



WSE9-3P2230

W9-3

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WSE9-3P2230	1049076

Other models and accessories → www.sick.com/W9-3

Detailed technical data

Features

Sensor/detection principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	12.2 mm x 49.8 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_J = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Power consumption	≤ 30 mA ³⁾
Output type	PNP ⁴⁾
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	Connector M8, 4-pin
Circuit protection	A ⁸⁾ B ⁹⁾ C ¹⁰⁾
Protection class	III
Weight	13 g
Housing material	Plastic, VISTAL®, Plastic, PMMA
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67 IP69K
Test input sender off	Sender off
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493
Part number of individual components	2055821 WS9-3D2230 2055822 WE9-3P2230

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 T_u 50 °C, a max. load current of I_{max.} = 50 mA is permitted.

⁶⁾ Signal transit time with resistive load.

⁷⁾ With light/dark ratio 1:1.

⁸⁾ A = V_S connections reverse-polarity protected.

⁹⁾ B = inputs and output reverse-polarity protected.

¹⁰⁾ C = interference suppression.

Classifications

ECl@ss 5.0	27270901
ECl@ss 5.1.4	27270901
ECl@ss 6.0	27270901
ECl@ss 6.2	27270901
ECl@ss 7.0	27270901
ECl@ss 8.0	27270901
ECl@ss 8.1	27270901
ECl@ss 9.0	27270901

ETIM 5.0	EC002716
ETIM 6.0	EC002716
UNSPSC 16.0901	39121528

Adjustments possible

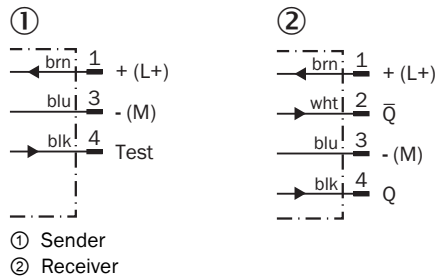
No adjustment possibility



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

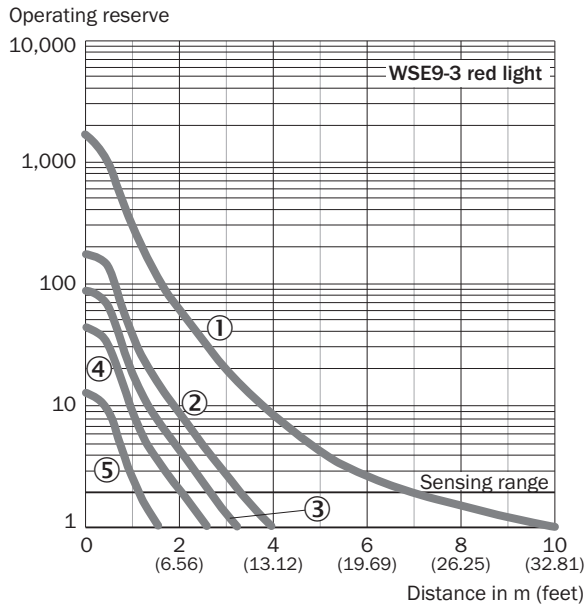
Connection diagram

Cd-077



Characteristic curve

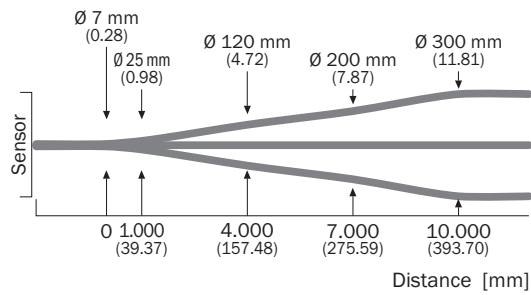
WSE9-3, red light, 10 m



- 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

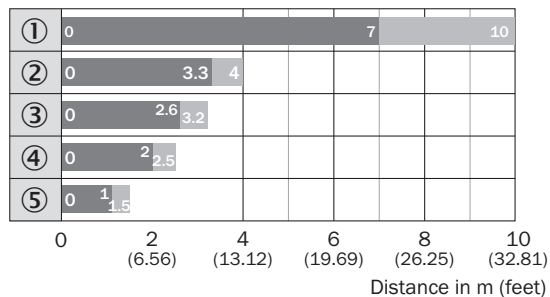
Light spot size

WSE9-3, red light, 10 m



Sensing range diagram

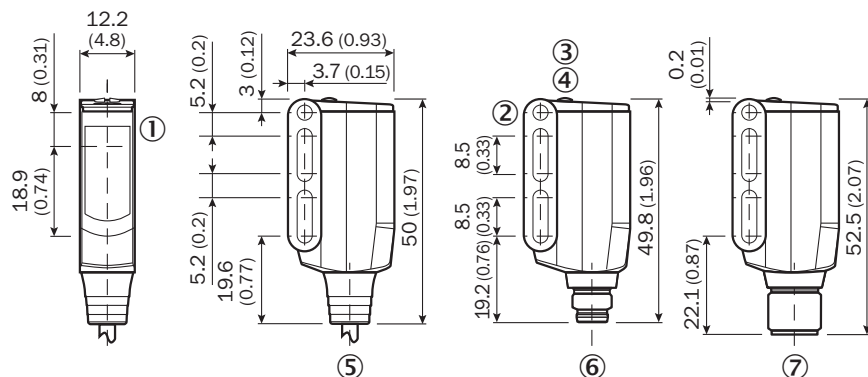
WSE9-3, red light, 10 m



- 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

Dimensional drawing (Dimensions in mm (inch))


WL9-3, WSE9-3







- ① Center of optical axis, sender and receiver
- 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 Connector M8, 4-pin
- ⑦ Male connector M12, 4-pin

Recommended accessories

Other models and accessories → www.sick.com/W9-3

	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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W9-2	2022855
	Adapter plate, Stainless steel	BEF-AP-W9	2022734
	Fastening plate with threaded sleeve M3, PMMA, Brass (Br)	BEF-GPM3-W9	4066039
Masks			
	Mask card, vertical/horizontal slots, slot width: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm	BL-9-2	4033253

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