



DATA SHEET

GSE6-P4111

G6
Photoelectric sensors

PHOTOELECTRIC SENSORS

GSE6-P4111

ORDERING INFORMATION

| Type | part no. |
|------------|----------|
| GSE6-P4111 | 1052446 |

Further device versions and accessories at www.sick.com/G6



Illustration may differ



DETAILED TECHNICAL DATA

FEATURES

| | | |
|--------------------------------------|-------------------------------------|----------------------------|
| Functional principle | Through-beam photoelectric sensor | |
| Sensing range max. | 0 m ... 15 m | |
| Sensing range | 0 m ... 10 m | |
| Polarisation filter | No | |
| Emitted beam | Light source | PinPoint LED ¹⁾ |
| | Type of light | Visible red light |
| | Light spot size (distance) | Ø 375 mm (12 m) |
| Key LED figures | Wave length | 650 nm |
| | Adjustment | None |
| Part number of individual components | 2058059 GS6-D4311 2058077 GE6-P4111 | |

¹⁾ Average service life: 100,000 h at T_u = +25 °C.

SAFETY-RELATED PARAMETERS

| | |
|-------------------|-------------|
| MTTF _D | 1,009 years |
| DC _{avg} | 0 % |

ELECTRONICS

| | |
|----------------------|---|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | $\pm 10\%$ ²⁾ |
| Current consumption | 30 mA ³⁾ |
| Protection class | III |
| Digital output | <p>Type PNP</p> <p>Switching mode Light/dark switching</p> <p>Switching mode selector Selectable via light/dark selector</p> <p>Signal voltage PNP HIGH/LOW $V_S - (\leq 3\text{ V}) / \text{approx. } 0\text{ V}$</p> <p>Output current I_{max} $\leq 100\text{ mA}$ ⁴⁾</p> <p>Response time $< 500\ \mu\text{s}$ ⁵⁾</p> <p>Switching frequency 1,000 Hz ⁶⁾</p> |
| Circuit protection | A ⁷⁾ B ⁸⁾ D ⁹⁾ |

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_i tolerances.

³⁾ Without load.

⁴⁾ At $U_V > 24\text{ V}$, $I_A \text{ max.} = 50\text{ mA}$.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ D = outputs overcurrent and short-circuit protected.

MECHANICS

| | |
|------------------------|--|
| Housing | Rectangular |
| Dimensions (W x H x D) | 12 mm x 31.5 mm x 21 mm |
| Connection | Male connector M8, 4-pin |
| Material | <p>Housing Plastic, ABS/PC</p> <p>Front screen Plastic, PMMA</p> |
| Weight | 40 g |

AMBIENT DATA

| | |
|-------------------------------|---|
| Enclosure rating | IP67 |
| Ambient operating temperature | $-25\text{ }^\circ\text{C} \dots +55\text{ }^\circ\text{C}$ ¹⁾ |
| Ambient temperature, storage | $-40\text{ }^\circ\text{C} \dots +70\text{ }^\circ\text{C}$ |
| UL File No. | NRKH.E348498 & NRKH7.E348498 |

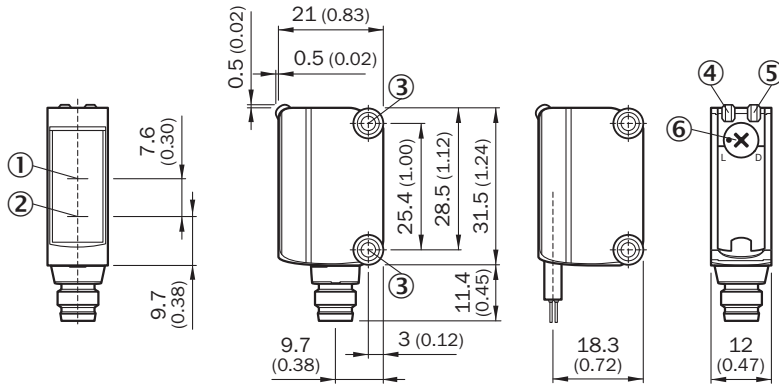
¹⁾ Temperature stability following adjustment $\pm 10\text{ }^\circ\text{C}$.

CERTIFICATES

| | |
|--------------------------------|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |

| | |
|---|---|
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| Photobiological safety (DIN EN 62471) certificate | ✓ |

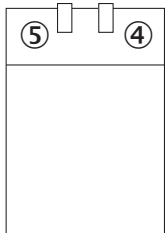
DIMENSIONAL DRAWING



Dimensions in mm (inch)

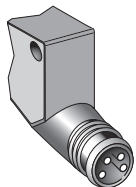
- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

ADJUSTMENTS NO ADJUSTMENT POSSIBILITY

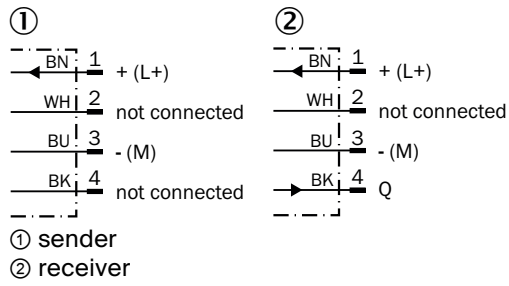


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

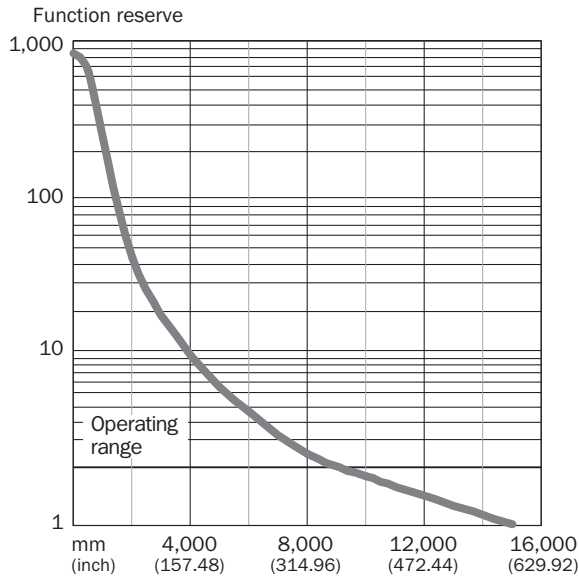
CONNECTION TYPE



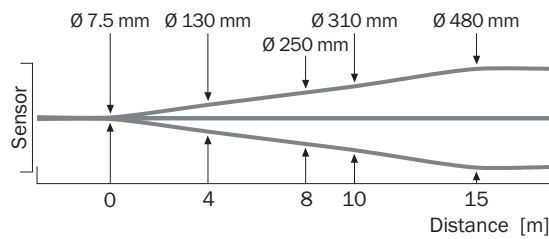
CONNECTION DIAGRAM CD-057



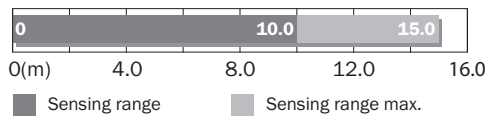
CHARACTERISTIC CURVE WITH GE6-P1111, GE6-N1111, GE6-P1111S63



LIGHT SPOT SIZE



SENSING RANGE DIAGRAM



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1052446



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK
Sensor Intelligence