



Photoelectric sensors
G6, Photoelectric retro-reflective sensor,
Standard optics

GL6G-N4212



Model Name > [GL6G-N4212](#)
Part No. > [1060809](#)



Illustration may differ

At a glance

- PinPoint LED for a bright, precise light spot
- Durable metal threaded inserts
- SICK ASIC technology - the result of decades of experience in photoelectric sensors
- Large, user-friendly potentiometer
- Large, bright indicator LEDs
- Adjustable receiver sensitivity via 270° turn potentiometer
- IP 67 enclosure rating

Your benefits

- Easy alignment and precise object detection due to a highly visible PinPoint LED
- Quick and easy mounting and high durability due to threaded metal inserts
- SICK ASIC technology provides high performance, excellent reliability and crosstalk immunity
- Easy to adjust due to large, user-friendly potentiometers
- Easy to monitor due to large, bright indicator LEDs
- Easy installation with SICK accessories
- Detection of transparent objects



Features

| | |
|----------------------------------|--|
| Sensor/detection principle: | Photoelectric retro-reflective sensor, Standard optics |
| Dimensions (W x H x D): | 12 mm x 31.5 mm x 21 mm |
| Housing design (light emission): | Rectangular |
| Sensing range max.: | ≤ 6 m ¹⁾ |
| Sensing range: | ≤ 5 m ²⁾ |
| Type of light: | Visible red light |
| Light source: | PinPoint LED ³⁾ |
| Wave length: | 650 nm |
| Adjustment: | Potentiometer, 270 ° |
| Light spot size (distance): | Ø 8 mm (350 mm) |

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

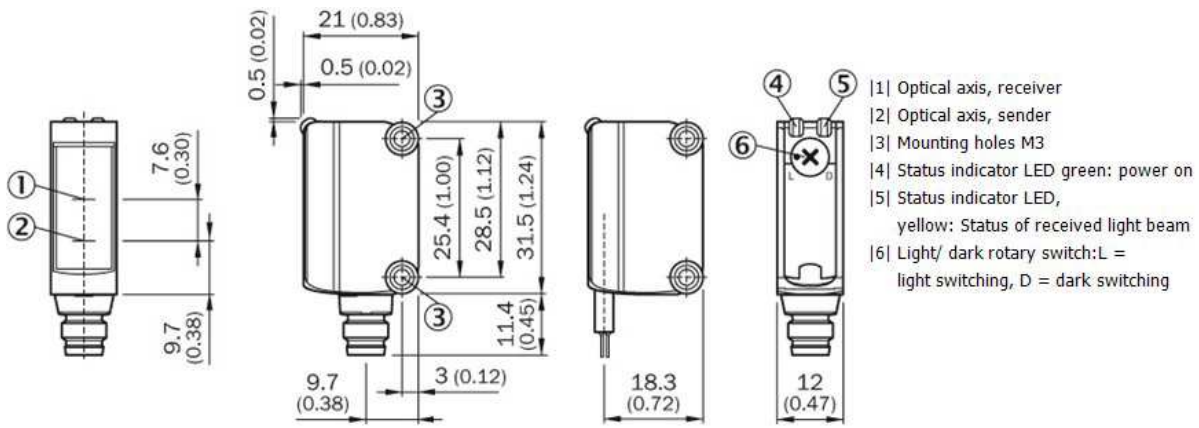
Mechanics/electronics

| | |
|-----------------|-----------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Ripple: | ± 10 % ²⁾ |

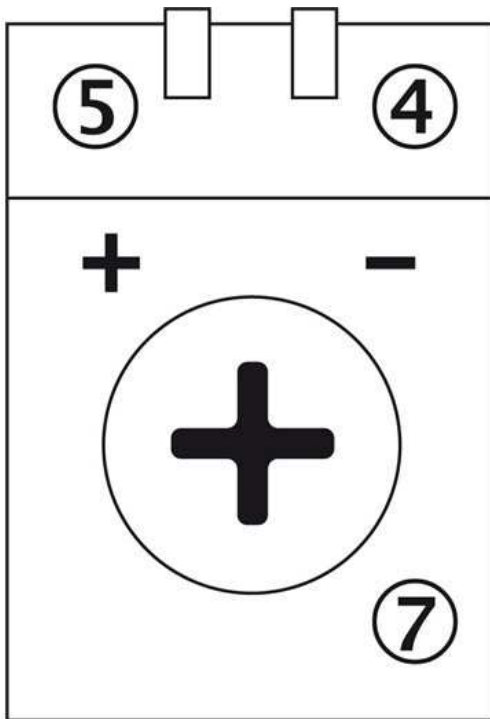
| | |
|-----------------------------------|--|
| Power consumption: | $\leq 30 \text{ mA}$ ³⁾ |
| Output type: | NPN, open collector |
| Switching mode: | Light/dark switching |
| Switching mode selector: | Selectable via light/dark selector |
| Output current I _{max} : | $\leq 100 \text{ mA}$ ⁴⁾ |
| Response time: | $< 625 \mu\text{s}$ ⁵⁾ |
| Switching frequency: | 1,000 Hz ⁶⁾ |
| Attenuation along light beam: | $> 20 \%$ |
| Connection type: | Connector M8, 4-pin |
| Circuit protection::: | A, B, D ^{7) 8) 9)} |
| Protection class: | III |
| Weight: | 20 g |
| Polarisation filter: | ✓ |
| Optics material: | PMMA |
| Enclosure rating: | IP 67 |
| Items supplied: | Stainless steel mounting bracket (1.4301/304) BEF-W100-A, Reflector P250 |
| Special feature: | Detection of transparent objects |
| Ambient temperature operation: | $-25 \text{ }^\circ\text{C} \dots +55 \text{ }^\circ\text{C}$ ¹⁰⁾ |
| Ambient storage temperature: | $-40 \text{ }^\circ\text{C} \dots +70 \text{ }^\circ\text{C}$ |
| UL File No.: | NRKH.E348498 & NRKH7.E348498 |
| Signal voltage NPN HIGH/LOW: | Approx. $V_S / \leq 3 \text{ V}$ |
| Housing material: | ABS/PC, Plastic |

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⁾ At $V_S > 24 \text{ V}$, $I_{A \text{ max}} = 50 \text{ mA}$
⁵⁾ Signal transit time with resistive load
⁶⁾ With light/dark ratio 1:1
⁷⁾ $A = V_S$ connections reverse-polarity protected
⁸⁾ B = inputs and output reverse-polarity protected
⁹⁾ D = outputs overcurrent and short-circuit protected
¹⁰⁾ Temperature stability after adjustment $\pm 10^\circ\text{C}$

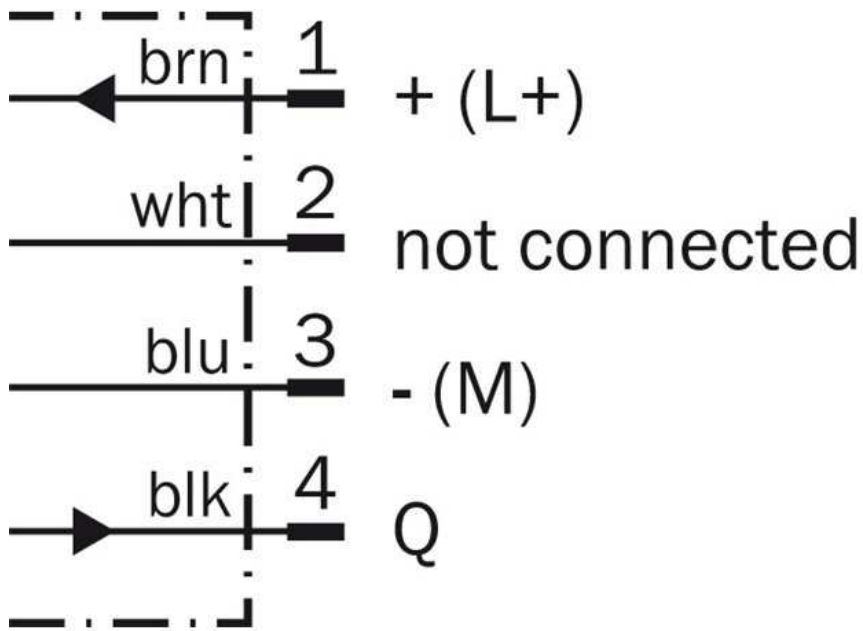
Dimensional drawing



Adjustments possible

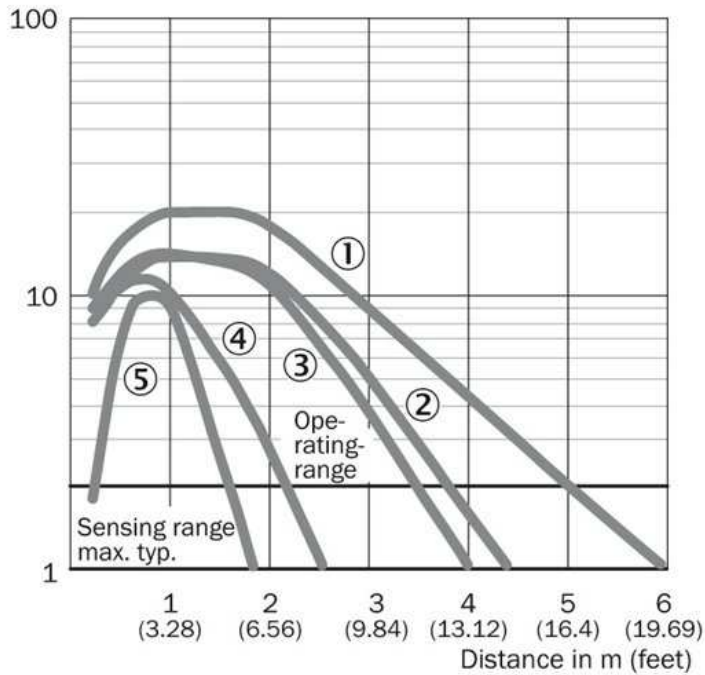


Connection diagram



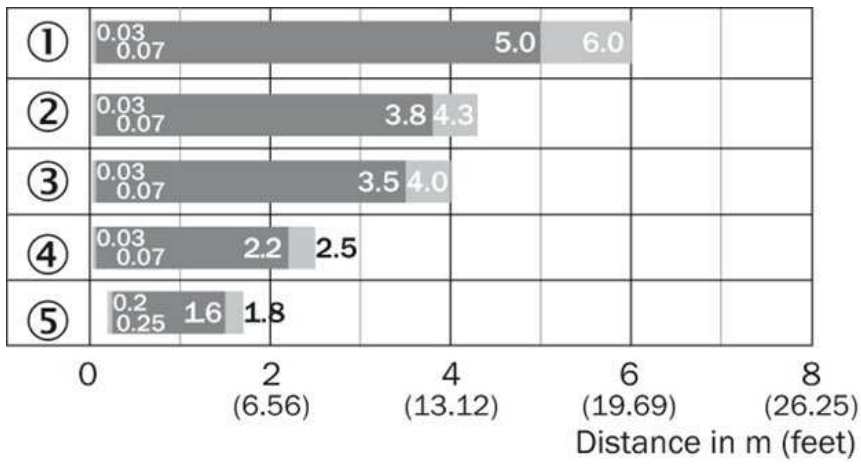
Characteristic curve

Operating reserve



- |1| PL80A
- |2| PL40A
- |3| P250
- |4| PL20A
- |5| REF-IRF-56

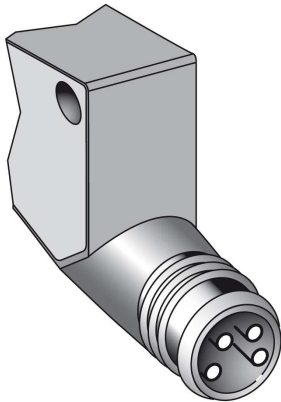
Sensing range diagram



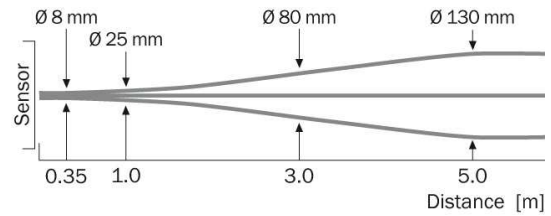
- |1| PL80A
- |2| PL40A
- |3| P250
- |4| PL20A
- |5| REF-IRF-56

■ Sensing range ■ Sensing range max.

Connection type



Light spot size



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