



Photoelectric sensors W9-3 Glass, Photoelectric retro-reflective sensor, autocollimation

WL9M4G-3N1132



Model Name > [WL9M4G-3N1132](#)
Part No. > [1051897](#)



Illustration may differ

At a glance

- High-performance retro-reflective clear material sensor in ultra-rugged VISTAL™ housing
- Best-in-class optical performance for transparent object detection
- Continuous threshold adaption
- 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 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)
Continuous threshold adaption:	✓

^{1) 2)} PL80A ³⁾ Average service life of 100,000 h at T_A = +25 °C

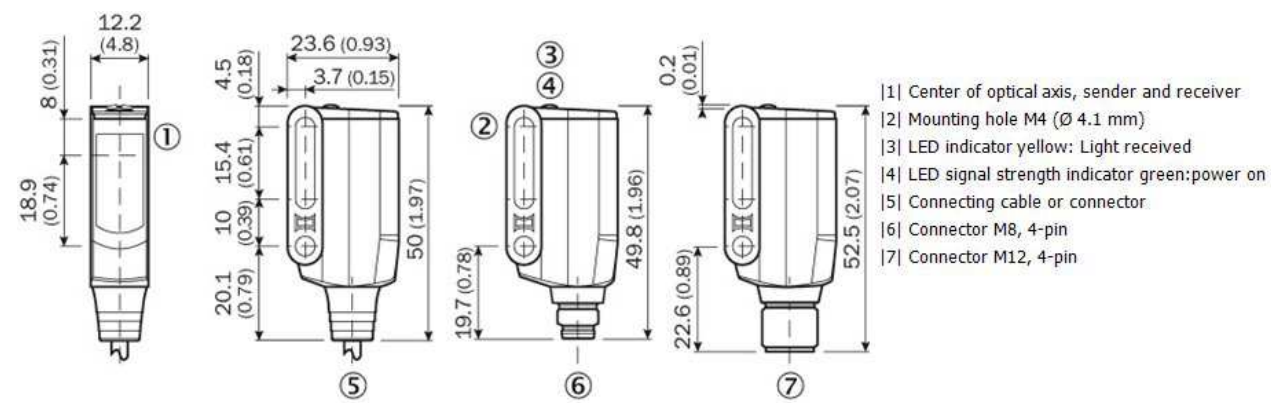
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾

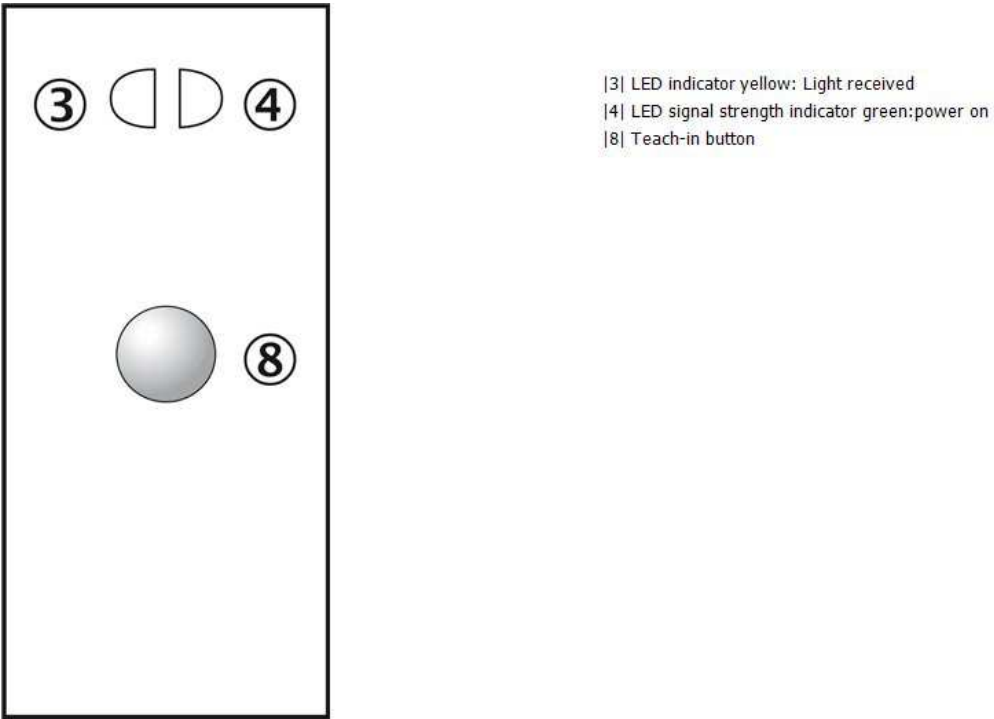
Power consumption:	$\leq 20 \text{ mA}$ ³⁾
Output type:	NPN ⁴⁾
Output function:	Complementary
Switching mode:	Light/dark switching ⁵⁾
Output current I _{max.} :	$\leq 100 \text{ mA}$ ⁶⁾
Response time:	$< 0.5 \text{ ms}$ ⁷⁾
Switching frequency:	1,000 Hz ⁸⁾
Connection type:	Cable, 4-wire, 2 m ⁹⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
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
Special feature:	For transparent objects
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 I_{max.} = 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

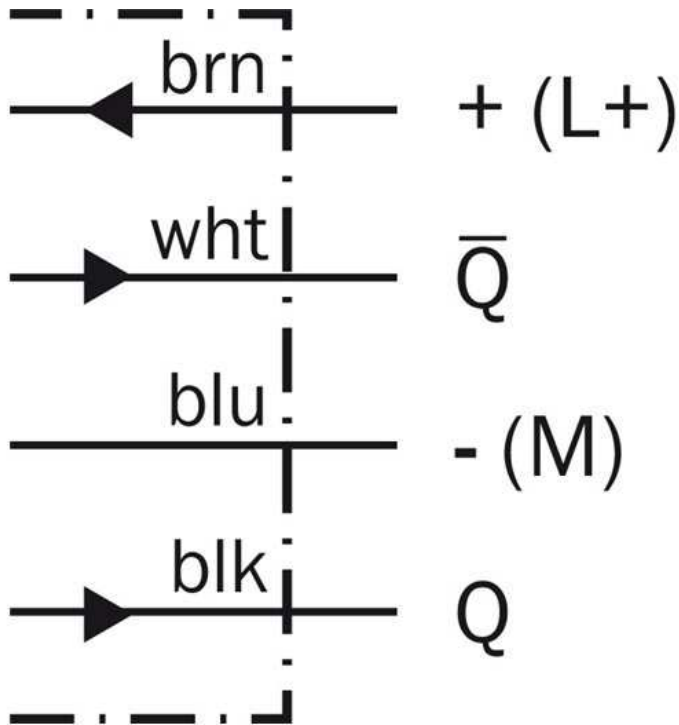
Dimensional drawing



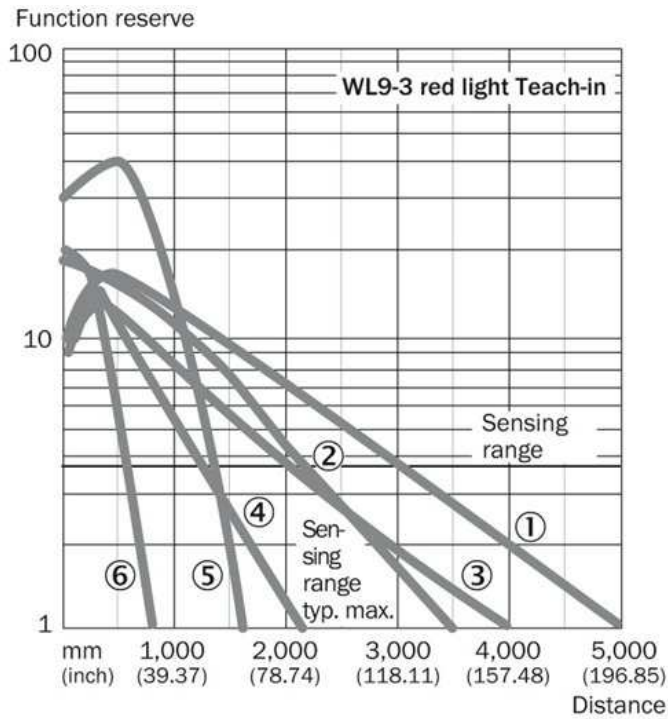
Adjustments possible



Connection diagram

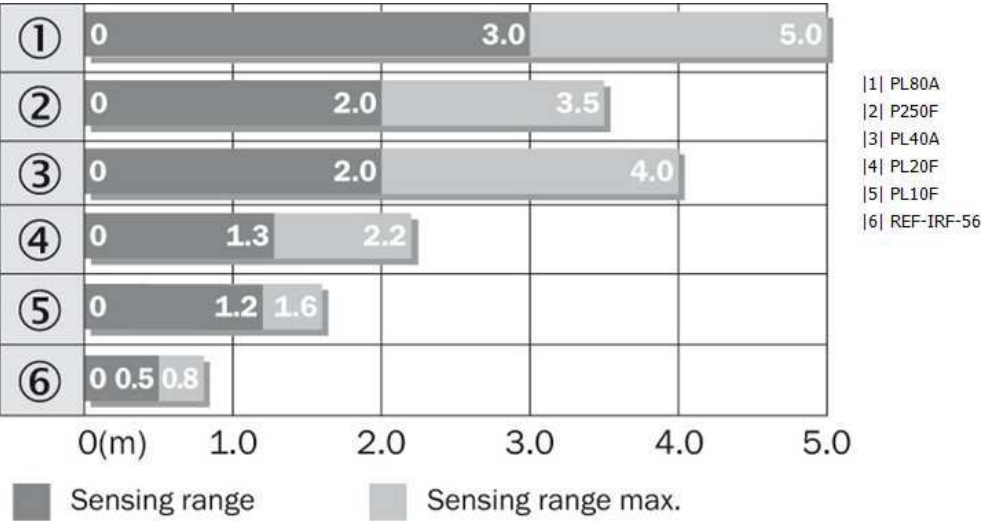


Characteristic curve

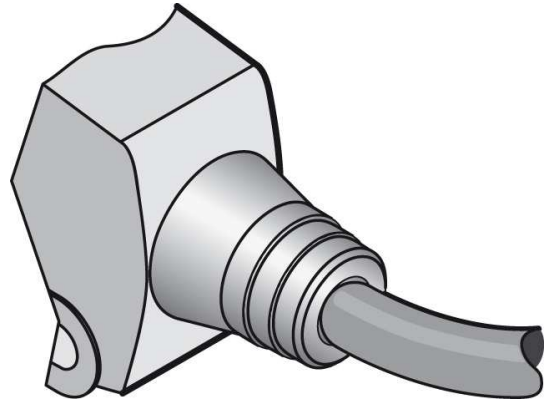


- |1| PL80A
- |2| P250F
- |3| PL40A
- |4| PL20F
- |5| PL10F
- |6| REF-IRF-56

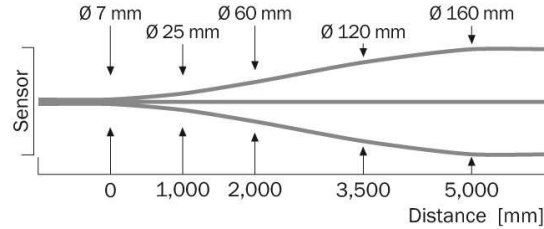
Sensing range diagram



Connection type



Light spot size



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