



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

WL9G-3N1134S02



Model Name > [WL9G-3N1134S02](#)
Part No. > [1058701](#)



Illustration may differ

At a glance

- High-performance clear material retro-reflective sensor in ultra-rugged VISTAL™ housing
- Best-in-class optical performance for transparent object detection
- Continuous threshold adjustment
- PinPoint LED for highly visible and precise light spot
- Variable mounting with M3 hole pattern
- Wide range of connection options

Your benefits

- Rugged VISTAL™ housing provides reliable installation and operation
- Best-in-class optical performance for transparent object detection
- Quick and easy alignment due to the highly visible PinPoint light spot
- M3 slotted hole mounting for multiple mounting possibilities
- One housing with a wide variety 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
Teach-in:	Single teach-in button
Adjustment:	Teach-in
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

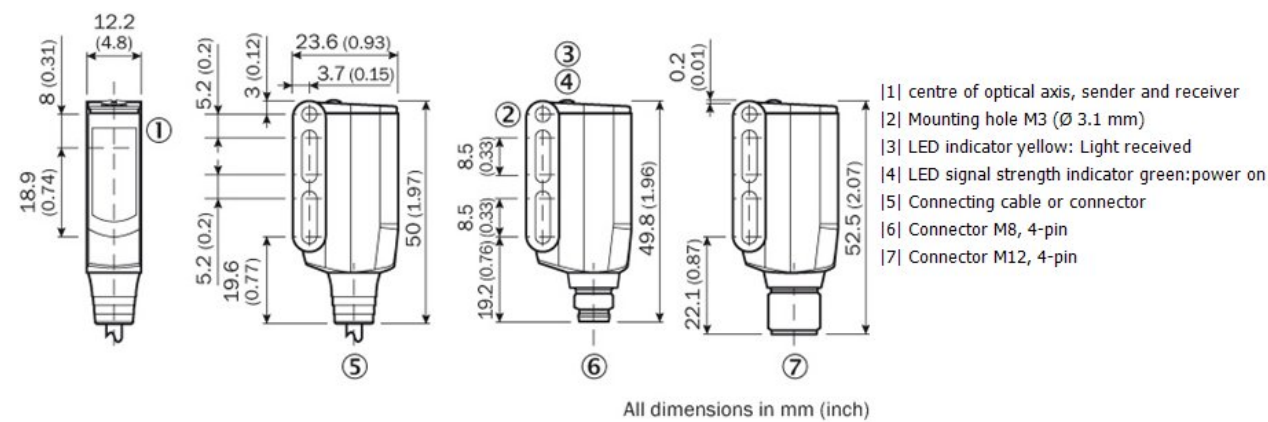
Mechanics/electronics

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

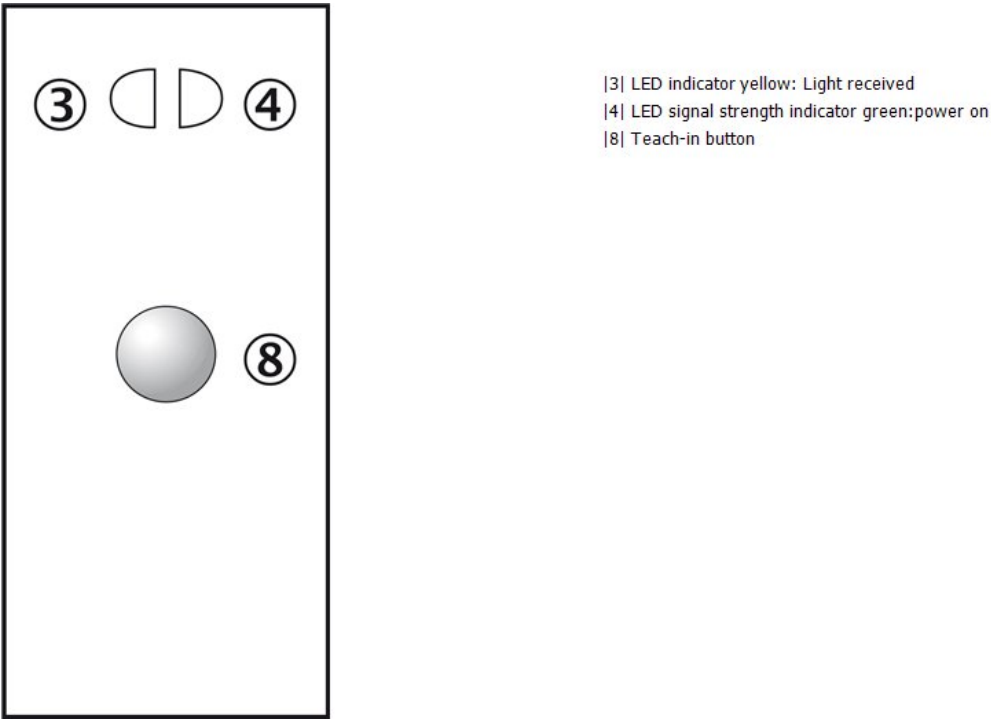
Power consumption:	$\leq 20 \text{ mA}$ ³⁾
Output type:	NPN ⁴⁾
Switching mode:	Light switching ⁵⁾
Output current I _{max} :	$\leq 100 \text{ mA}$ ⁶⁾
Response time:	$< 333 \text{ } \mu\text{s}$ ⁷⁾
Switching frequency:	3,000 Hz ⁸⁾
Connection type:	Cable, 4-wire, 5 m ⁹⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Circuit protection:::	A, B, C ¹⁰⁾ ¹¹⁾ ¹²⁾
Protection class:	III
Weight:	80 g
Polarisation filter:	✓
Housing material:	Plastic, VISTAL
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67 IP 69K
Special feature:	For transparent objects
Special features:	External teach
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C

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

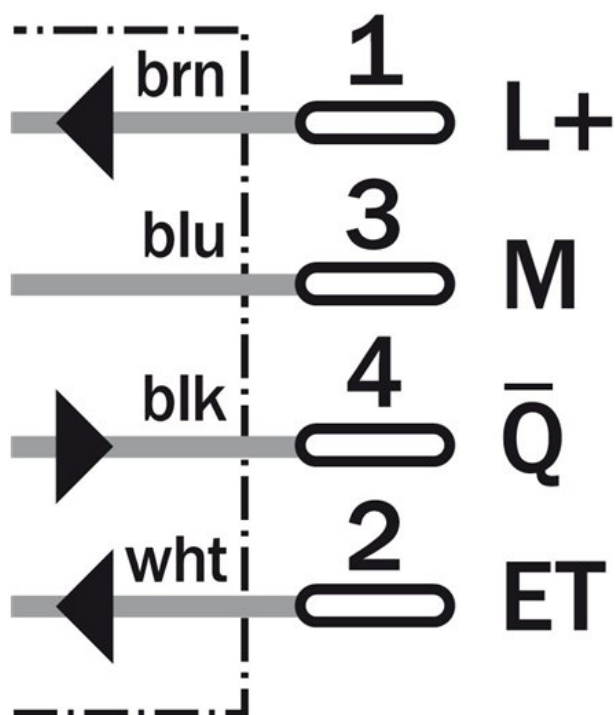
Dimensional drawing



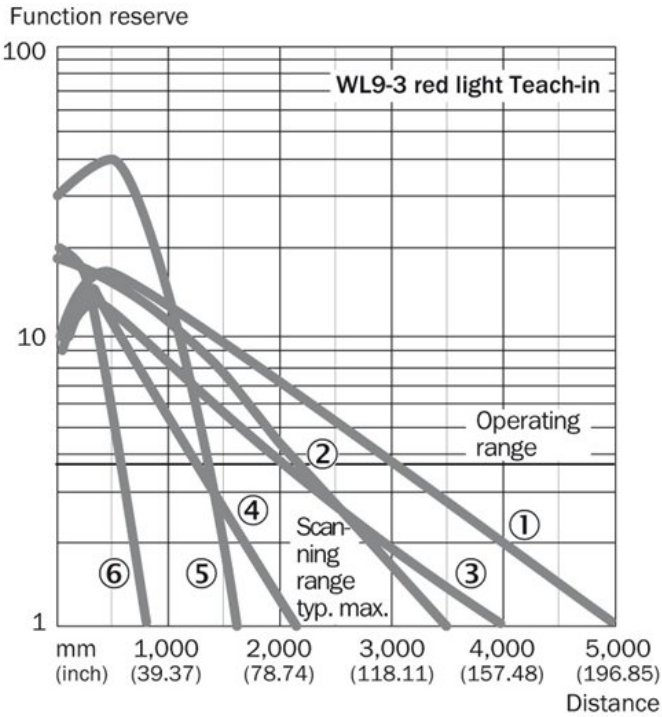
Adjustments possible



Connection diagram

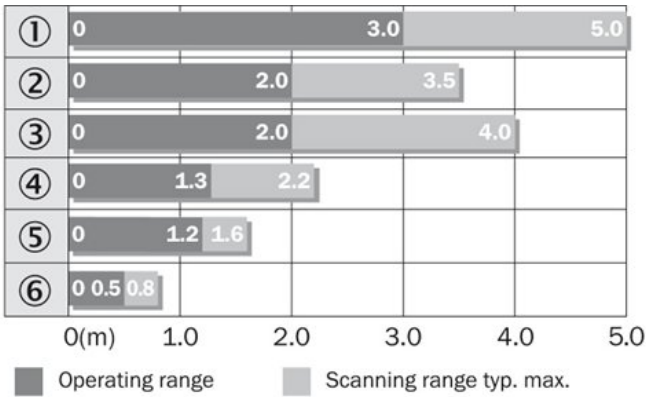


Characteristic curve



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

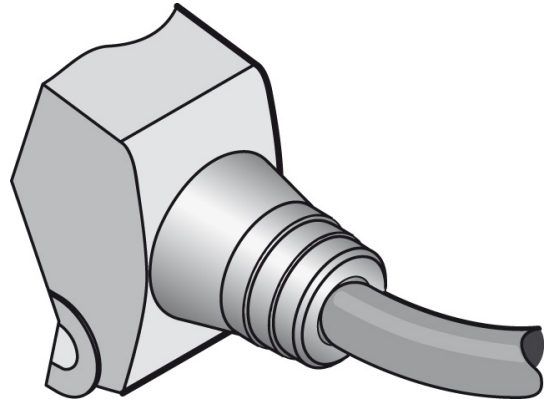
Sensing range diagram



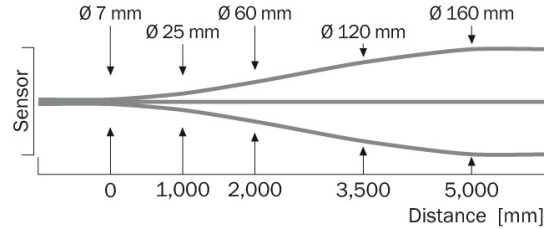
- |1| PL80A
- |2| P250F
- |3| PL40A
- |4| PL20F
- |5| PL10F
- |6| REF-IRF-56

	Reflector type	Operating range
①	PL80A	0 ... 3.0 m
②	P250	0 ... 2.0 m
③	PL40A	0 ... 2.0 m
④	PL20A	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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