



Photoelectric sensors  
G6, Through-beam photoelectric sensor

GSE6-P4112



**Model Name** > [GSE6-P4112](#)  
**Part No.** > [1052450](#)



*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
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

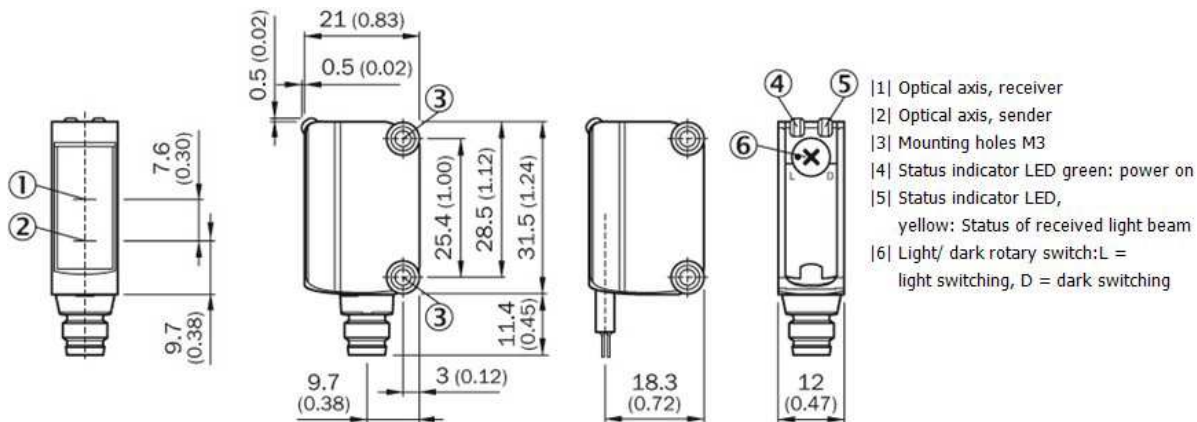
**Mechanics/electronics**

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

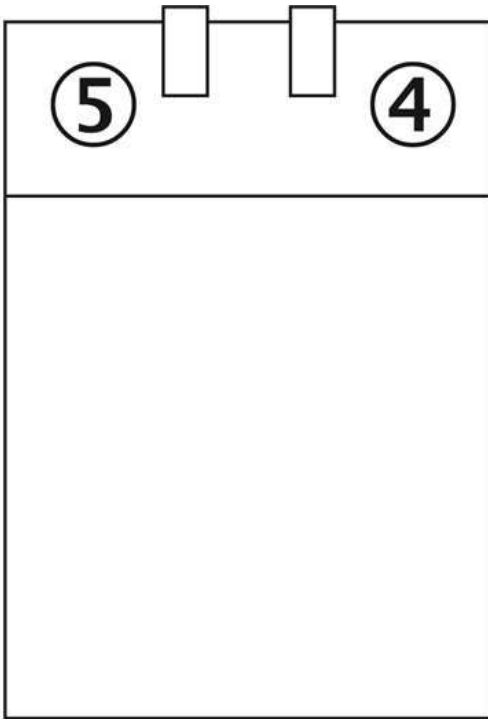
Switching mode selector:	Selectable via light/dark selector
Output current I <sub>max</sub> ::	≤ 100 mA <sup>4)</sup>
Response time:	< 500 μs <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, D <sup>7) 8) 9)</sup>
Protection class:	III
Weight:	40 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
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  
5) 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  
9) D = outputs overcurrent and short-circuit protected<sup>10)</sup> Temperature stability after adjustment +/-10°C

## Dimensional drawing



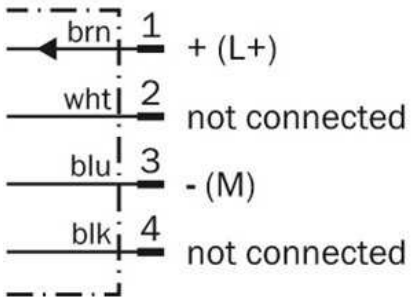
## Adjustments possible



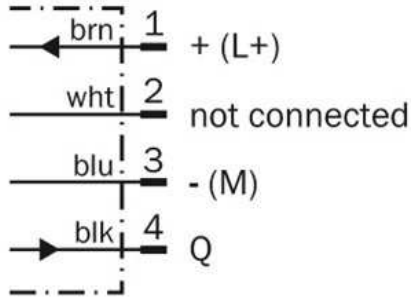
- |4| Status indicator LED green: power on
- |5| Status indicator LED,  
yellow: Status of received light beam

## Connection diagram

①

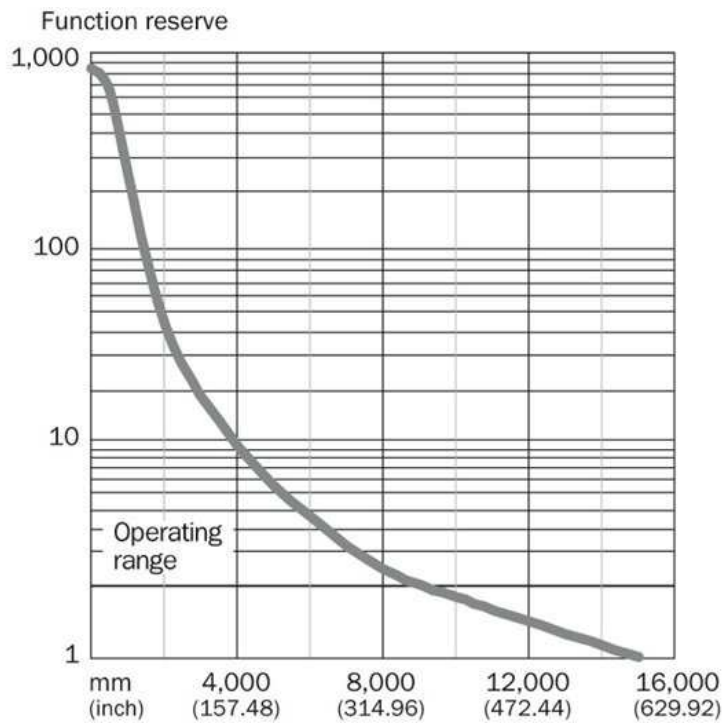


②

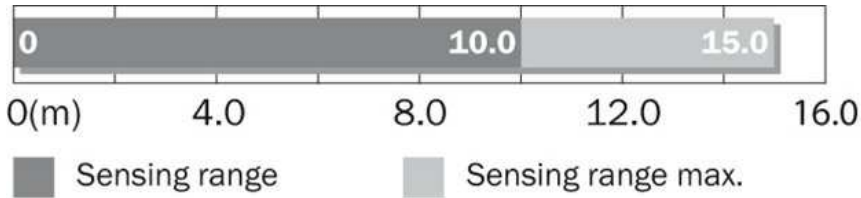


- |1| sender
- |2| receiver

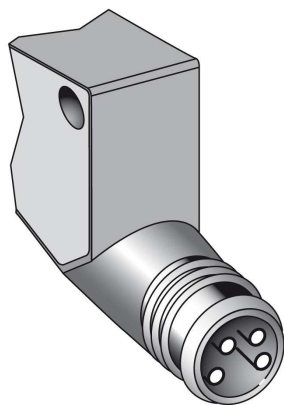
## Characteristic curve



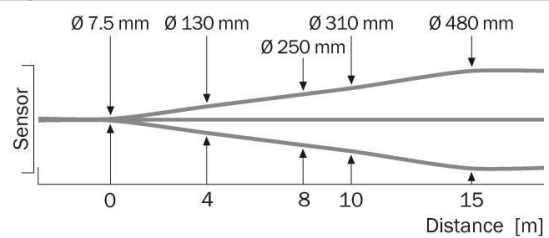
## Sensing range diagram



### Connection type



### Light spot size



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