



Photoelectric sensors
G6, Through-beam photoelectric sensor

GSE6-P6112



Model Name > [GSE6-P6112](#)
Part No. > [1054850](#)



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 ¹⁾ |
| Wave length: | 650 nm |
| Light spot size (distance): | Ø 375 mm (12 m) |

¹⁾ Average service life of 100,000 h at T_A = +25 °C

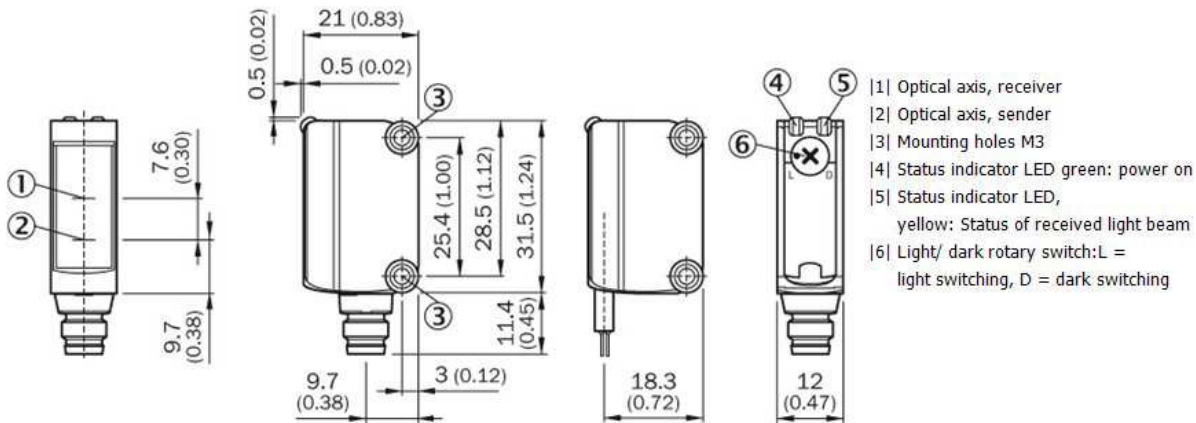
Mechanics/electronics

| | |
|--------------------|-----------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Ripple: | ± 10 % ²⁾ |
| Power consumption: | ≤ 30 mA ³⁾ |
| Output type: | PNP |
| Switching mode: | Light/dark switching |

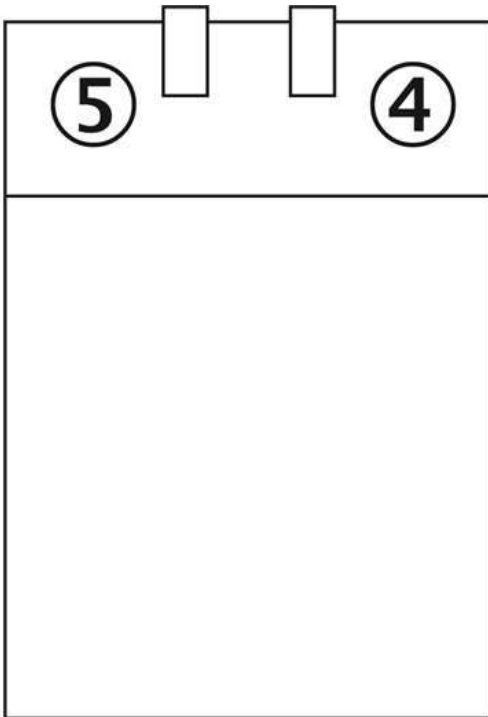
| | |
|-------------------------------------|--|
| Switching mode selector: | Selectable via light/dark selector |
| Output current I _{max} ..: | ≤ 100 mA ⁴⁾ |
| Response time: | < 500 μs ⁵⁾ |
| Switching frequency: | 1,000 Hz ⁶⁾ |
| Connection type: | Cable with connector M8, 4-pin, 300 mm ⁷⁾ |
| Cable material: | PVC |
| Conductor cross-section: | 0.14 mm ² |
| Circuit protection::: | A, B, D ^{8) 9) 10)} |
| 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 ¹¹⁾ |
| 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 A²⁾ May not exceed or fall short of V_S tolerances³⁾ Without load⁴⁾ At V_S > 24 V, I_A max = 50 mA
5) Signal transit time with resistive load⁶⁾ With light/dark ratio 1:1⁷⁾ Do not bend below 0 °C⁸⁾ A = V_S connections reverse-polarity protected⁹⁾ B = inputs and output reverse-polarity protected¹⁰⁾ D = outputs overcurrent and short-circuit protected¹¹⁾ Temperature stability after adjustment +/-10°C

Dimensional drawing



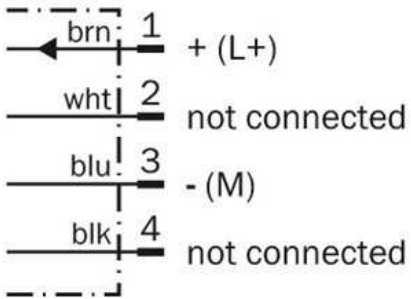
Adjustments possible



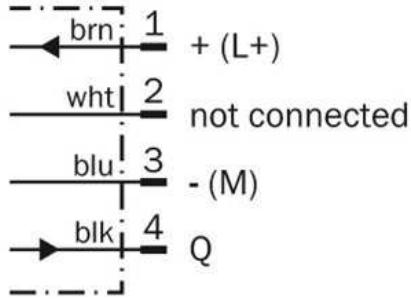
- |4| Status indicator LED green: power on
- |5| Status indicator LED,
yellow: Status of received light beam

Connection diagram

①

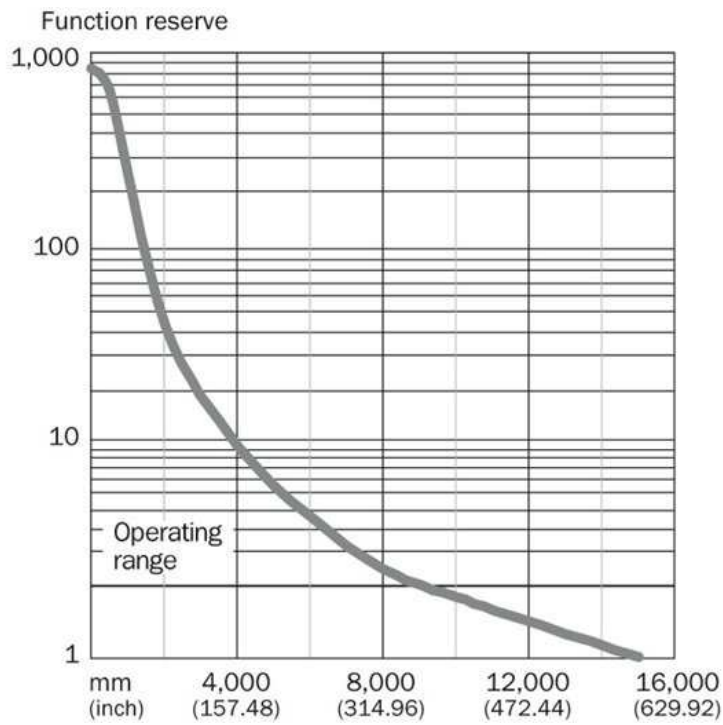


②

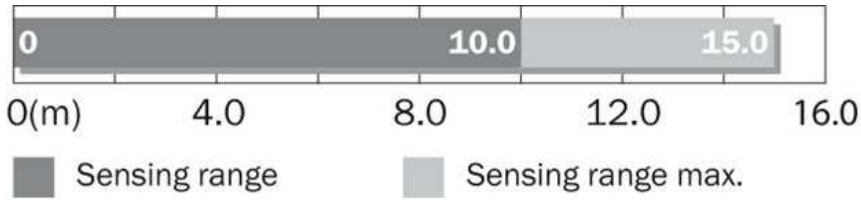


- |1| sender
- |2| receiver

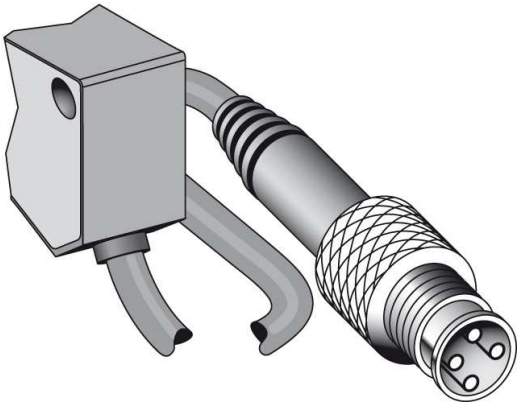
Characteristic curve



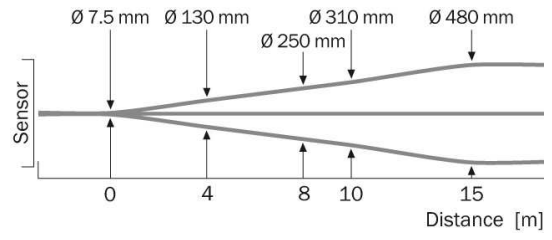
Sensing range diagram



Connection type



Light spot size



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