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Product data sheet



WSE9-3P3230

W9

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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WSE9-3P3230 | W9

SMALL PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
WSE9-3P3230	1056568

Other models and accessories → www.sick.com/W9

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	12.2 mm x 50 mm x 23.6 mm
Housing design (light emission)	Rectangular
Mounting hole	M3
Sensing range max.	0 m ... 10 m
Sensing range	0 m ... 7 m
Type of light	Visible red light
Light source	PinPoint LED [1]
Light spot size (distance)	Ø 25 mm (1 m)
Wave length	650 nm
Adjustment	None

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

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Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	30 mA [3]
Switching output	PNP [4]
Output function	Complementary
Switching mode	Light/dark switching [4]
Output current $I_{max.}$	≤ 100 mA [5]
Response time	< 0.5 ms [6]
Switching frequency	1,000 Hz [7]
Connection type	Cable with M8 male connector, 4-pin, 120 mm [8]
Cable material	PVC
Conductor cross section	0.14 mm²
Circuit protection	A [9] B [10] C [11]
Protection class	III
Weight	80 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67 IP69K
Test input sender off	Sender off
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493
Part number of individual components	2062564 WS9-3D3230 2062565 WE9-3P3230

[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] Q = light switching.
[5] At and above Tu 50 °C, a max. load current of Imax. = 50 mA is permitted.
[6] Signal transit time with resistive load.
[7] With light/dark ratio 1:1.
[8] Do not bend below 0 °C.
[9] A = V_S connections reverse-polarity protected.
[10] B = inputs and output reverse-polarity protected.
[11] C = interference suppression.

Safety-related parameters

$MTTF_D$	968 years
DC_{avg}	0 %
T_M (mission time)	20 years

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

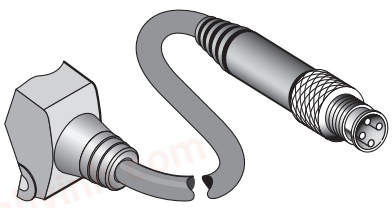
Adjustments

No adjustment possibility



③ LED indicator yellow: Status of received light beam
④ LED indicator green: power on

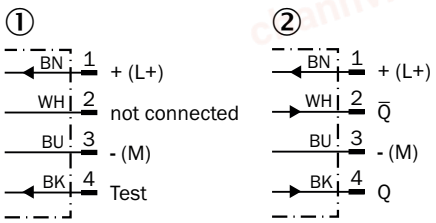
Connection type



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Connection diagram

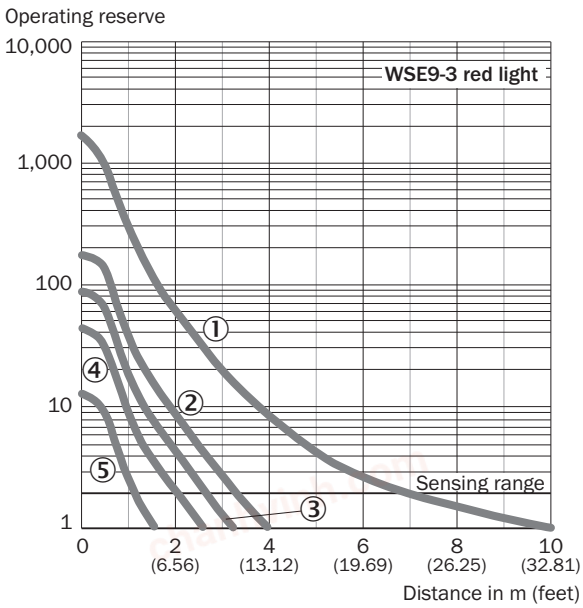
Cd-072



① Sender
② Receiver

Characteristic curve

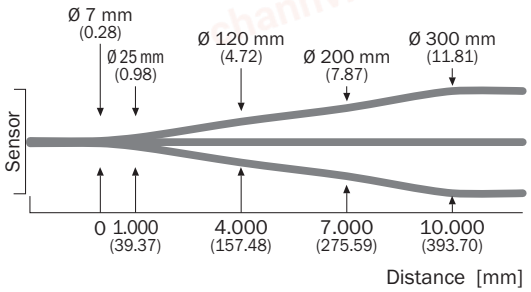
WSE9-3, red light, 10 m



① Without masks
② With slotted mask, width 2.0 mm
③ With slotted mask, width 1.5 mm
④ With slotted mask, width 1.0 mm
⑤ With slotted mask, width 0.5 mm

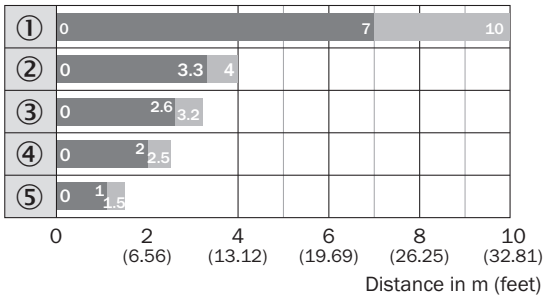
Light spot size

WSE9-3, red light, 10 m



Sensing range diagram

WSE9-3, red light, 10 m



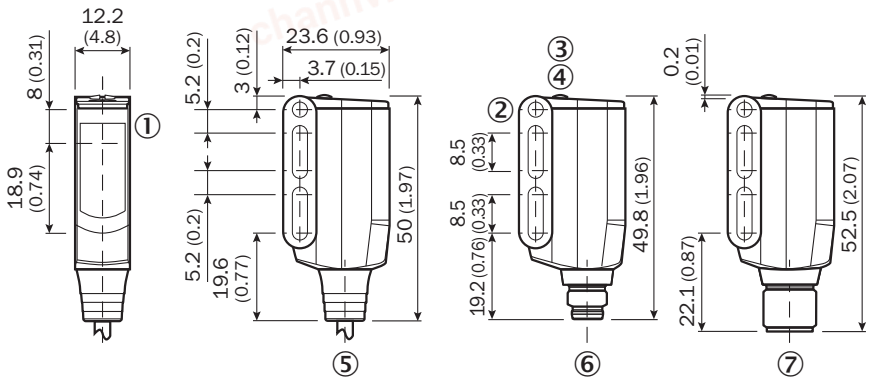
Sensing range Sensing range, max. typ.

① Without masks
② With slotted mask, width 2.0 mm
③ With slotted mask, width 1.5 mm
④ With slotted mask, width 1.0 mm
⑤ With slotted mask, width 0.5 mm

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Dimensional drawing (Dimensions in mm (inch))

WL9-3, WSE9-3



① Sender and receiver optical axis center
② Mounting hole M3 (Ø 3.1 mm)
③ LED indicator yellow: Status of received light beam
④ LED indicator green: power on
⑤ Connecting cable or connector
⑥ Male connector M8, 4-pin
⑦ Male connector M12, 4-pin

Recommended accessories

Other models and accessories ➜ www.sick.com/W9

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W9-2	2022855
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 Cable: unshielded	STE-0804-G	6037323

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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.”

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