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Product data sheet



# GSE6-F2411V

G6

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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# GSE6-F2411V | G6

MINIATURE PHOTOELECTRIC SENSORS



Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| GSE6-F2411V | 1084106 |

Other models and accessories → 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 filters** | No |
| **Emitted beam** | |
| Light source | PinPoint LED [1] |
| Type of light | Visible red light |
| Light spot size (distance) | Ø 310 mm (10 m) |
| **Key LED figures** | |
| Wave length | 650 nm |
| **Adjustment** | Potentiometer, 270° |
| **Special applications** | Hygienic and washdown zones |

[1] Average service life: 100,000 h at $T_U$ = +25 °C.

### Electrical data

| | |
|---|---|
| **Supply voltage $U_B$** | 10 V DC ... 30 V DC [1] |
| **Ripple** | ± 10 % [2] |
| **Current consumption** | 30 mA [3] |
| **Protection class** | III |

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below $U_V$ 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.

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| | |
|---|---|
| **Digital output** | |
| Type | PNP |
| Switching mode | Light/dark switching |
| Signal voltage PNP HIGH/LOW | $V_S$ - (≤ 3 V) / approx. 0 V |
| Output current $I_{max.}$ | ≤ 100 mA [4] |
| Response time | < 625 µs [5] |
| Switching frequency | 1,000 Hz [6] |
| **Output function** | Complementary switching output |
| **Circuit protection** | A [7]<br>B [8]<br>D [9] |

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below $U_V$ 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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## Mechanical data

| | |
|---|---|
| **Housing** | Rectangular |
| **Dimensions (W x H x D)** | 15 mm x 44 mm x 22 mm |
| **Connection** | Cable, 4-wire, 2 m [1] |
| **Connection detail** | |
| Conductor size | 0.14 mm² |
| Length of cable (L) | 2 m [1] |
| **Material** | |
| Housing | Stainless steel, Stainless steel V4A (1.4404, 316L) |
| Front screen | Plastic, PMMA |
| Cable | PVC |
| **Weight** | 150 g |

[1] Do not bend below 0 °C.

## Ambient data

| | |
|---|---|
| **Enclosure rating** | IP67<br>IP69K [1] |
| **Ambient operating temperature** | –25 °C ... +55 °C [2] |
| **Ambient temperature, storage** | –30 °C ... +75 °C |
| **UL File No.** | NRKH.E348498 & NRKH7.E348498 |

[1] According to ISO 20653:2013-03.
[2] Temperature stability following adjustment +/-10 °C.

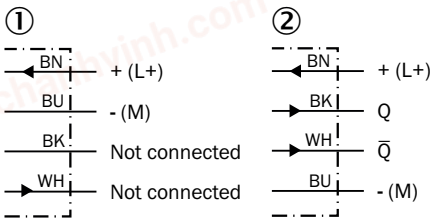
## Classifications

| | |
|---|---|
| **ECLASS 5.0** | 27270901 |

| | |
|---|---|
| **ECLASS 5.1.4** | 27270901 |
| **ECLASS 6.0** | 27270901 |
| **ECLASS 6.2** | 27270901 |
| **ECLASS 7.0** | 27270901 |
| **ECLASS 8.0** | 27270901 |
| **ECLASS 8.1** | 27270901 |
| **ECLASS 9.0** | 27270901 |
| **ECLASS 10.0** | 27270901 |
| **ECLASS 11.0** | 27270901 |
| **ECLASS 12.0** | 27270901 |
| **ETIM 5.0** | EC002716 |
| **ETIM 6.0** | EC002716 |
| **ETIM 7.0** | EC002716 |
| **ETIM 8.0** | EC002716 |
| **UNSPSC 16.0901** | 39121528 |

## Connection diagram

Cd-231



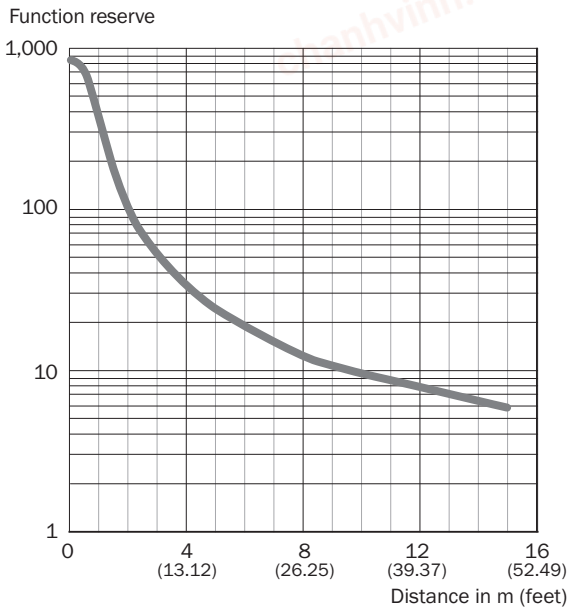

① Sender
② Receiver

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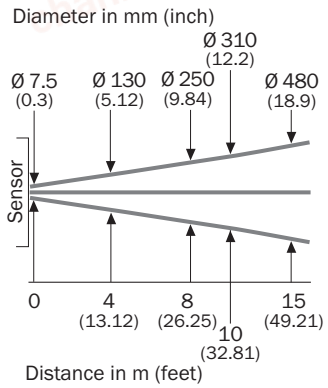
## Characteristic curve

GSE6 Inox, Red, Standard



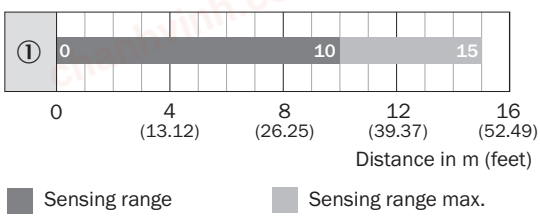

## Light spot size

GSE6 Inox, Red, Standard



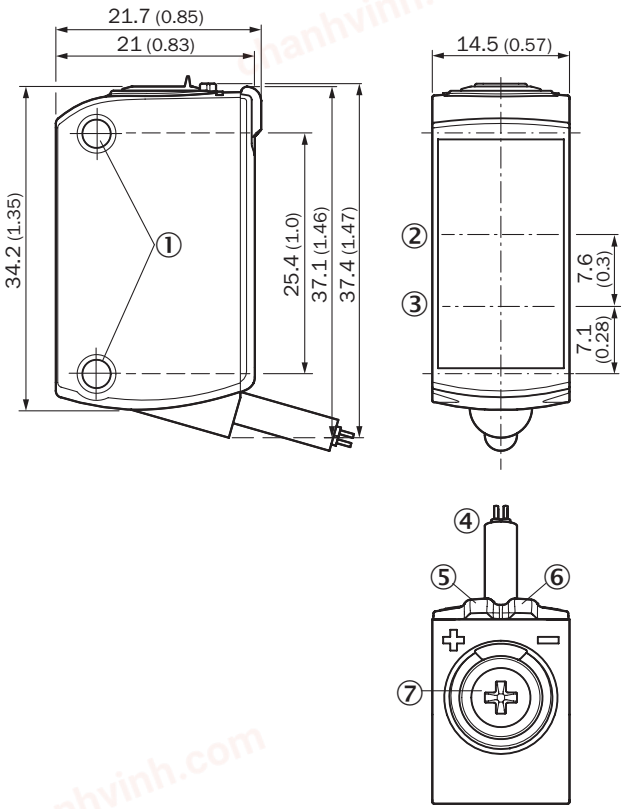

## Sensing range diagram

GSE6 Inox, Red, Standard



## Dimensional drawing (Dimensions in mm (inch))

GTB6, GTE6, GL6, GSE6 Inox, cable (with male connector)




① M3 mounting hole
② Optical axis, receiver
③ Optical axis, sender
④ Connection
⑤ LED indicator yellow: Status of received light beam
⑥ LED indicator green: Supply voltage active
⑦ Potentiometer

## Recommended accessories

Other models and accessories ➜ www.sick.com/G6

| | Brief description | Type | Part no. |
|---|---|---|---|
| Universal bar clamp systems | | | |
|  | Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness, aluminum (clamp bar), stainless steel (bracket), clamp bar mounting and clamp function, mounting bracket, mounting hardware | BEF-KHS-IS12G6 | 2086865 |
| Mounting brackets and plates | | | |
|  | Mounting bracket for wall mounting, stainless steel, mounting hardware included | BEF-W100-A | 5311520 |

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| | Brief description | Type | Part no. |
|---|---|---|---|
| Plug connectors and cables | | | |
|  | • **Connection type head A:** Male connector, M8, 4-pin, straight<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** 0.14 mm² ... 0.5 mm² | STE-0804-G | 6037323 |

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# SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

# WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com