



Photoelectric sensors  
G6, Photoelectric proximity sensor, energetic

GTE6-P4212



**Model Name** > [GTE6-P4212](#)  
**Part No.** > [1051781](#)



*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
- 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



**Features**

|                                  |   |
|----------------------------------|---|
| Sensor/detection principle:      | Photoelectric proximity sensor, energetic |
| Dimensions (W x H x D):          | 12 mm x 31.5 mm x 21 mm                   |
| Housing design (light emission): | Rectangular                               |
| Sensing range max.:              | ≤ 300 mm <sup>1)</sup>                    |
| Sensing range:                   | ≤ 250 mm                                  |
| Type of light:                   | Visible red light                         |
| Light source:                    | PinPoint LED <sup>2)</sup>                |
| Wave length:                     | 650 nm                                    |
| Adjustment:                      | Mechanical spindle, 5 turns               |
| Light spot size (distance):      | Ø 7 mm (90 mm)                            |

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033)    <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

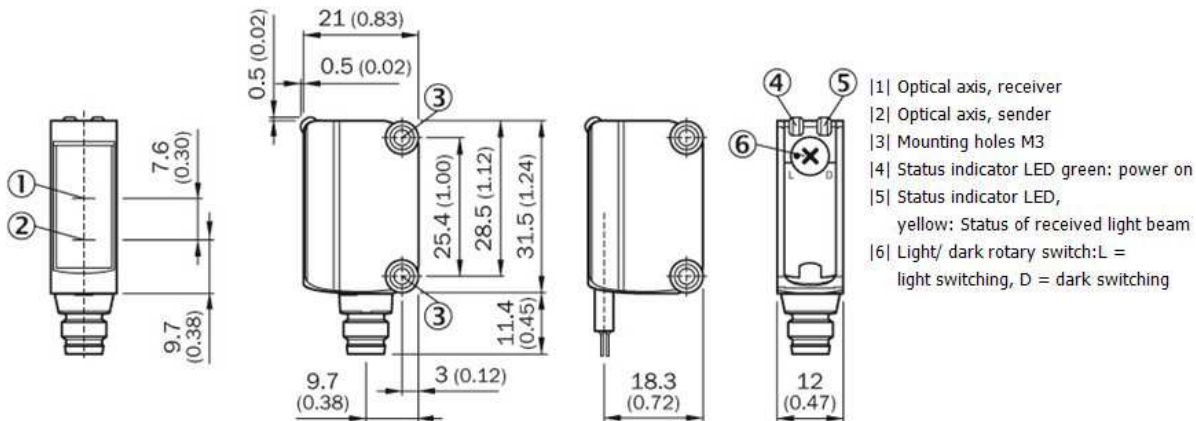
**Mechanics/electronics**

|                    |                                   |
|--------------------|-----------------------------------|
| 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                               |

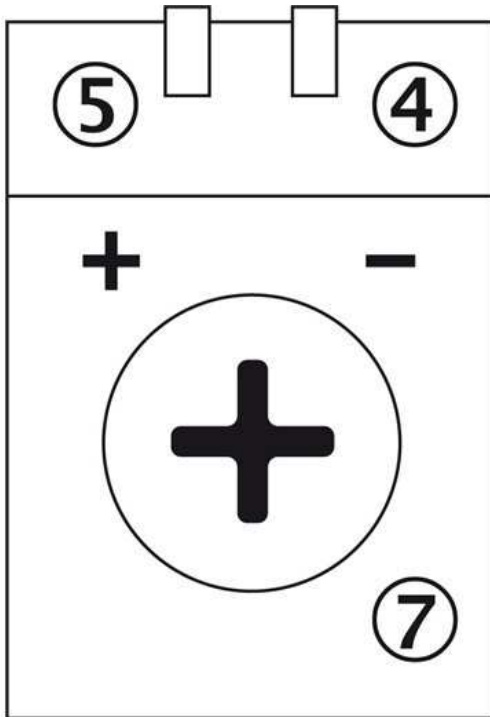
|                                     |  |
|-------------------------------------|--|
| Switching mode:                     | Light/dark switching                                     |
| Switching mode selector:            | Selectable via light/dark selector                       |
| Output current I <sub>max</sub> ..: | ≤ 100 mA <sup>4)</sup>                                   |
| Response time:                      | < 1,250 ms <sup>5)</sup>                                 |
| Switching frequency:                | 500 Hz <sup>6)</sup>                                     |
| Connection type:                    | Connector M8, 4-pin                                      |
| Circuit protection:::               | A, B, D <sup>7) 8) 9)</sup>                              |
| 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 |
| Ambient operating temperature:      | -25 °C ... +55 °C <sup>10)</sup>                         |
| Ambient storage temperature:        | -40 °C ... +70 °C  |
| UL File No.:                        | NRKH.E348498 & NRKH7.E348498                             |
| Signal voltage PNP HIGH/LOW:        | VS - (≤ 3 V)/approx. 0 V                                 |
| Signal voltage NPN HIGH/LOW:        | Approx. VS/≤ 3 V   |
| Housing material:                   | ABS/PC, Plastic  |

1) Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances <sup>3)</sup> Without load <sup>4)</sup> At V<sub>S</sub> > 24 V, I<sub>A</sub> max = 50 mA  
<sup>5)</sup> Signal transit time with resistive load <sup>6)</sup> With light/dark ratio 1:1 <sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>8)</sup> B = inputs and output reverse-polarity protected  
<sup>9)</sup> D = outputs overcurrent and short-circuit protected <sup>10)</sup> Temperature stability after adjustment +/-10°C

### Dimensional drawing

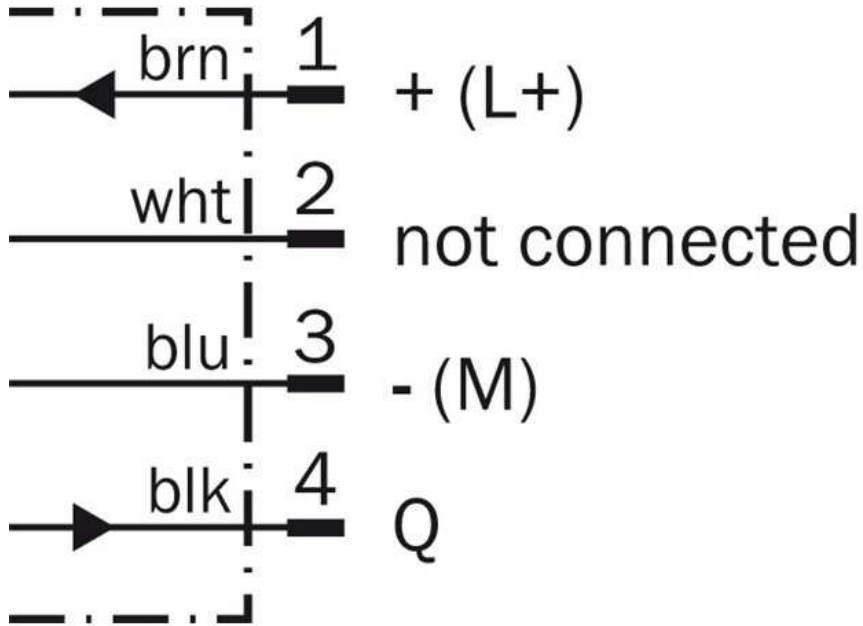


Adjustments possible

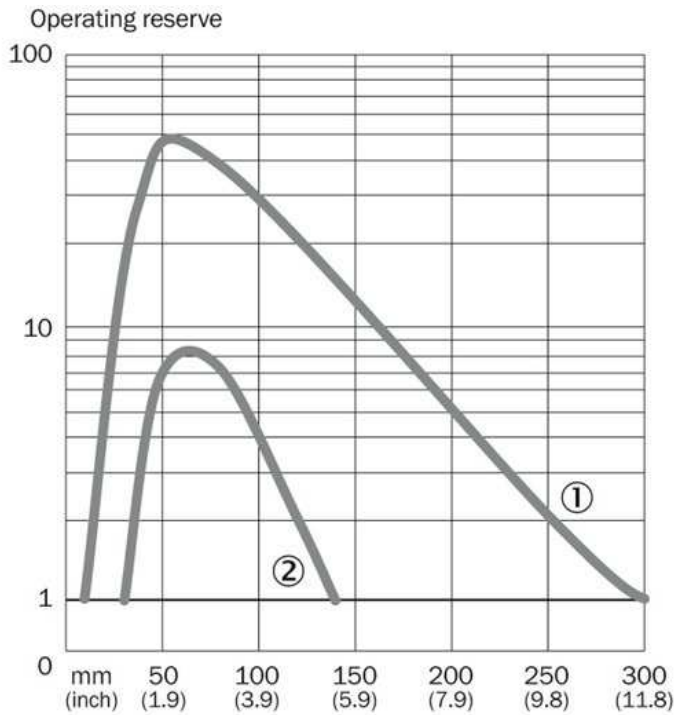


- |4| Status indicator LED green: power on
- |5| Status indicator LED, yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

Connection diagram

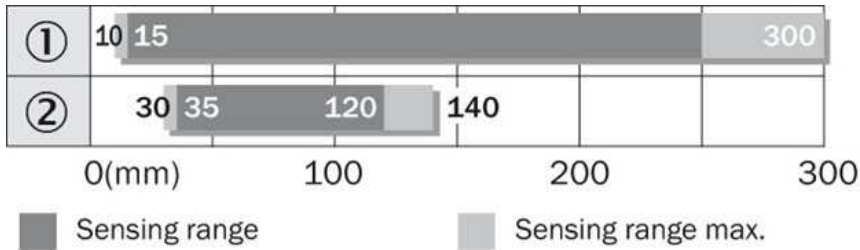


**Characteristic curve**



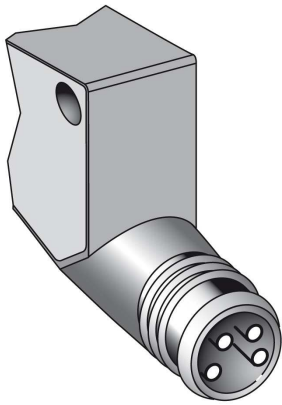
- |1| Sensing range on gray, 18 % remission
- |2| Sensing range on white, 90 % remission

**Sensing range diagram**

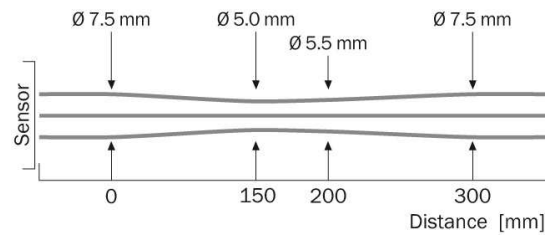


- |1| Object with 90% remission (referred to standard white DIN 5033)
- |2| Sensing range on gray, 18 % remission

## Connection type



## Light spot size



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