



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

WL9-3N2230



Type > [WL9-3N2230](#)
Part No. > [1049071](#)



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 49.8 mm x 23.6 mm
Housing design (light emission):	Rectangular
Mounting hole:	M3
Sensing range max.:	0 m ... 4 m ¹⁾
Sensing range:	0 m ... 2.5 m ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
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

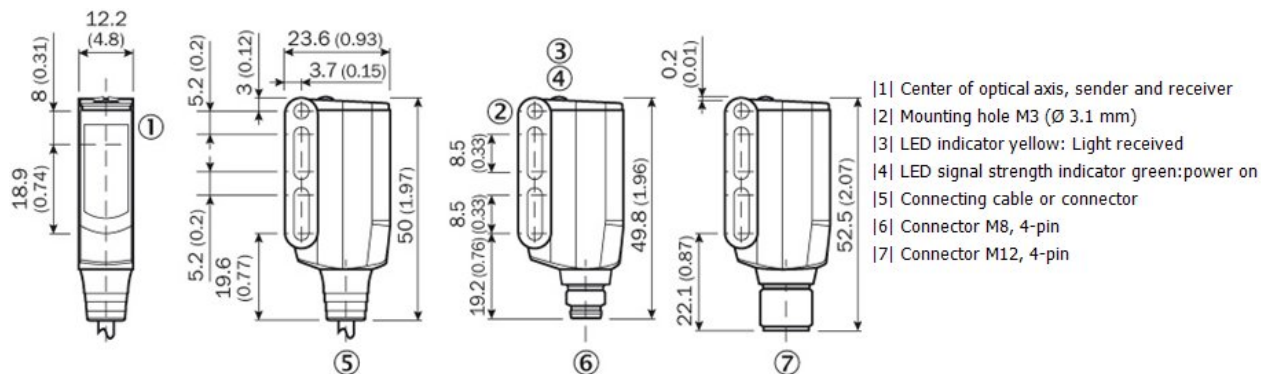
Mechanics/electronics

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
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:	Connector M8, 4-pin
Circuit protection:::	A, B, C ⁹⁾ 10) 11)
Protection class:	III
Weight:	13 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 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⁾ $A = V_S$ connections reverse-polarity
 protected¹⁰⁾ B = inputs and output reverse-polarity protected¹¹⁾ C = interference suppression

Dimensional drawing

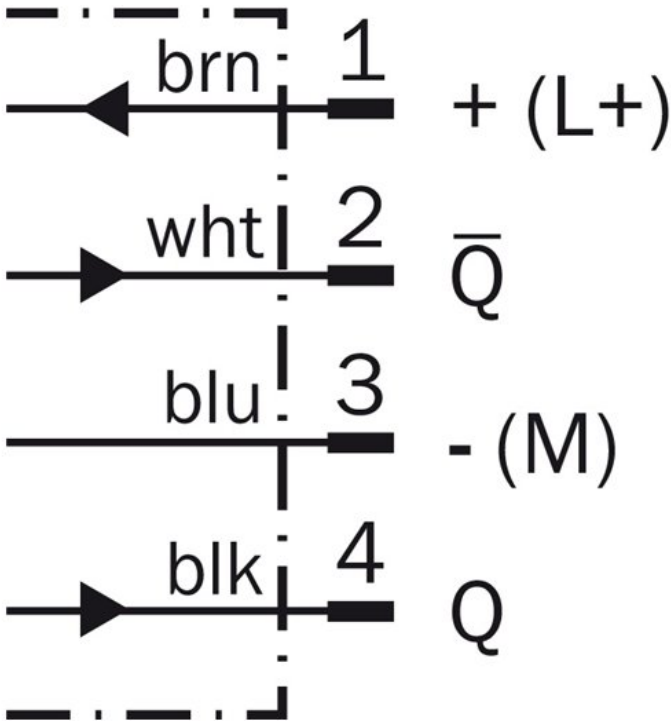


Adjustments possible

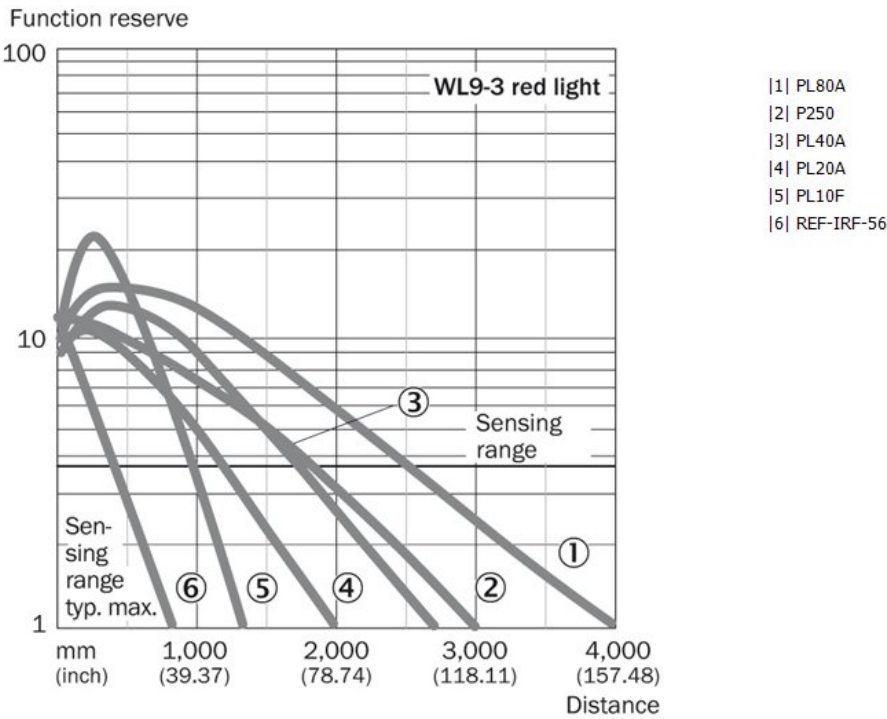


|3| LED indicator yellow: Light received
|4| LED signal strength indicator green:power on

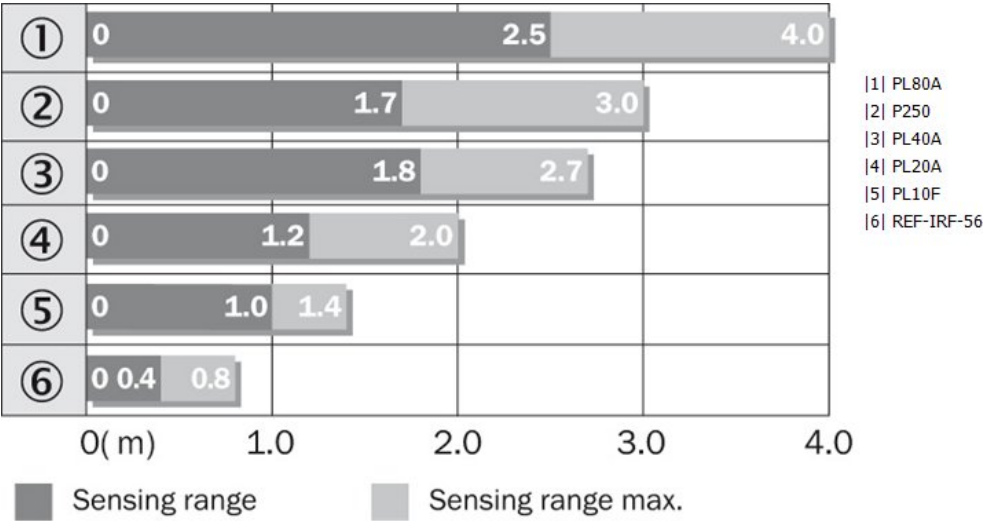
Connection diagram



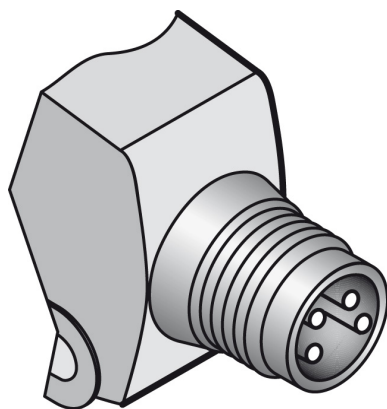
Characteristic curve



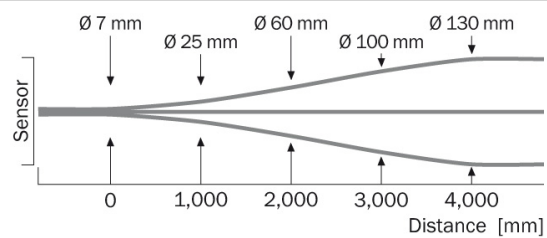
Sensing range diagram



Connection type



Light spot size



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