



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

GL6G-N1212



**Model Name** > **GL6G-N1212**  
**Part No.** > **1060811**



*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 <sup>1)</sup>
Sensing range:	≤ 5 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	650 nm
Adjustment:	Potentiometer, 270 °
Light spot size (distance):	Ø 8 mm (350 mm)

<sup>1) 2)</sup> PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

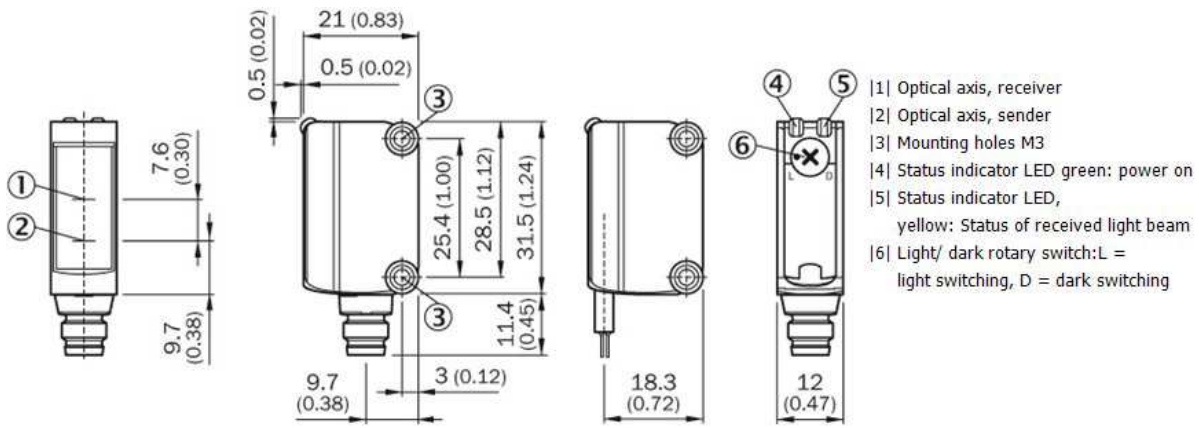
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 10 % <sup>2)</sup>

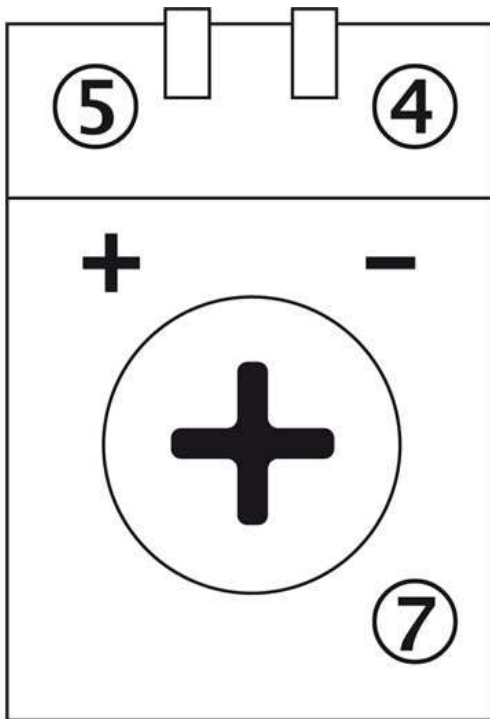
Power consumption:	$\leq 30 \text{ mA}$ <sup>3)</sup>
Output type:	NPN, open collector
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current I <sub>max</sub> :	$\leq 100 \text{ mA}$ <sup>4)</sup>
Response time:	$< 625 \mu\text{s}$ <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Attenuation along light beam:	$> 20 \%$
Connection type:	Cable, 3-wire, 2 m <sup>7)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Circuit protection:::	A, B, D <sup>8)</sup> <sup>9)</sup> <sup>10)</sup>
Protection class:	III
Weight:	60 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:	$-25 \text{ }^\circ\text{C} \dots +55 \text{ }^\circ\text{C}$ <sup>11)</sup>
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

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> At  $V_S > 24 \text{ V}$ ,  $I_{A \text{ max}} = 50 \text{ mA}$   
<sup>5)</sup> Signal transit time with resistive load <sup>6)</sup> With light/dark ratio 1:1 <sup>7)</sup> Do not bend below  $0 \text{ }^\circ\text{C}$  <sup>8)</sup>  $A = V_S$  connections reverse-polarity protected <sup>9)</sup> B = inputs and  
output reverse-polarity protected <sup>10)</sup> D = outputs overcurrent and short-circuit protected <sup>11)</sup> Temperature stability after adjustment  $\pm 10 \text{ }^\circ\text{C}$

## Dimensional drawing

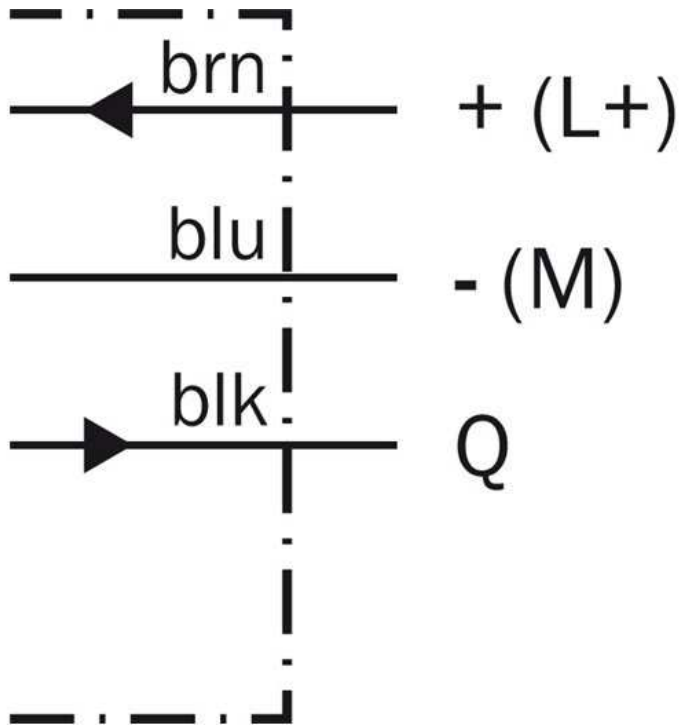


## Adjustments possible



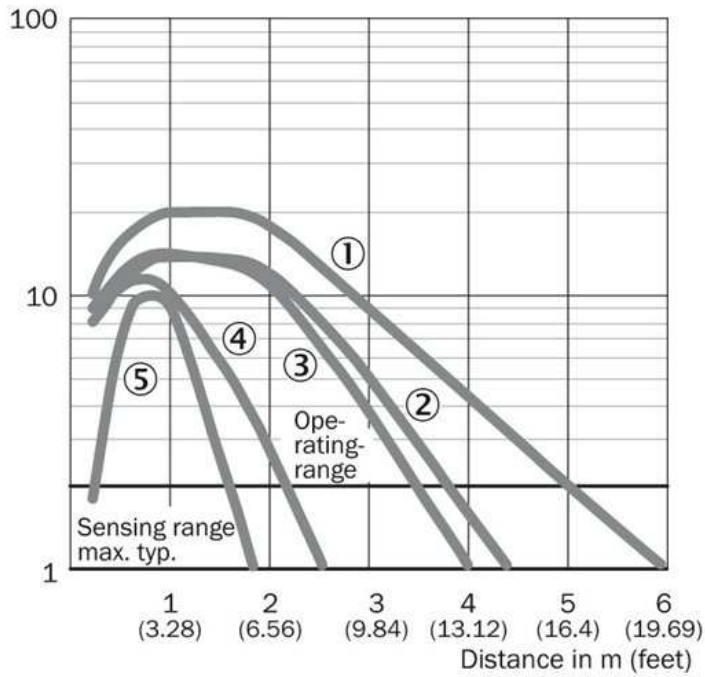
- 4] Status indicator LED green: power on
- 5] Status indicator LED,  
yellow: Status of received light beam
- 7] Sensitivity adjustment: poti

Connection diagram



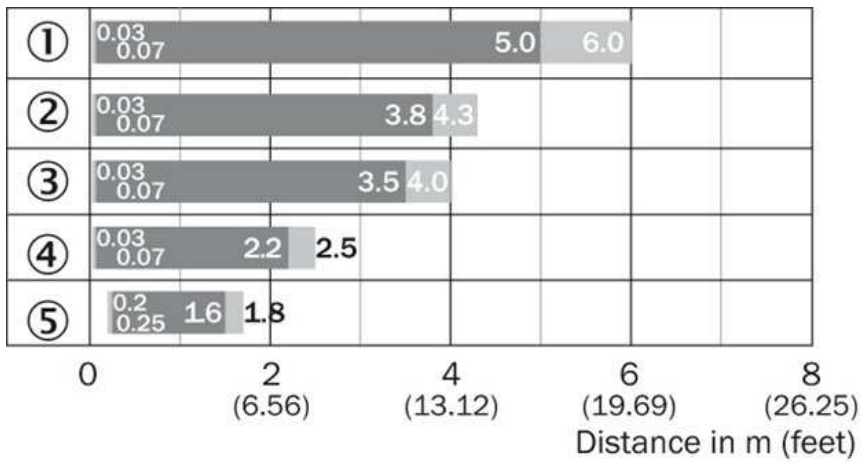
Characteristic curve

Operating reserve



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

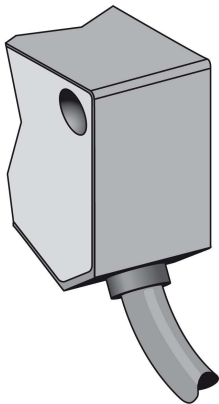
## Sensing range diagram



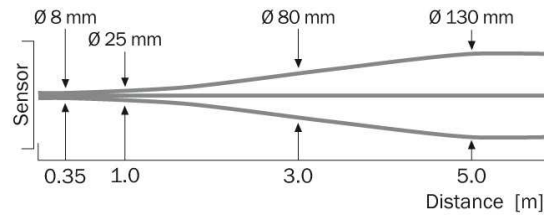
- |1| PL80A
- |2| PL40A
- |3| P250
- |4| PL20A
- |5| REF-IRF-56

■ Sensing range                      ■ Sensing range max.

## Connection type



## Light spot size



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