



Photoelectric sensors
W4-3, Photoelectric retro-reflective sensor,
Standard optics

WL4-3N3031S02



Model Name > [WL4-3N3031S02](#)
Part No. > [1042990](#)



Illustration may differ

At a glance

- Fixed setting or setting via teach-in pushbutton
- PinPoint LED technology for highly visible, intense light spot
- Sensing range from 0.01 - 4 m
- Rugged plastic housing with M3 threaded metal inserts

Your benefits

- The PinPoint LED's sharply defined, intense light spot simplifies alignment
- Low-cost machine integration due to small dimensions that enable mounting in areas with tight space restrictions
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Dimensions (W x H x D):	16 mm x 39.5 mm x 12 mm
Housing design (light emission):	Rectangular, Flat
Sensing range max.:	0.01 m ... 4.5 m ¹⁾
Sensing range:	0.02 m ... 3.5 m ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	650 nm
Adjustment:	Potentiometer, 5-turn
Light spot size (distance):	Ø 75 mm (1.5 m)

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

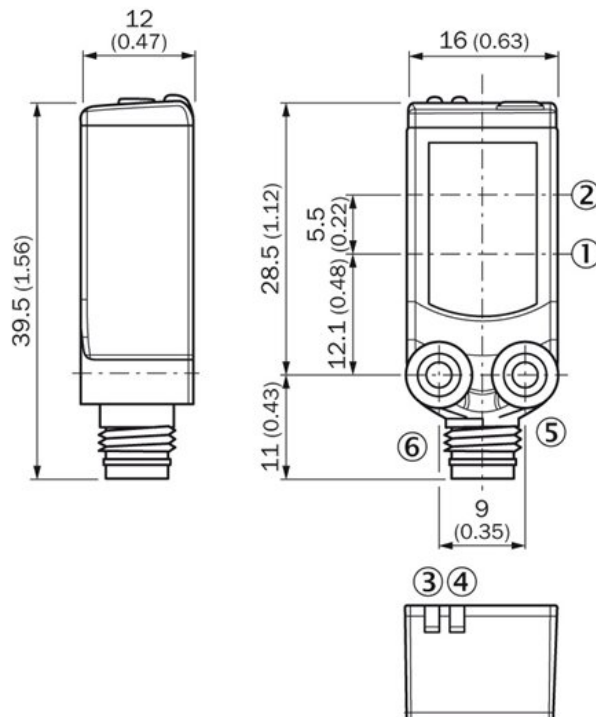
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 V _{pp} ²⁾
Power consumption:	≤ 20 mA ³⁾
Output type:	NPN
Switching mode:	Light switching
Output current I _{max} ..:	≤ 100 mA
Response time:	< 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Circuit protection:::	A, C, D ^{6) 7) 8)}

Protection class:	III
Weight:	30 g
Polarisation filter:	✓
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67 IP 66
Special features:	Adjustable OFF delay
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

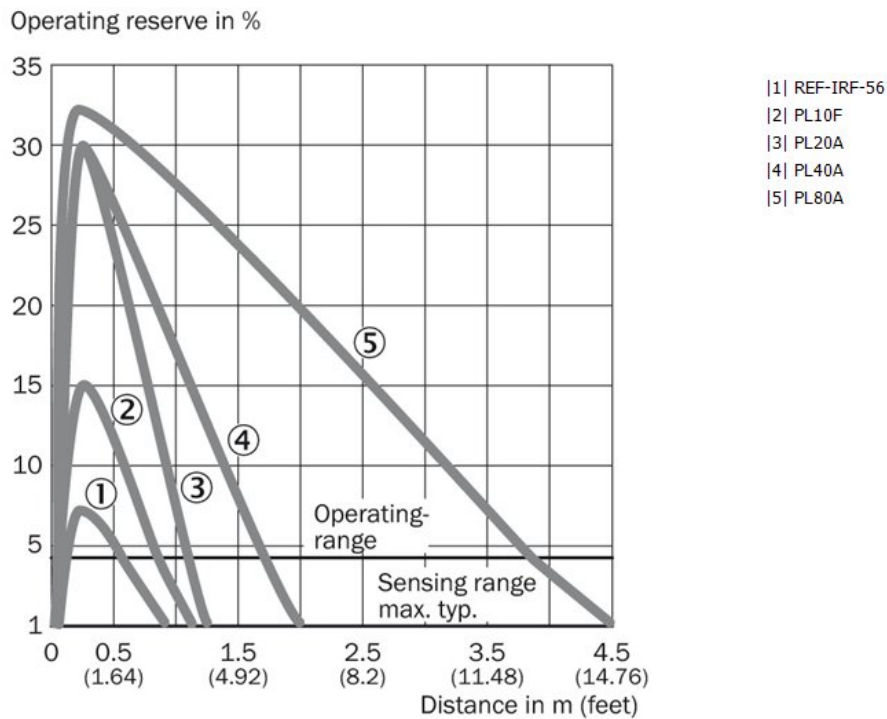
¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ $A = V_S$
 connections reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing

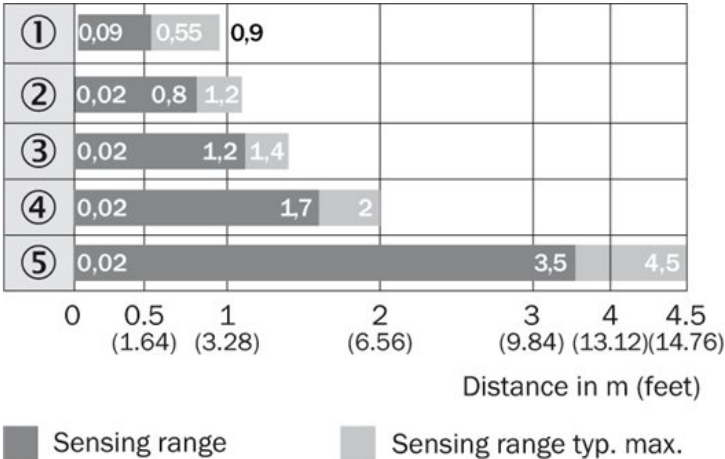


- |1| Center of optical axis, sender
- |2| Center of optical axis, receiver
- |3| LED indicator orange: status of received light beam
- |4| Status indicator LED green: power on
- |5| Threaded mounting hole M3
- |6| Connection

Characteristic curve



Sensing range diagram



- 1| REF-IRF-56
- 2| PL10F
- 3| PL20A
- 4| PL40A
- 5| PL80A

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