



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

GL6-N1212



**Model Name** > **GL6-N1212**  
**Part No.** > **1060814**



*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 critical surfaces and shiny 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

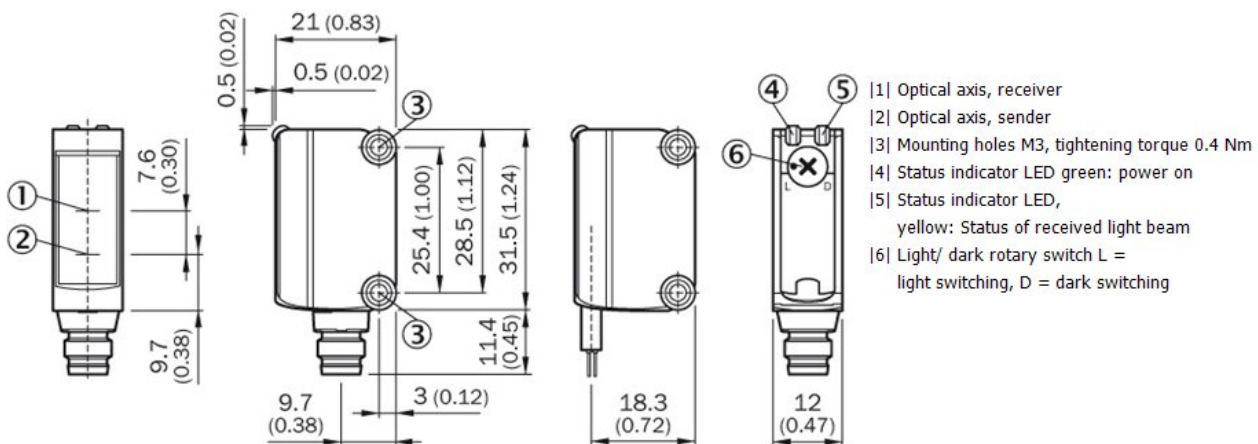
#### Mechanics/electronics

|                    |                                   |
|--------------------|-----------------------------------|
| Supply voltage:    | 10 V DC ... 30 V DC <sup>1)</sup> |
| Power consumption: | ≤ 30 mA <sup>2)</sup>             |

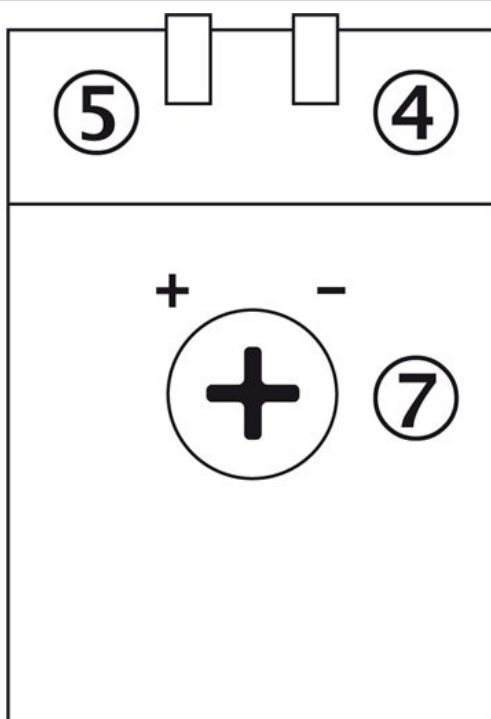
|                                   |                                                                          |
|-----------------------------------|--------------------------------------------------------------------------|
| Output type:                      | NPN, open collector                                                      |
| Switching mode:                   | Light/dark-switching                                                     |
| Switching mode selector:          | Selectable via light/dark selector                                       |
| Signal voltage NPN HIGH/LOW:      | Approx. $V_S / \leq 3 \text{ V}$                                         |
| Output current $I_{\text{max}}$ : | $\leq 100 \text{ mA}$ <sup>3)</sup>                                      |
| Response time:                    | $< 625 \mu\text{s}$ <sup>4)</sup>                                        |
| Switching frequency:              | $1,000 \text{ Hz}$ <sup>5)</sup>                                         |
| Connection type:                  | Cable, 3-wire, $2 \text{ m}$ <sup>6)</sup>                               |
| Cable material:                   | PVC                                                                      |
| Circuit protection:::             | A, B, D <sup>7)</sup> <sup>8)</sup> <sup>9)</sup>                        |
| Weight:                           | 60 g                                                                     |
| Polarisation filter:              | ✓                                                                        |
| AS-Interface-Chip:                | -                                                                        |
| Housing material:                 | ABS/PC, Plastic                                                          |
| Optics material:                  | PMMA                                                                     |
| Enclosure rating:                 | IP 67                                                                    |
| Items supplied:                   | Stainless steel mounting bracket (1.4301/304) BEF-W100-A, Reflector P250 |
| Ambient operating temperature:    | $-25 \text{ }^{\circ}\text{C} \dots 55 \text{ }^{\circ}\text{C}$         |
| Ambient storage temperature:      | $-40 \text{ }^{\circ}\text{C} \dots 70 \text{ }^{\circ}\text{C}$         |

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

## Dimensional drawing

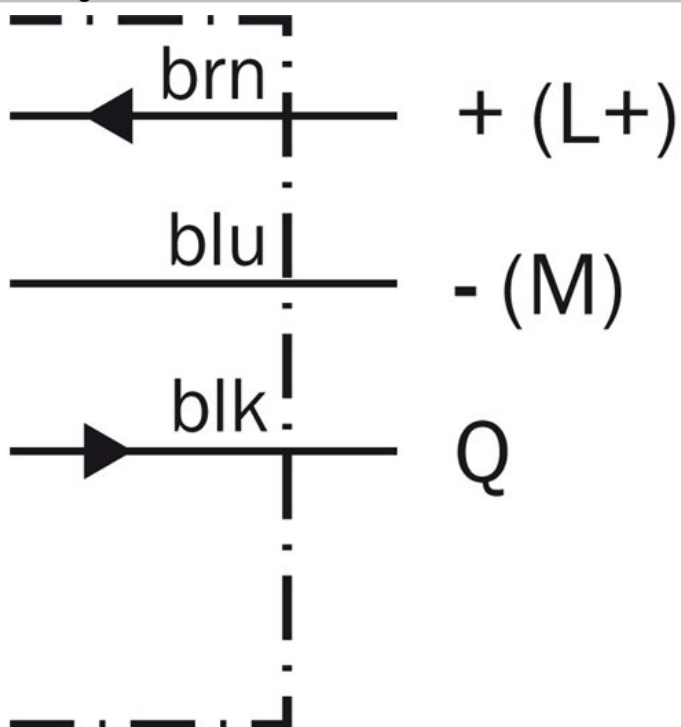


## Adjustments possible



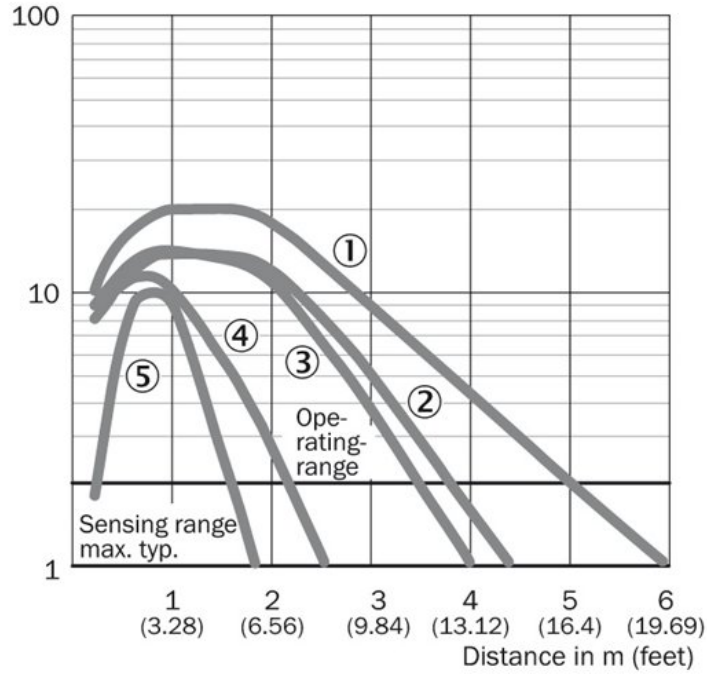
- |4| Status indicator LED green: power on
- |5| Status indicator LED,  
yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

## Connection diagram



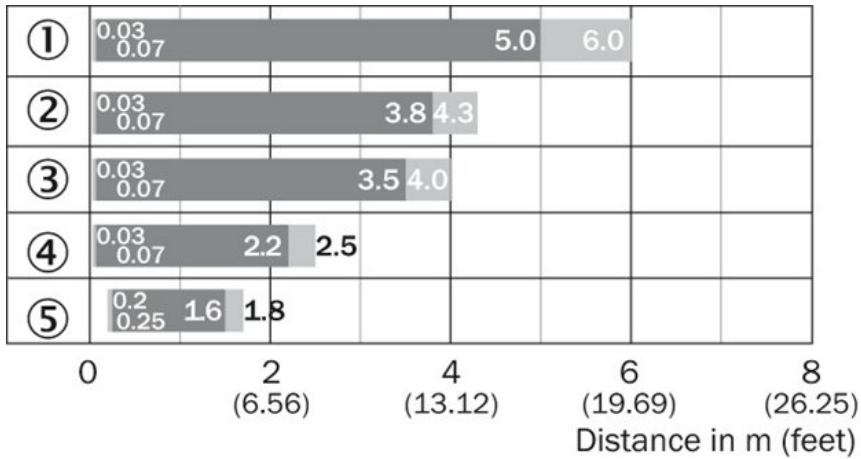
## Characteristic curve

Operating reserve



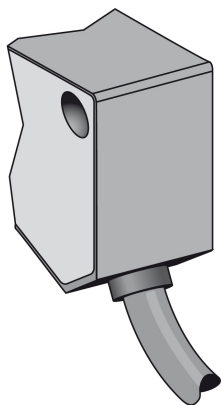
- [1] PL80A
- [2] PL40A
- [3] P250
- [4] PL20A
- [5] REF-IRF-56

## Sensing range diagram

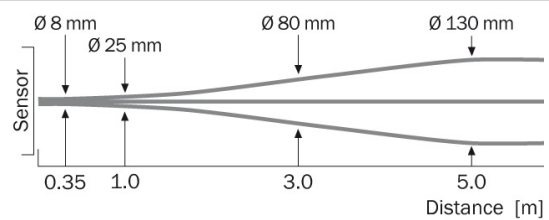


■ Sensing range      ■ Sensing range max.

## Connection type



## Light spot size



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