching
Output current I_{max}	≤ 100 mA
Response time	< 0.5 ms ⁵⁾
Switching frequency	1,000 Hz ⁶⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	40 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP66
Test input sender off	TE to 0 V
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493
Part number of individual components	2073737 WS4S-3D2230 2073738 WE4S-3P2230

- 1) Limit values.
- 2) May not exceed or fall below U_y tolerances.
- 3) Sender.
- 4) Receiver.
- 5) Signal transit time with resistive load.
- 6) With light/dark ratio 1:1.
- 7) A = V_S connections reverse-polarity protected.
- 8) C = interference suppression.
- 9) D = outputs overcurrent and short-circuit protected.

Safety-related parameters

MTTF_D	587 years
DC_{avg}	0%

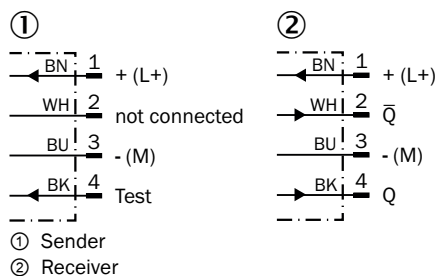
Classifications

ECI@ss 5.0	27270901
ECI@ss 5.1.4	27270901
ECI@ss 6.0	27270901
ECI@ss 6.2	27270901

ECl@ss 7.0	27270901
ECl@ss 8.0	27270901
ECl@ss 8.1	27270901
ECl@ss 9.0	27270901
ECl@ss 10.0	27270901
ECl@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
UNSPSC 16.0901	39121528

Connection diagram

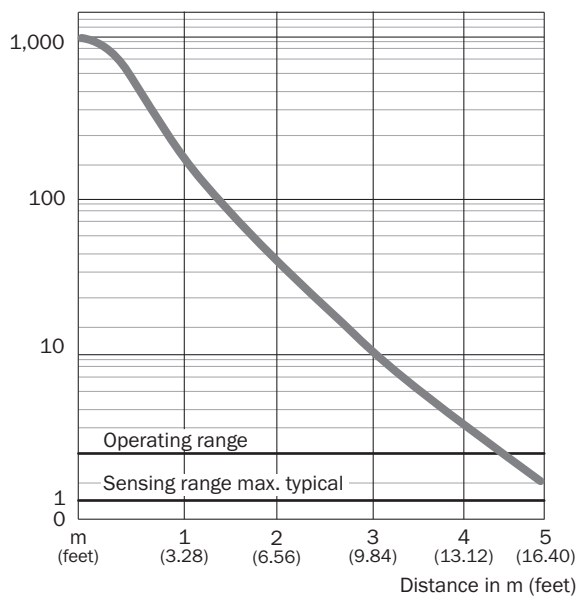
Cd-072



Characteristic curve

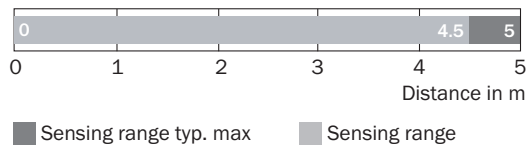
WSE4S-3

Operating reserve



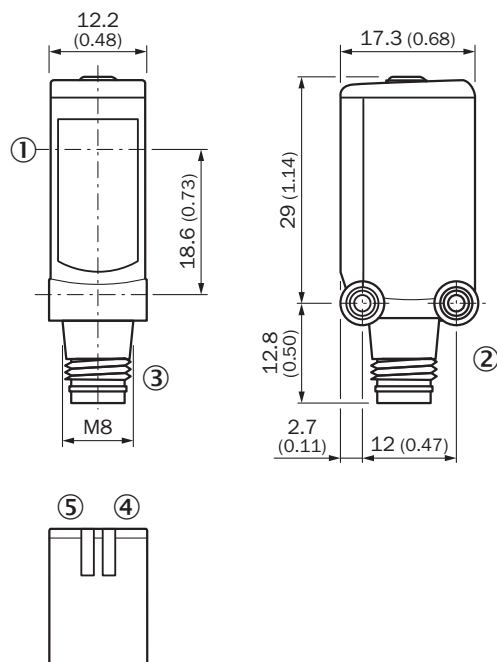
Sensing range diagram

WSE4S-3



Dimensional drawing (Dimensions in mm (inch))


WL4S-3, WSE4S-3, potentiometer





- ① Center of optical axis
- ② Threaded mounting hole M3
- ③ Connection
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Recommended accessories

Other models and accessories → www.sick.com/W4S-3

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for wall mounting, Stainless steel 1.4571, mounting hardware included	BEF-W4-A	2051628

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323

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