



## Photoelectric sensors G6, Through-beam photoelectric sensor

GSE6-P1212



**Model Name** > GSE6-P1212  
**Part No.** > 1061398



*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 (depending on type)
- 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 and excellent reliability
- Easy to adjust due to large, user-friendly potentiometers
- Easy to monitor due to large, bright indicator LEDs
- Easy installation with SICK accessories



#### Features

|                                  |                                   |
|----------------------------------|-----------------------------------|
| Sensor/detection principle:      | Through-beam photoelectric sensor |
| Dimensions (W x H x D):          | 12 mm x 31.5 mm x 21 mm           |
| Housing design (light emission): | Rectangular                       |
| Sensing range max.:              | 0 m ... 15 m                      |
| Sensing range:                   | 0 m ... 10 m                      |
| Type of light:                   | Visible red light                 |
| Light source:                    | PinPoint LED <sup>1)</sup>        |
| Wave length:                     | 650 nm                            |
| Adjustment:                      | Potentiometer, 270°               |
| Light spot size (distance):      | Ø 375 mm (12 m)                   |

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

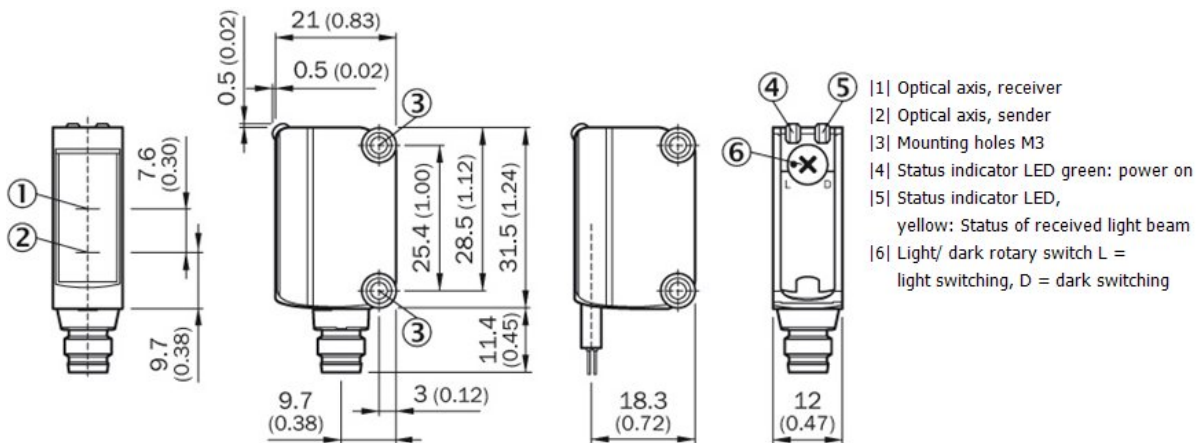
#### Mechanics/electronics

|                    |                                   |
|--------------------|-----------------------------------|
| Supply voltage:    | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:            | ± 10 % <sup>2)</sup>              |
| Power consumption: | ≤ 30 mA <sup>3)</sup>             |
| Output type:       | PNP                               |

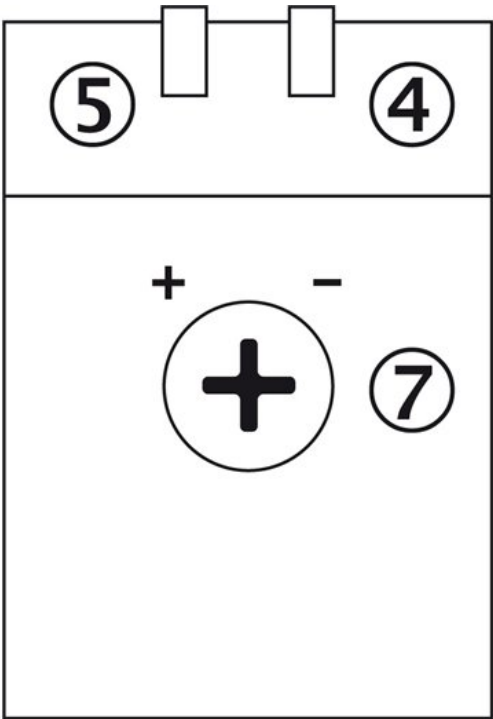
|                                   |                                                              |
|-----------------------------------|--------------------------------------------------------------|
| Switching mode:                   | Light/dark-switching                                         |
| Switching mode selector:          | Selectable via light/dark selector                           |
| Signal voltage PNP HIGH/LOW:      | $V_S - (\leq 3 \text{ V}) / \text{approx. } 0 \text{ V}$     |
| Output current $I_{\text{max}}$ : | $\leq 100 \text{ mA}$ <sup>4)</sup>                          |
| Response time:                    | $< 500 \mu\text{s}$ <sup>5)</sup>                            |
| Switching frequency:              | $\pm 1,000 \text{ Hz}$ <sup>6)</sup>                         |
| Connection type:                  | Cable, 3-wire, 2 m <sup>7)</sup>                             |
| Cable material:                   | PVC                                                          |
| Conductor cross-section:          | $0.14 \text{ mm}^2$                                          |
| Circuit protection:::             | A, B, D <sup>8)</sup> <sup>9)</sup> <sup>10)</sup>           |
| Protection class:                 | III                                                          |
| Weight:                           | 170 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     |
| Ambient operating temperature:    | $-25 \text{ }^\circ\text{C} \dots 55 \text{ }^\circ\text{C}$ |
| Ambient storage temperature:      | $-40 \text{ }^\circ\text{C} \dots 70 \text{ }^\circ\text{C}$ |

- 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) Do not bend below  $0 \text{ }^\circ\text{C}$     8)  $A = V_S$  connections reverse-polarity protected    9) B = inputs and output reverse-polarity protected    10) D = outputs overcurrent and short-circuit protected

## Dimensional drawing



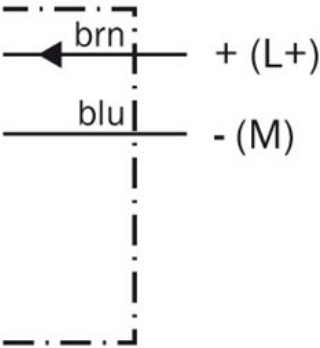
Adjustments possible



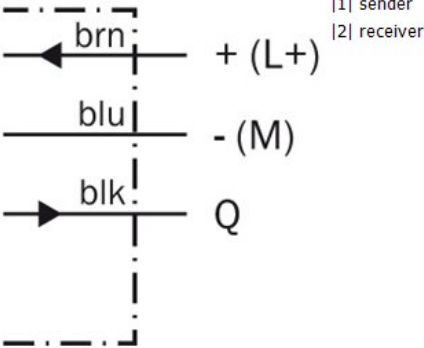
- |4| Status indicator LED green: power on
- |5| Status indicator LED,  
yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

Connection diagram

①

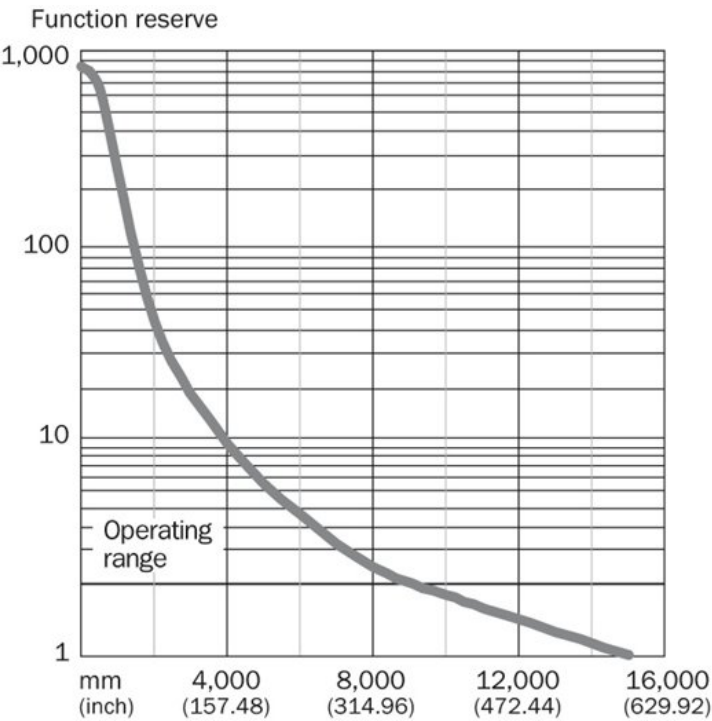


②

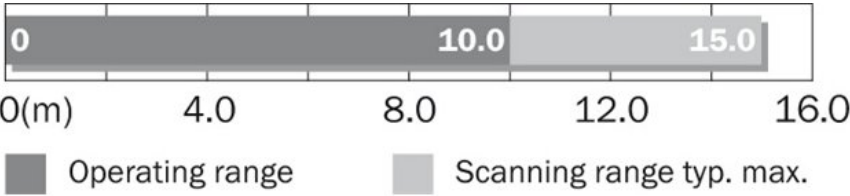


- |1| sender
- |2| receiver

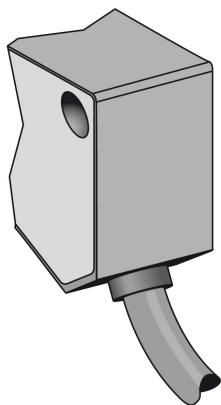
Characteristic curve



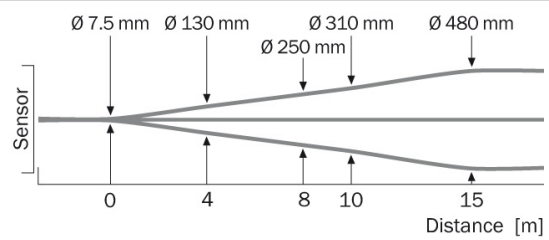
Sensing range diagram



## Connection type



## Light spot size



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