



DATA SHEET

# GSE6-P7112

G6  
Photoelectric sensors

## PHOTOELECTRIC SENSORS

## GSE6-P7112

## ORDERING INFORMATION

Type	part no.
GSE6-P7112	1054831

Further device versions and accessories at [www.sick.com/G6](http://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 <sup>1)</sup>
	Type of light	Visible red light
	Light spot size (distance)	Ø 375 mm (12 m)
Key LED figures	Wave length	650 nm
	Adjustment	None
Items supplied	Stainless steel mounting bracket (1.4301/304) BEF-W100-A	

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

## SAFETY-RELATED PARAMETERS

MTTF <sub>D</sub>	995 years
DC <sub>avg</sub>	0 %

**ELECTRONICS**

Supply voltage $U_B$	10 V DC ... 30 V DC <sup>1)</sup>
Ripple	$\pm 10\%$ <sup>2)</sup>
Current consumption	30 mA <sup>3)</sup>
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 <math>V_S - (\leq 3\text{ V}) / \text{approx. } 0\text{ V}</math></p> <p>Output current <math>I_{\text{max}}</math> <math>\leq 100\text{ mA}</math> <sup>4)</sup></p> <p>Response time <math>&lt; 500\ \mu\text{s}</math> <sup>5)</sup></p> <p>Switching frequency 1,000 Hz <sup>6)</sup></p>
Circuit protection	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</sup>

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

<sup>2)</sup> May not fall below or exceed  $U_V$  tolerances.

<sup>3)</sup> Without load.

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

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> With light/dark ratio 1:1.

<sup>7)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>8)</sup> B = inputs and output reverse-polarity protected.

<sup>9)</sup> 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	Cable with M12 male connector, 4-pin <sup>1)</sup>
Connection detail	<p>Conductor size 0.14 mm<sup>2</sup></p> <p>Length of cable (L) 300 mm <sup>1)</sup></p>
Material	<p>Housing Plastic, ABS/PC</p> <p>Front screen Plastic, PMMA</p> <p>Cable Plastic, PVC</p>
Weight	40 g

<sup>1)</sup> Do not bend below 0 °C.

**AMBIENT DATA**

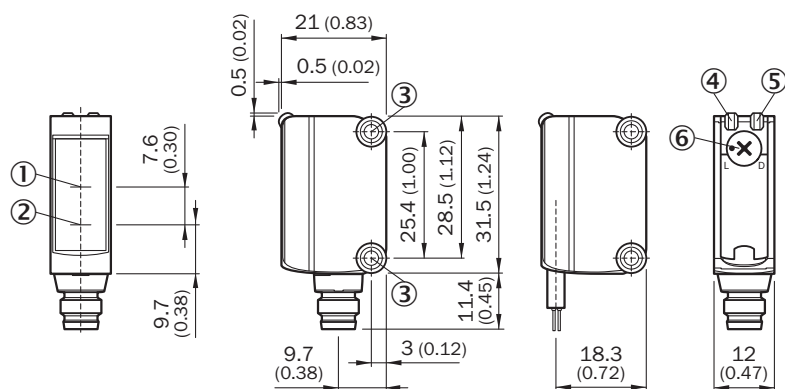
Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +55 °C <sup>1)</sup>
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

<sup>1)</sup> Temperature stability following adjustment +/-10 °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	✓

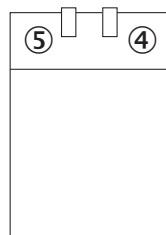
**DIMENSIONAL DRAWING**



Dimensions in mm (inch)

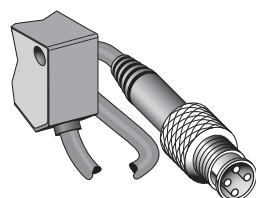
- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

**ADJUSTMENTS NO ADJUSTMENT POSSIBILITY**

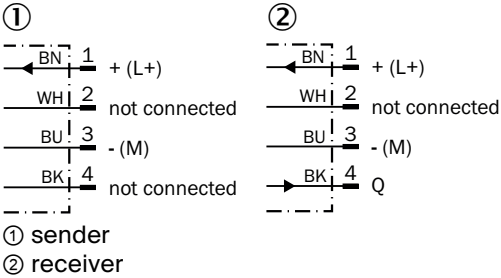


- ④ LED indicator green: Supply voltage active
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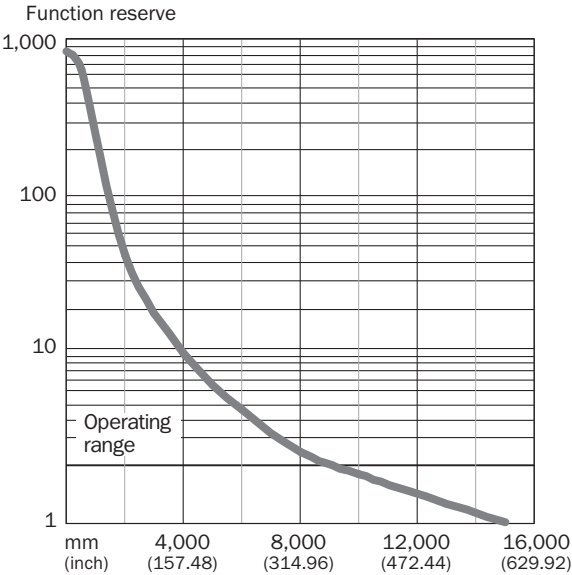
**CONNECTION TYPE**



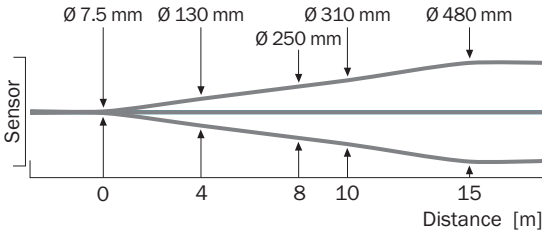
**CONNECTION DIAGRAM CD-057**



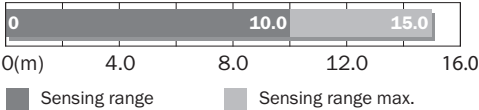
**CHARACTERISTIC CURVE WITH GE6-P1111, GE6-N1111, GE6-P1111S63**



**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/1054831](http://www.sick.com/1054831)



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