SICK.COM




DATA SHEET

# GE6-P7111S76

G6
Photoelectric sensors

SICK
Sensor Intelligence



Illustration may differ

# PHOTOELECTRIC SENSORS

# GE6-P7111S76

## ORDERING INFORMATION

| Type | part no. |
|---|---|
| GE6-P7111S76 | 2129188 |

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

## 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<br>Light spot size (distance) | <br>Ø 375 mm (12 m) |
| Adjustment | None |
| Special features | Through-beam photoelectric sensor (receiver only) |

### SAFETY-RELATED PARAMETERS

| | |
|---|---|
| $MTTF_D$ | 995 years |
| $DC_{avg}$ | 0 % |

### ELECTRONICS

| | |
|---|---|
| Supply voltage $U_B$ | 10 V DC ... 30 V DC [1] |

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

[2] May not fall below or exceed $U_V$ tolerances.

[3] Without load.

[4] At Uv > 24 V, IA max. = 50 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.

| | |
|---|---|
| Ripple | ± 10 % [2] |
| Current consumption | 30 mA [3] |
| Protection class | III |
| Digital output | |
| Type | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark selector |
| Signal voltage NPN HIGH/LOW | Approx. $V_S$ / ≤ 3 V |
| Output current $I_{max.}$ | ≤ 100 mA [4] |
| Response time | < 500 µs [5] |
| Switching frequency | 1,000 Hz [6] |
| Circuit protection | A [7]<br>B [8]<br>D [9] |
| Special feature | Receiver |

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

[2] May not fall below or exceed $U_V$ tolerances.

[3] Without load.

[4] At Uv > 24 V, IA max. = 50 mA.

[5] Signal transit time with resistive load.

[6] With light/dark ratio 1:1.

[7] A = $V_S$ connections reverse-polarity protected.

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[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 | Cable with plug, M12, 4-pin [1] |
| Connection detail | |
| Conductor size | 0.14 mm² |
| Length of cable (L) | 300 mm [1] |
| Material | |
| Housing | Plastic, ABS/PC |
| Front screen | Plastic, PMMA |
| Cable | Plastic, PVC |
| Weight | 28 g |

[1] Do not bend below 0 °C.

## AMBIENT DATA

| | |
|---|---|
| Enclosure rating | IP67 |
| Ambient operating temperature | –25 °C ... +55 °C [1] |
| Ambient temperature, storage | –40 °C ... +70 °C |
| UL File No. | NRKH.E348498 & NRKH7.E348498 |

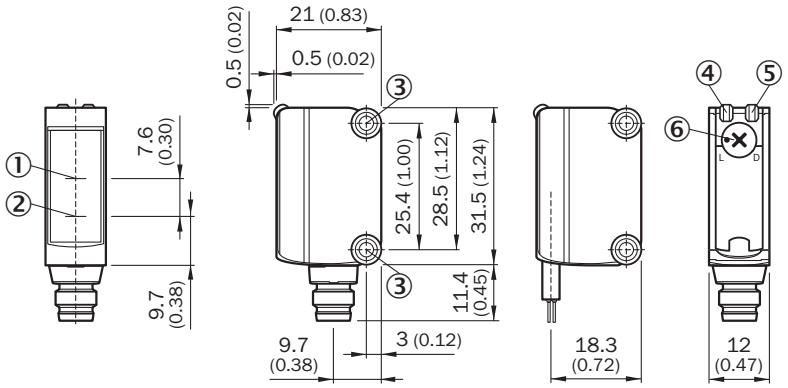
[1] Temperature stability following adjustment +/-10 °C.

## CERTIFICATES

| | |
|---|---|
| EU declaration of conformity | ✓ |

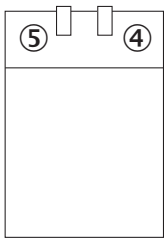
| | |
|---|---|
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |
| Photobiological safety (DIN EN 62471) certificate | ✓ |

## DIMENSIONAL DRAWING



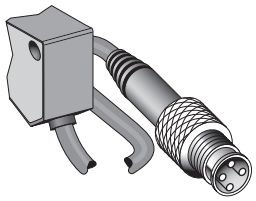

Dimensions in mm (inch)
① Optical axis, receiver
② Optical axis, sender
③ Mounting holes M3
④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑥ Light/ dark rotary switch: L = light switching, D = dark switching

## ADJUSTMENTS NO ADJUSTMENT POSSIBILITY

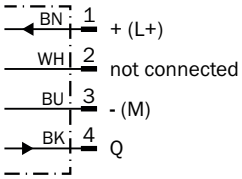


④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam

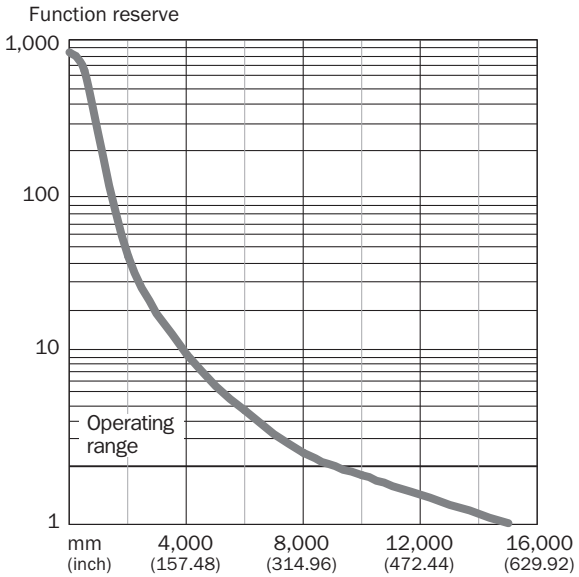
## CONNECTION TYPE



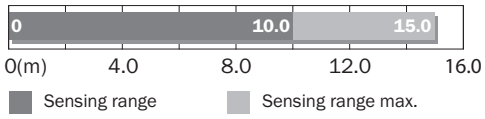
## CONNECTION DIAGRAM CD-067




## CHARACTERISTIC CURVE WITH GS6-D7311




## 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/2129188

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# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

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

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