



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

WL9-3P3030S01



Model Name > [WL9-3P3030S01](#)
Part No. > [1050913](#)



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 ... 5 m ¹⁾
Sensing range:	0 m ... 3 m ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	650 nm
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

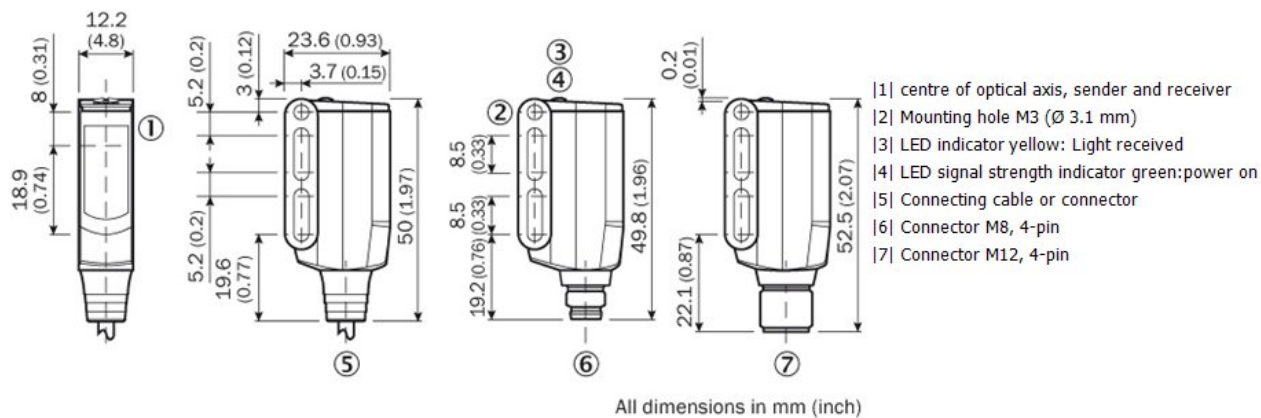
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption:	≤ 30 mA ²⁾
Output type:	PNP ³⁾
Output function:	Complementary
Switching mode:	Light/dark-switching ⁴⁾
Output current I _{max} ..:	≤ 100 mA ⁵⁾

Response time:	< 0.5 ms ⁶⁾
Switching frequency:	± 1,000 Hz ⁷⁾
Connection type:	Cable with connector M12, 4-pin, 290 mm ⁸⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Circuit protection:::	A, B, C ⁹⁾ 10) 11)
Protection class:	III
Weight:	80 g
Polarisation filter:	✓
Housing material:	Plastic, VISTAL
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

1) Limit values, operation in short-circuit protected network max. 8 A 2) Without load 3) 4) Q = light-switching 5) As of Tu 50 °C, a max. load current I_{lmax.} = 50 mA is permitted 6) Signal transit time with resistive load 7) With light/dark ratio 1:1 8) Do not bend below 0 °C 9) A = V_S connections reverse-polarity protected 10) B = inputs and output reverse-polarity protected 11) C = interference suppression

Dimensional drawing

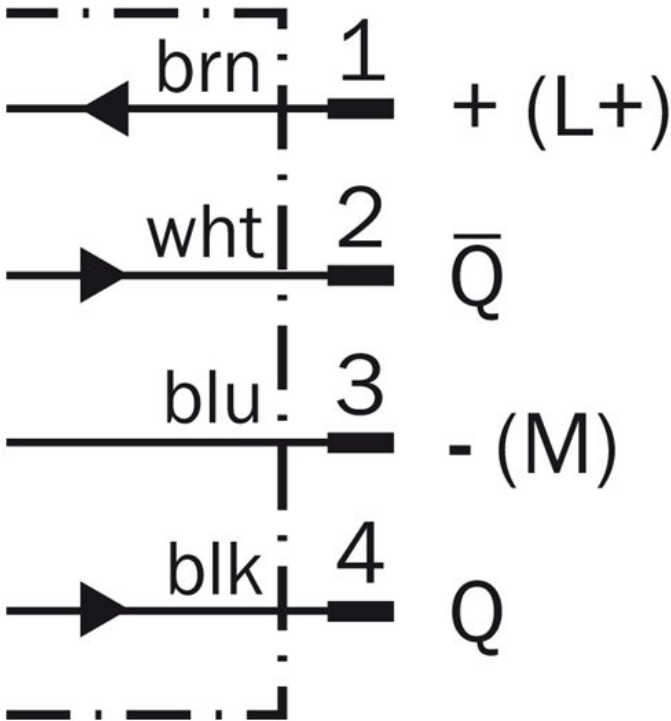


Adjustments possible

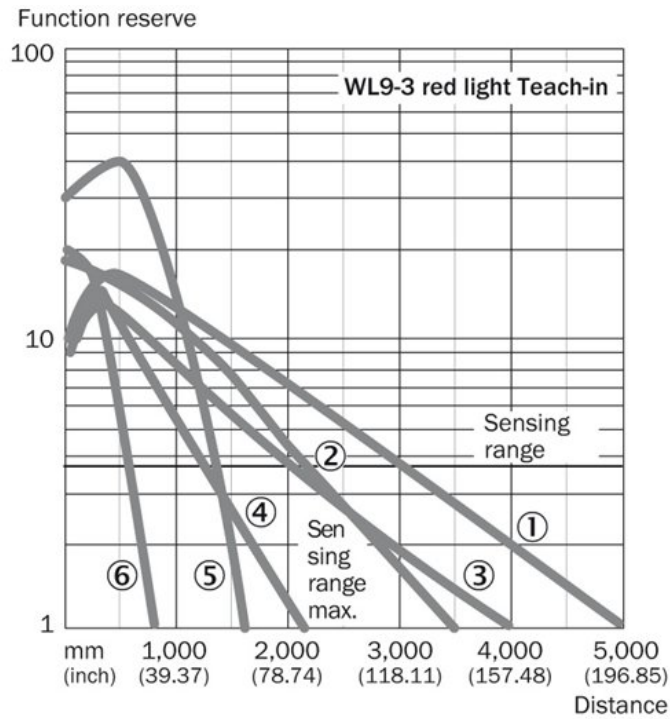


- |3| LED indicator yellow: Light received
- |4| LED signal strength indicator green:power on

Connection diagram

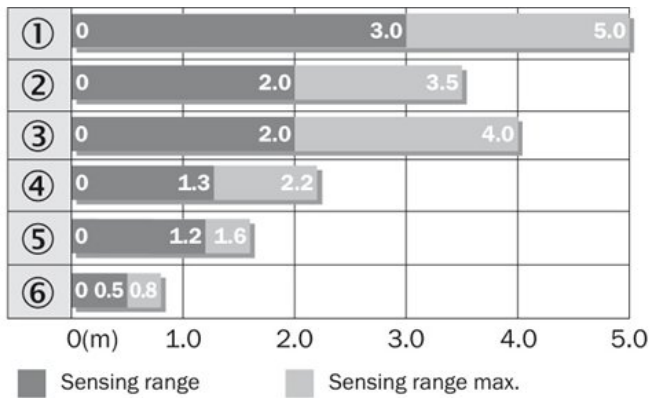


Characteristic curve



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

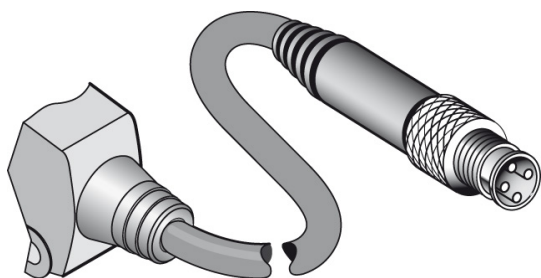
Sensing range diagram



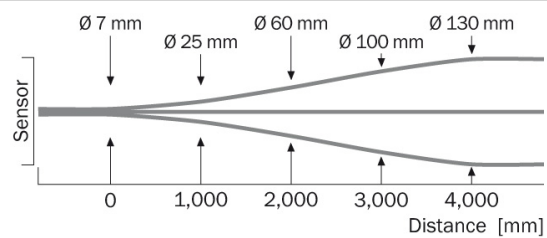
- [1] PL80A
- [2] P250F
- [3] PL40A
- [4] PL20F
- [5] PL10F
- [6] REF-IRF-56

	Reflector type	Sensing range
[1]	PL80A	0 ... 3.0 m
[2]	PL250F	0 ... 2.0 m
[3]	PL40A	0 ... 2.0 m
[4]	PL20F	0 ... 1.3 m
[5]	PL10F	0 ... 1.2 m
[6]	REF-IRF-56	0 ... 0.5 m

Connection type



Light spot size



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