



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

WL9-3P1162



Model Name > [WL9-3P1162](#)
Part No. > [1049054](#)



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

Dimensions (W x H x D):	12.2 mm x 50 mm x 23.6 mm
Sensing range max.:	0 m ... 0.4 m ¹⁾
Sensing range:	0 m ... 0.3 m ²⁾
Housing design (light emission):	Rectangular
Light source:	PinPoint LED ³⁾
Type of light:	Visible red light
Wave length:	650 nm
Sensitivity adjustment:	Teach
Teach-in:	Single teach-in button
Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Light spot (distance):	Ø 2 mm (35 mm)
Mounting hole:	M3

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

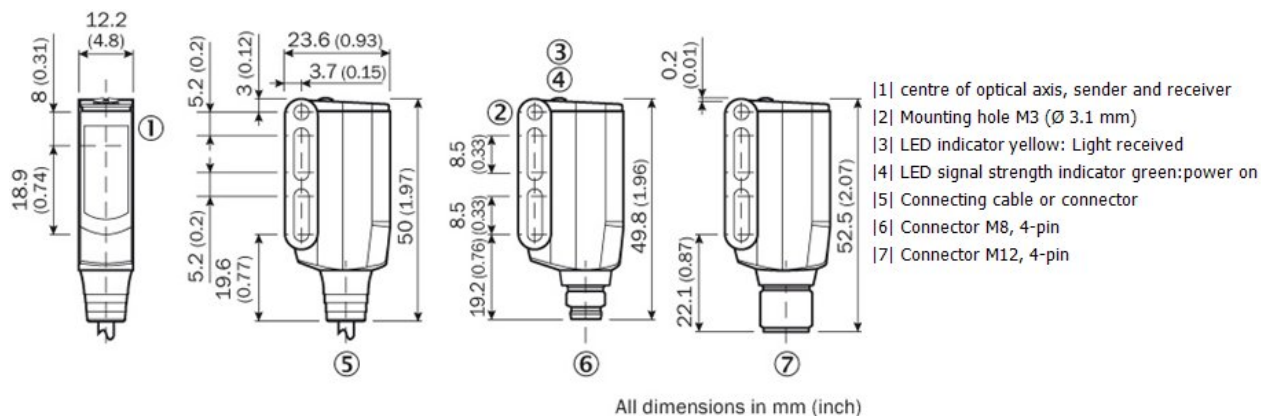
Mechanics/electronics

Enclosure rating:	IP 66 IP 67 IP 69K
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾

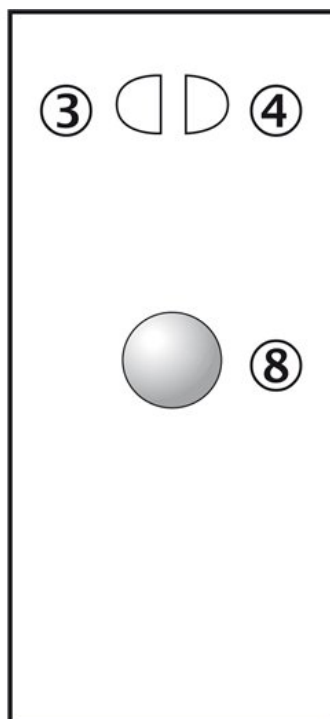
Power consumption:	30 ³⁾
Switching output:	PNP, Light/dark-switching, Complementary ⁴⁾
Output current I _{max} :	100 ⁵⁾
Response time:	< 0.5 ms ⁶⁾
Switching frequency:	1,000 Hz ⁷⁾
Connection type:	Cable, 4-wire, 2 m ⁸⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Protection class:	III
Circuit protection:::	A, B, C ⁹⁾ 10) 11)
Weight:	80 g
Housing material:	VISTAL
Optics material:	PMMA
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
Polarisation filter:	✓
Special design:	Focused optics
UL File-No.:	UL No. NRKH.E181493

1) Limit values, operation in short-circuit protected network max. 8 A²⁾ May not exceed or fall short of V_S ³⁾ Without load⁴⁾ Q = light-switching⁵⁾ As of Tu 50 °C, a max. load current I_{max} = 50 mA is permitted⁶⁾ Signal transit time with resistive load⁷⁾ With light/dark ratio 1:1⁸⁾ Do not bend below 0 °C⁹⁾ A = V_S connections reverse-polarity protected¹⁰⁾ B = inputs and output reverse-polarity protected¹¹⁾ C = interference suppression

Dimensional drawing

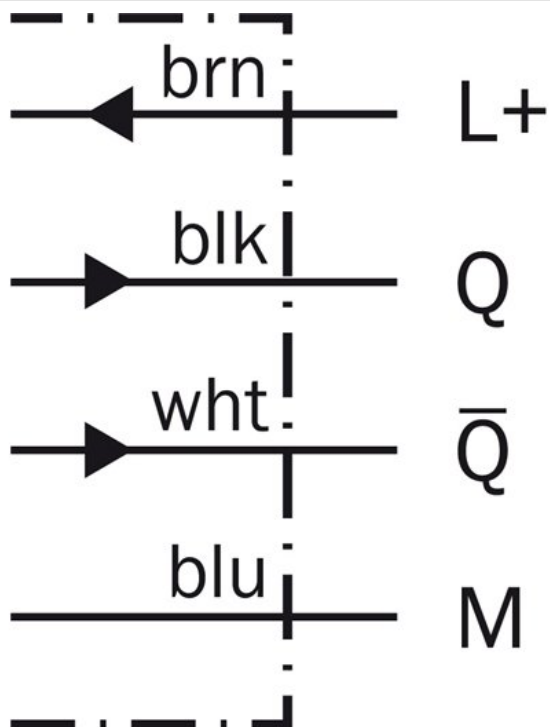


Adjustments possible

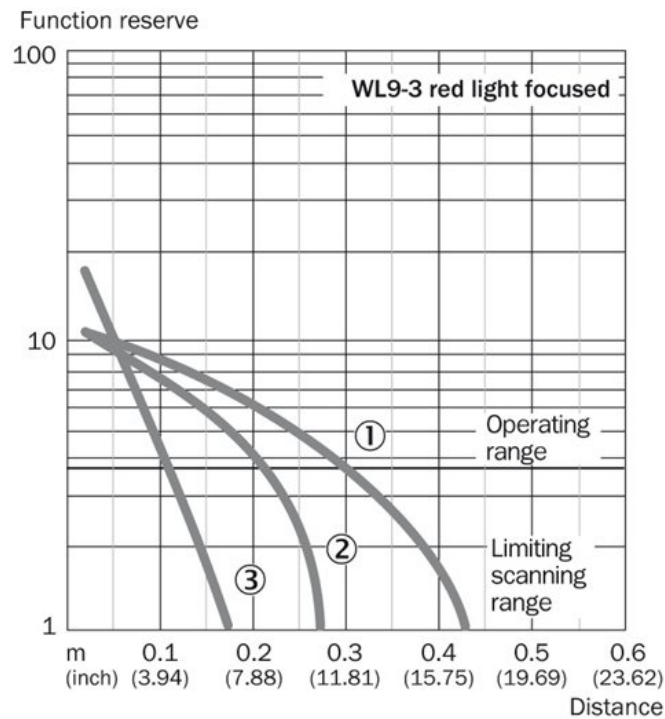


- |3| LED indicator yellow: Light received
- |4| LED signal strength indicator green: power on
- |8| Teach-in button

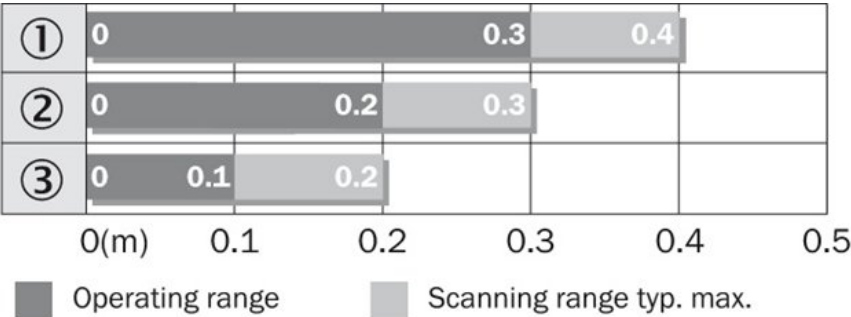
Connection diagram



Characteristic curve

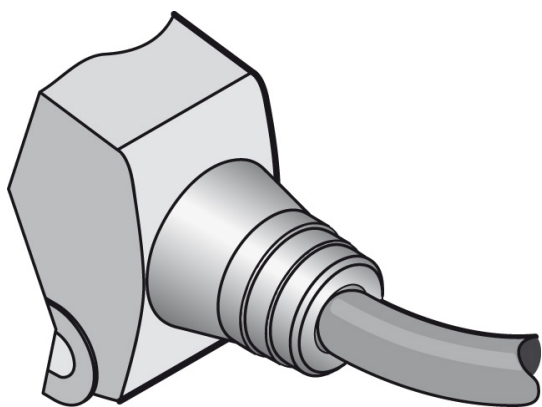


Sensing range diagram

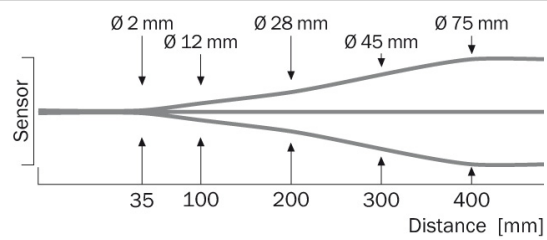


	Reflector type	Operating range
①	PL80A	0 ... 0.3 m
②	PL40A	0 ... 0.2 m
③	REF-IRF-56	0 ... 0.1 m

Connection type



Light spot size



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