

ONLINE DATA SHEET
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Photoelectric sensors
W9-3, Photoelectric retro-reflective sensor, autocollimation

WL9M4-3N1132



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W9-3, Photoelectric retro-reflective sensor, autocollimation

Model Name > WL9M4-3N1132
Part No. > 1051892



Illustration may differ

At a glance

- High-performance retro-reflective sensor in ultra-rugged VISTAL™ housing
- PinPoint LED for highly visible and precise light spot
- Autocollimation optics
- 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:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	12.2 mm x 50 mm x 23.6 mm
Housing design (light emission):	Rectangular
Mounting hole:	M4
Sensing range max.:	0 m ... 5 m [1]
Sensing range:	0 m ... 3 m [2]
Type of light:	Visible red light
Light source:	PinPoint LED [3]
Teach-in:	Single teach-in button
Adjustment:	Single teach-in button
Light spot size (distance):	Ø 45 mm (1.5 m)

[1] [2] PL80A [3] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

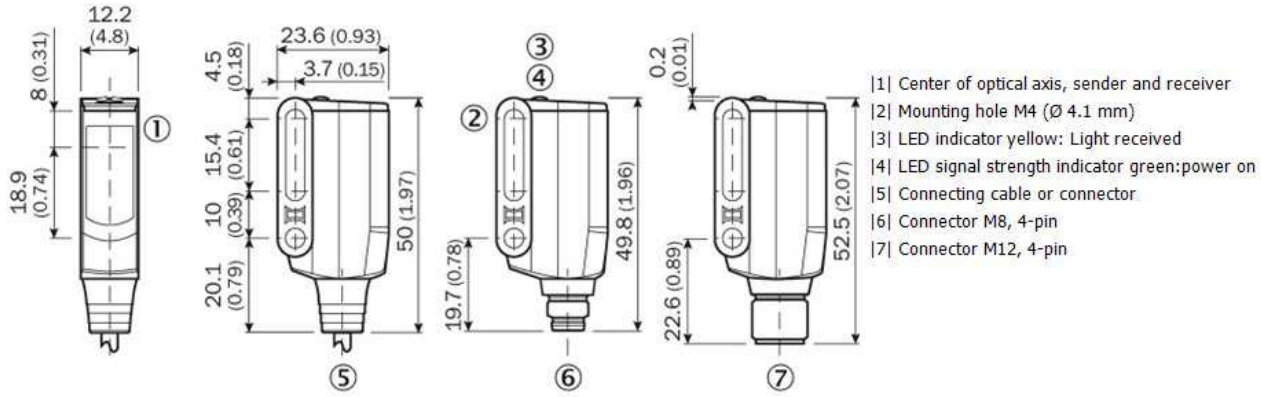
Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	< 5 Vpp [2]
Power consumption:	≤ 30 mA [3]
Output type:	NPN [4]
Output function:	Complementary

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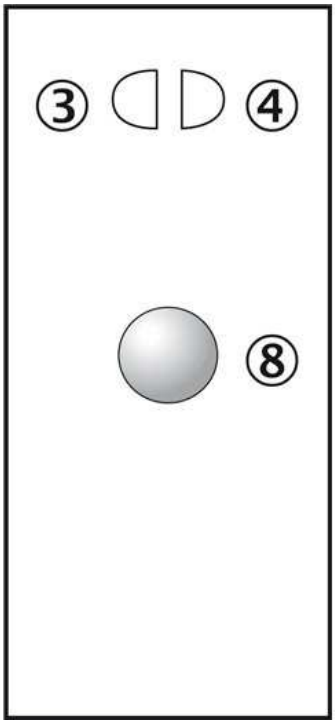
Switching mode:	Light/dark switching [5]
Output current Imax.:	≤ 100 mA [6]
Response time:	< 0.5 ms [7]
Switching frequency:	1,000 Hz [8]
Connection type:	Cable, 4-wire, 2 m [9]
Cable material:	PVC
Conductor cross-section:	0.14 mm²
Circuit protection:::	A, B, C [10] [11] [12]
Protection class:	III
Weight:	80 g
Polarisation filter:	✓
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67 IP 69K
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
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 Ilmax. = 50 mA is permitted [7] Signal transit time with resistive load [8] With light/dark ratio 1:1 [9] Do not bend below 0 °C [10] A = V_S connections reverse-polarity protected [11] B = inputs and output reverse-polarity protected [12] C = interference suppression

Dimensional drawing

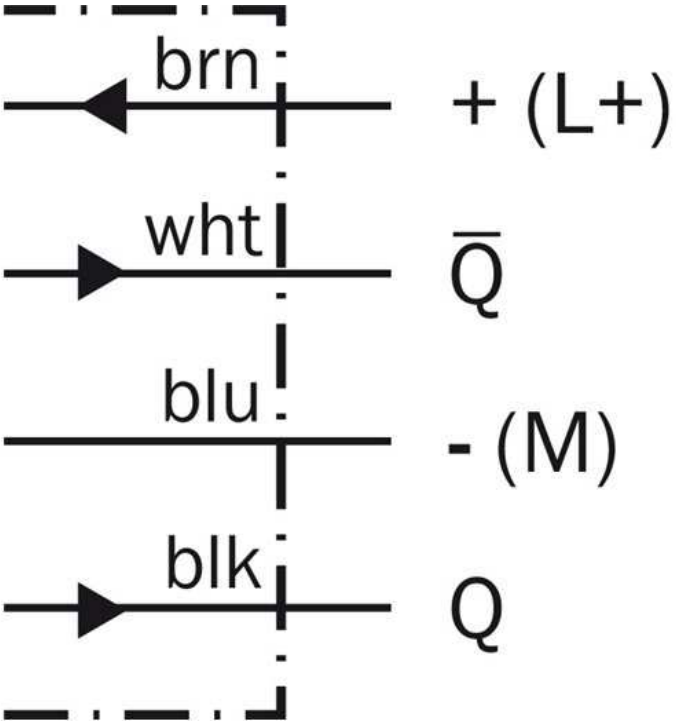


Adjustments possible



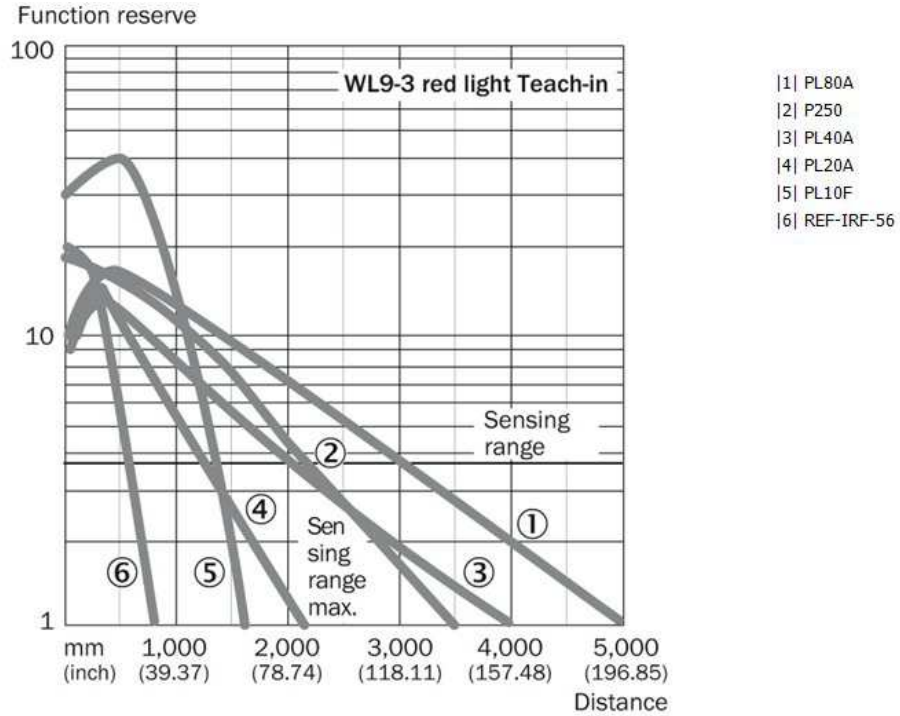
|3| LED indicator yellow: Light received
|4| LED signal strength indicator green:power on
|8| Teach-in button

Connection diagram



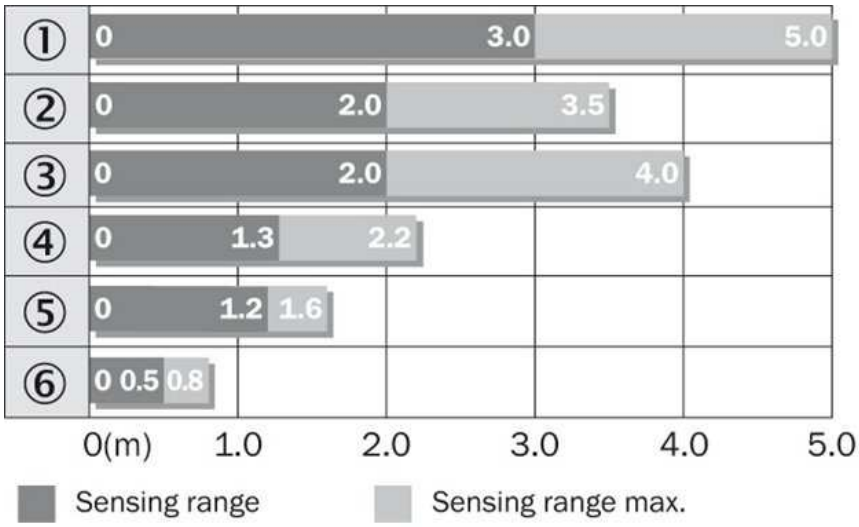
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Characteristic curve



|1| PL80A
|2| P250
|3| PL40A
|4| PL20A
|5| PL10F
|6| REF-IRF-56

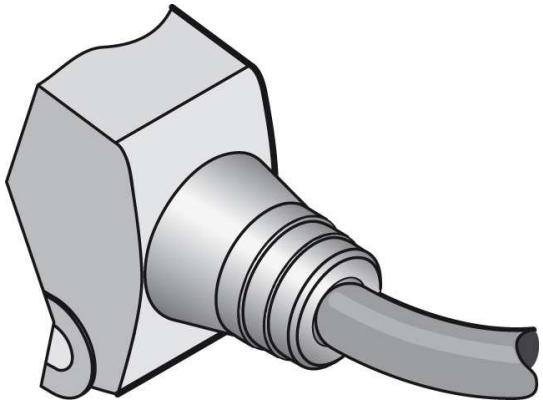
Sensing range diagram



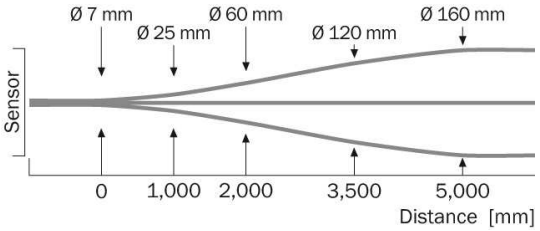
|1| PL80A
|2| P250F
|3| PL40A
|4| PL20F
|5| PL10F
|6| REF-IRF-56

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Connection type



Light spot size



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