



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.

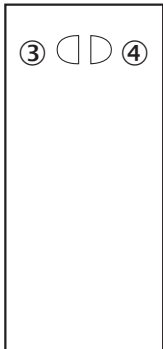
Classifications

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

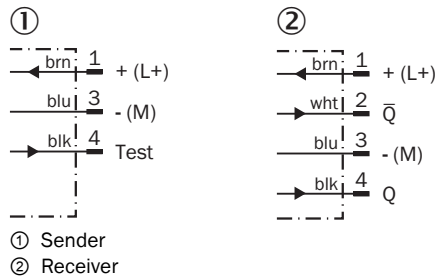
No adjustment possibility



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

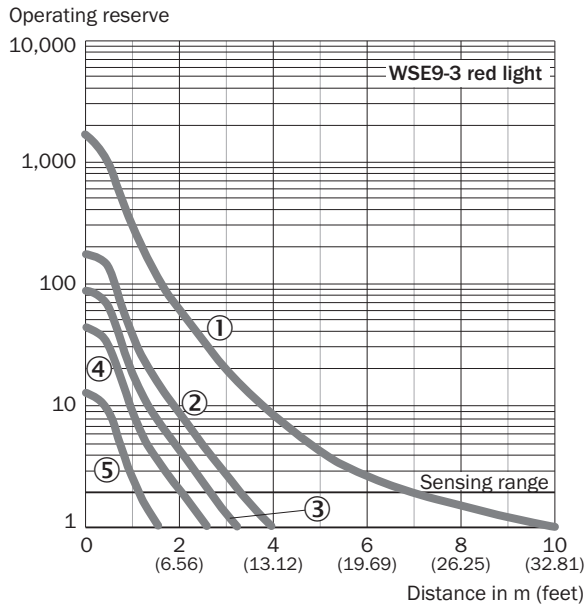
Connection diagram

Cd-077



Characteristic curve

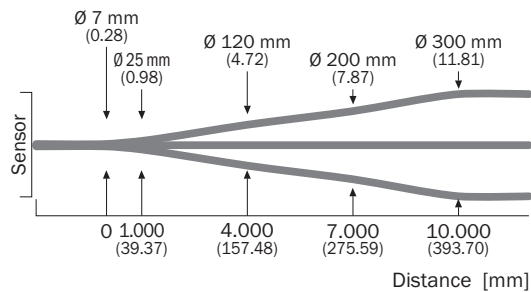
WSE9-3, red light, 10 m



- 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

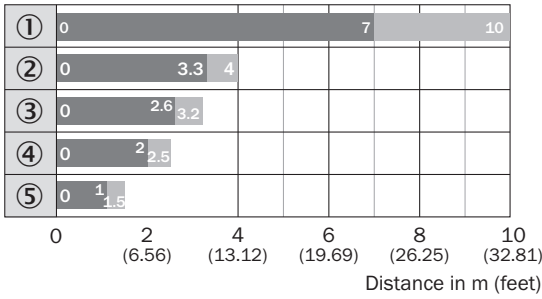
Light spot size

WSE9-3, red light, 10 m



Sensing range diagram

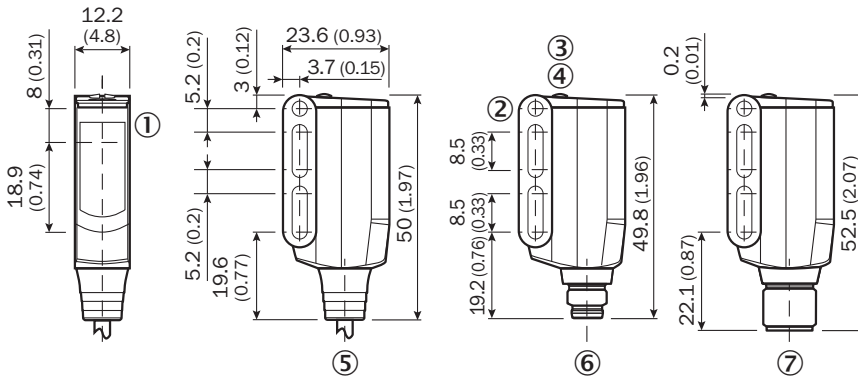
WSE9-3, red light, 10 m



- 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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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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