



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

WL9-3P3162



Model Name > [WL9-3P3162](#)
Part No. > [1054424](#)



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 M3 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 technology
- Quick and easy alignment with reliable object detection due to the highly visible PinPoint light spot
- M3 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:	M3
Sensing range max.:	0 m ... 0.4 m ¹⁾
Sensing range:	0 m ... 0.3 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 2 mm (35 mm)

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

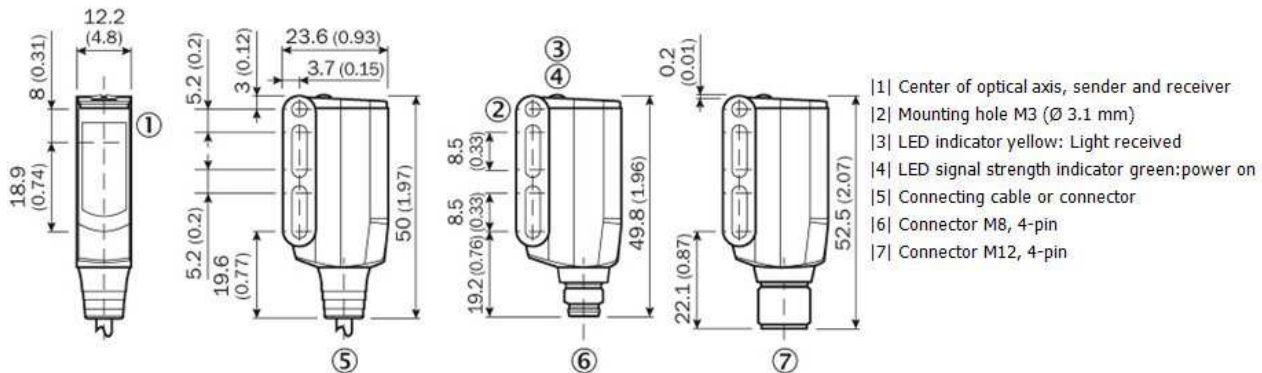
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	PNP ⁴⁾
Switching mode:	Light/dark switching ⁵⁾

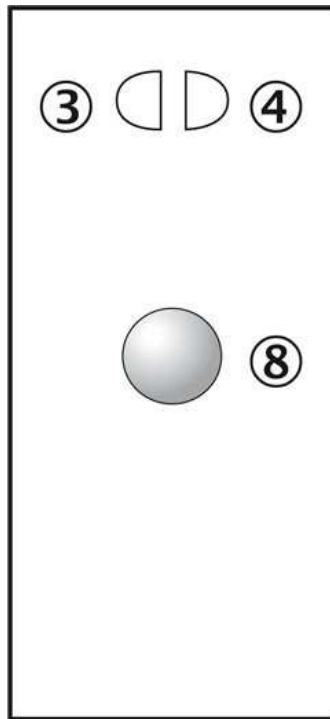
Output current I _{max} :	≤ 100 mA ⁶⁾
Response time:	< 0.5 ms ⁷⁾
Switching frequency:	1,000 Hz ⁸⁾
Connection type:	Cable with connector M8, 3-pin, 120 mm ⁹⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Circuit protection:::	A, B, C ^{10) 11) 12)}
Protection class:	III
Weight:	80 g
Polarisation filter:	✓
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67 IP 69K
Special feature:	Focused optics
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 A²⁾ May not exceed or fall short of V_S tolerances³⁾ Without load^{4) 5)} Q = light-switching⁶⁾ As of Tu 50 °C, a max. load current I_{max} = 50 mA is permitted⁷⁾ Signal transit time with resistive load⁸⁾ With light/dark ratio 1:1⁹⁾ Do not bend below 0 °C¹⁰⁾ A = V_S connections reverse-polarity protected¹¹⁾ B = inputs and output reverse-polarity protected¹²⁾ C = interference suppression

Dimensional drawing

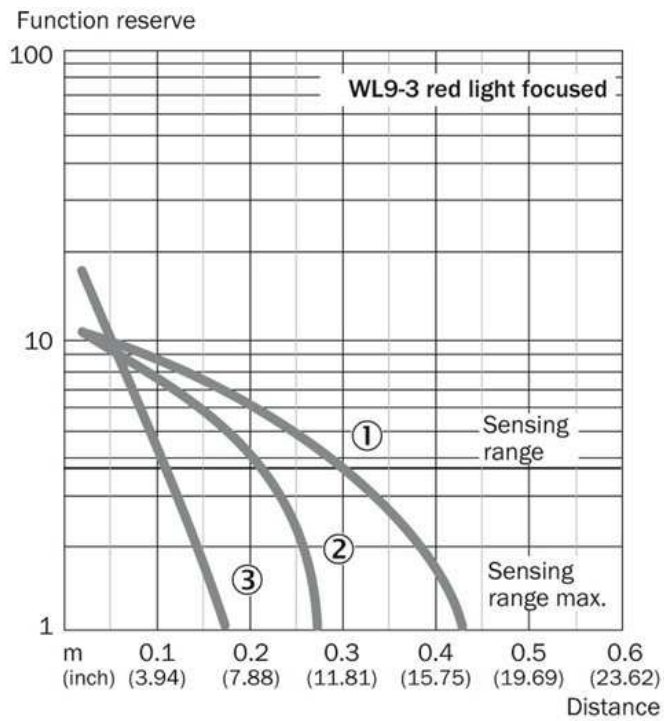


Adjustments possible



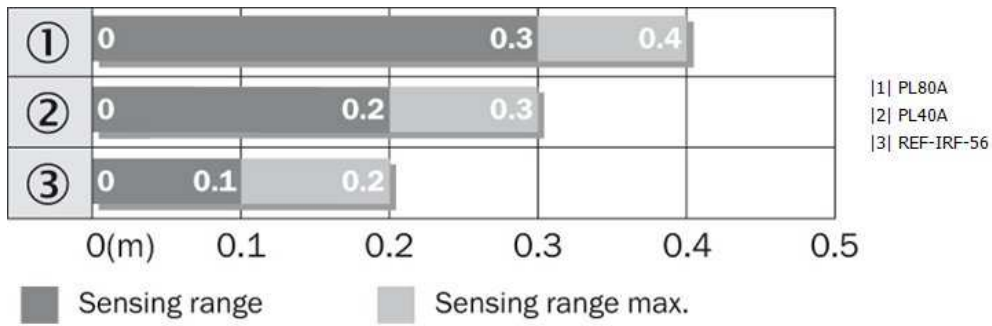
- |3| LED indicator yellow: Light received
- |4| LED signal strength indicator green:power on
- |8| Teach-in button

Characteristic curve

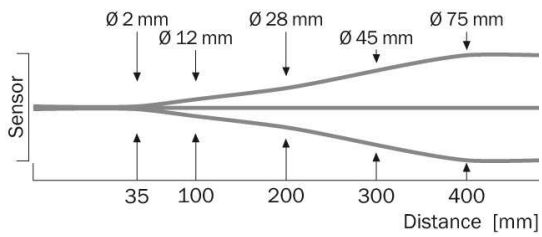


- |1| PL80A
- |2| PL40A
- |3| REF-IRF-56

Sensing range diagram



Light spot size



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