



Photoelectric sensors
W9-3, Through-beam photoelectric sensor

WSE9M4-3N2230



Type > [WSE9M4-3N2230](#)
Part No. > [1052938](#)



Illustration may differ

At a glance

- High-performance through-beam sensor in ultra-rugged VISTAL™ housing
- PinPoint LED for highly visible and precise light spot
- Variable mounting with M4 hole pattern
- Wide range of connection options

Your benefits

- Rugged VISTAL™ housing provides reliable installation and operation
- Reliable object detection in all situations using best-in-class performance
- Quick and easy alignment with reliable object detection due to the highly visible PinPoint light spot
- M4 slotted hole mounting for multiple mounting possibilities
- One housing with a wide range of options makes machine integration easy
- Variety of accessories for simple mounting



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:	M4
Sensing range max.:	0 m ... 10 m
Sensing range:	0 m ... 7 m
Type of light:	Visible red light
Light source:	PinPoint LED ¹⁾
Adjustment:	No adjustment
Light spot size (distance):	Ø 25 mm (1 m)

¹⁾ Average service life of 100,000 h at T_A = +25 °C

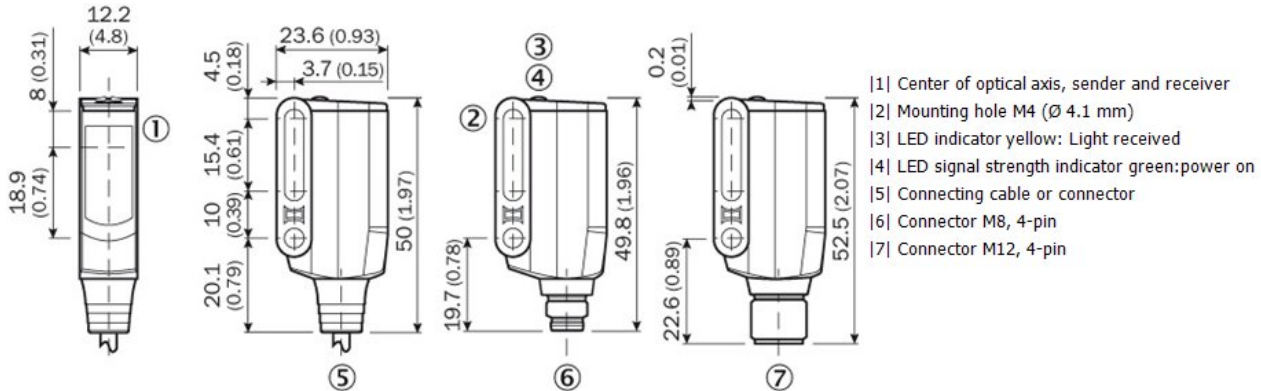
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	NPN ⁴⁾
Switching mode:	Light/dark switching ⁵⁾
Output current I _{max.} :	≤ 100 mA ⁶⁾
Response time:	< 0.5 ms ⁷⁾

Switching frequency:	1,000 Hz ⁸⁾
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, C ⁹⁾ ¹⁰⁾ ¹¹⁾
Protection class:	III
Weight:	13 g
Polarisation filter:	-
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67 IP 69K
Test input sender off:	Sender off
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
Part number of individual components:	Receiver, WE9M4-3N2230, 2058556, Sender, WS9M4-3D2230, 2057938
UL File No.:	NRKH.E181493
Housing material:	Plastic, VISTAL

1) Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ^{4) 5)} Q = light-switching ⁶⁾ As of Tu 50 °C, a max. load current $I_{max.} = 50 \text{ mA}$ is permitted ⁷⁾ Signal transit time with resistive load ⁸⁾ With light/dark ratio 1:1 ⁹⁾ $A = V_S$ connections reverse-polarity protected ¹⁰⁾ B = inputs and output reverse-polarity protected ¹¹⁾ C = interference suppression

Dimensional drawing



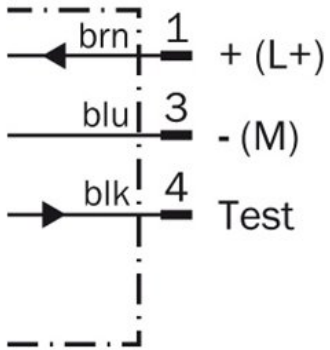
Adjustments possible



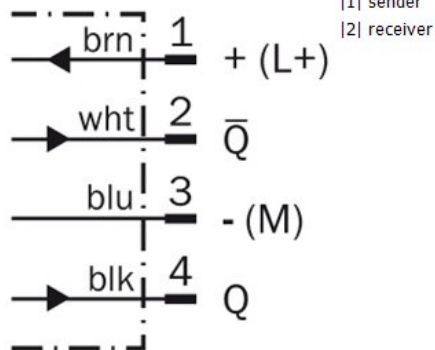
|3| LED indicator yellow: Light received
|4| LED signal strength indicator green:power on

Connection diagram

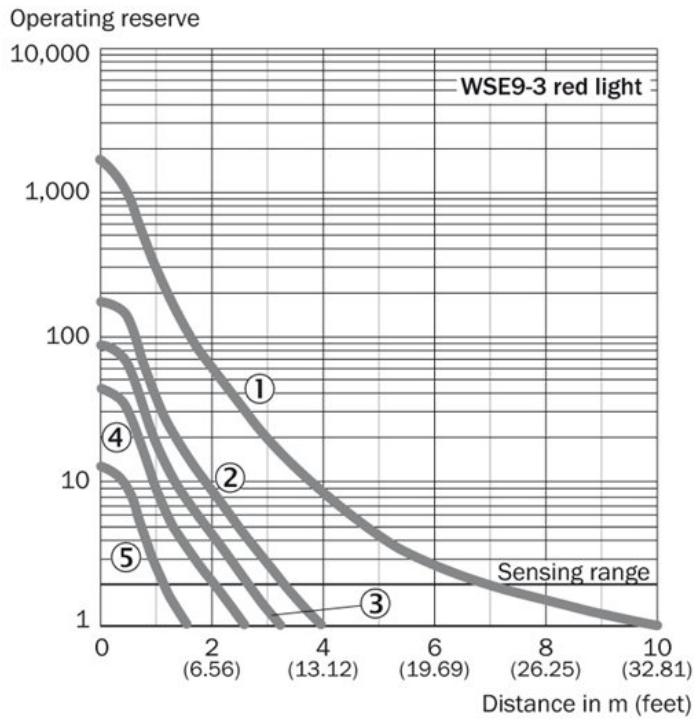
①



②

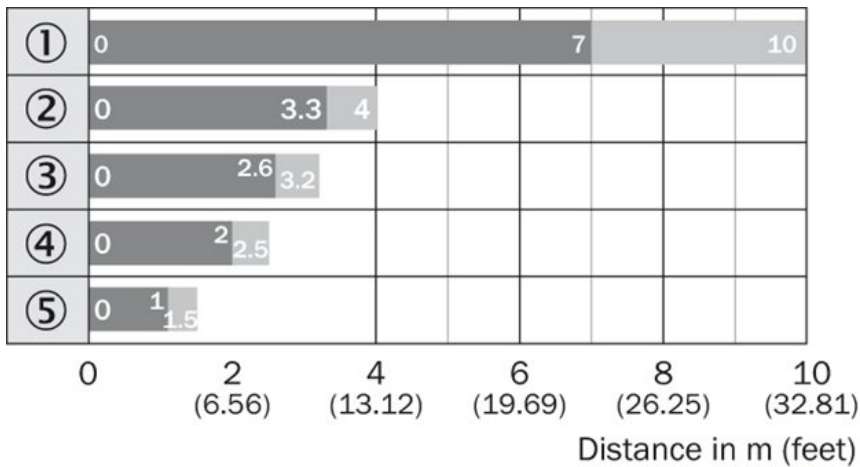


Characteristic curve



- [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

Sensing range diagram

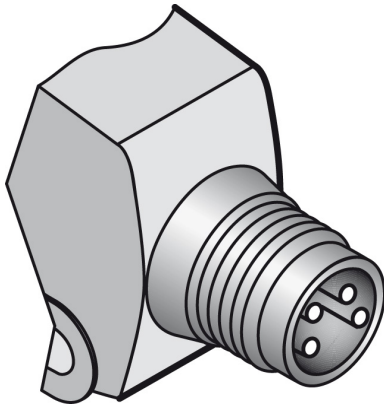


- [1] Without masks
- [2] With slotted mask, width 2.0 mm
- [3] With slotted mask, width 1.5 mm
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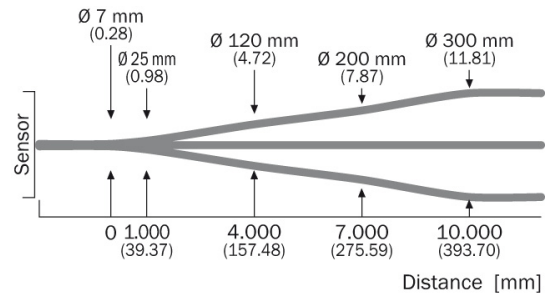
■ Sensing range

■ Sensing range, max. typ.

Connection type



Light spot size



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