



Photoelectric sensors
W4S-3 Inox Glass, Photoelectric retro-reflective
sensor, autocollimation

WLG4S-3N2432V



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Type > [WLG4S-3N2432V](#)
Part No. > [1054728](#)



Illustration may differ

At a glance

- IP 66, IP 67, IP 68 and IP 69K enclosure rating and Ecolab certified
- Tough stainless steel housing (316L/1.4404)
- Resistant to a variety of common cleaning and disinfection agents
- Modern electrical connection available - M12 connector with pin casting
- PinPoint LED technology provides a highly visible laser-like light spot
- Teach-in via stainless steel pushbutton with a metal membrane
- Continuous threshold adjustment technology reliably detects objects in changing conditions

Your benefits

- Long service life in harsh conditions ensures less downtime and fewer replacement costs
- Reliable detection of all materials, including transparent objects in the pharmaceutical, packaging, and food and beverage industries
- Easy adjustment via a stainless steel metal membrane teach-in pushbutton
- Quick and easy alignment due to highly visible PinPoint emitter LED
- Remote monitoring and quick diagnostics via IO-Link (optional)



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	15.25 mm x 49.2 mm x 22.2 mm
Housing design:	Washdown
Housing design (light emission):	Rectangular
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
Adjustment:	Single teach-in button
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:	≤ 30 mA ³⁾
Output type:	NPN
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I _{max} ::	≤ 100 mA
Response time:	< 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type::	M12, 4-pin male connector ^{6) 7)}
Cable material:	PVC
Circuit protection:::	A B 8) 9) 10) C
Protection class:	III
Weight:	45 g
Polarisation filter:	✓
Special device:	-
Enclosure rating:	IP 66 IP 67 IP 68 IP 69K
Special feature:	Detecting transparent objects
Ambient operating temperature:	-30 °C ... +60 °C, -30 °C ... +70 °C ¹¹⁾
Ambient storage temperature:	-30 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Housing material:	Stainless steel, Stainless steel 316L

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A 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⁾ Tightening torque, max.: 0.7 Nm ⁷⁾ Do not bend below 0 °C ⁸⁾ A = V_S connections reverse-polarity
protected ⁹⁾ B = inputs and output reverse-polarity protected ¹⁰⁾ C = interference suppression ¹¹⁾ At UV ≤ 24 V and IA < 30 mA

[illegible]

- [1] Center of optical axis
- [2] Threaded mounting hole M3
- [3] Status indicator LED,
yellow: Status of received light beam
- [4] Status indicator LED green: supply voltage on
- [5] Teach-in button

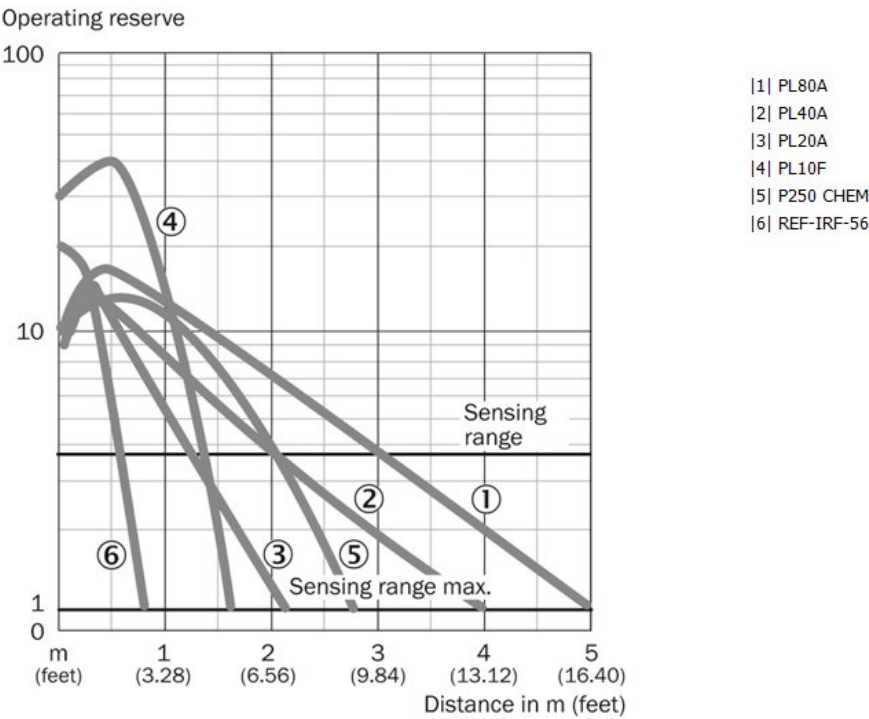
Diagram illustrating a quantum circuit with four qubits (1, 2, 3, 4) and their corresponding states:

- Qubit 1: $|L+\rangle$ (labeled **1**)
- Qubit 2: $|\bar{Q}\rangle$ (labeled **2**)
- Qubit 3: $|M\rangle$ (labeled **3**)
- Qubit 4: $|Q\rangle$ (labeled **4**)

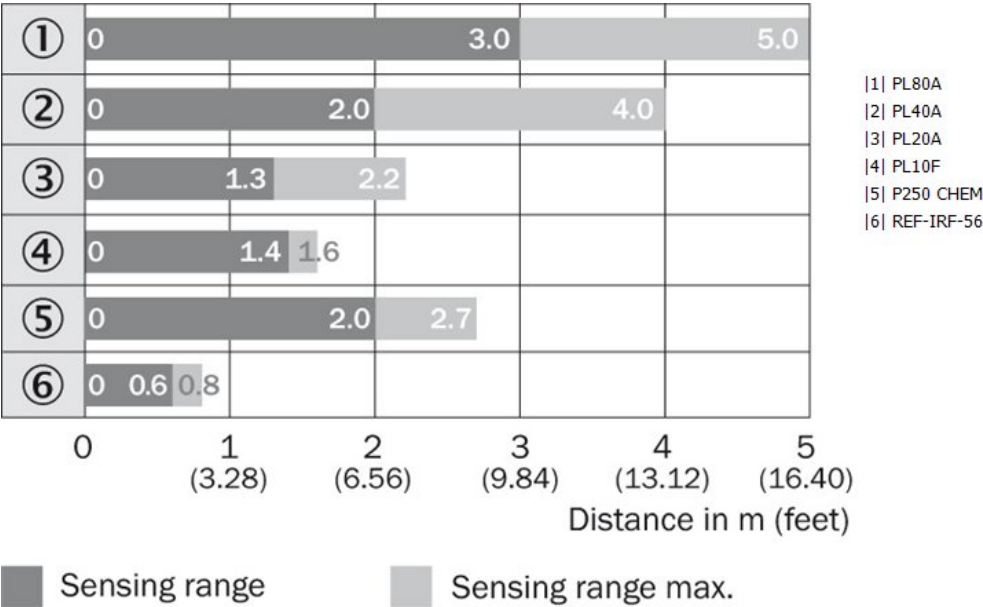
The circuit consists of four gates:

- Gate 1: CNOT (Control: Qubit 1, Target: Qubit 2)
- Gate 2: CNOT (Control: Qubit 2, Target: Qubit 3)
- Gate 3: CNOT (Control: Qubit 3, Target: Qubit 4)
- Gate 4: CNOT (Control: Qubit 4, Target: Qubit 1)

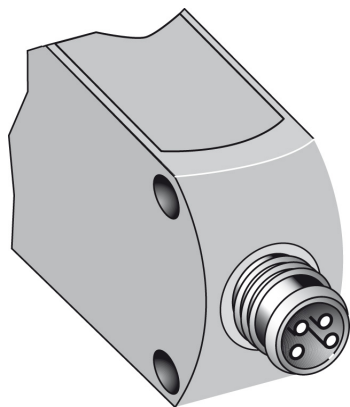
Characteristic curve



Sensing range diagram



Connection type



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