Data sheet




# GL6-P0311S94

G6

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

## Ordering information

| Type | part no. |
|---|---|
| GL6-P0311S94 | 1102710 |

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

## Detailed technical data

### Features

| | |
|---|---|
| **Functional principle** | Photoelectric retro-reflective sensor |
| **Functional principle detail** | With minimum distance to reflector (dual lens system) |
| **Sensing range max.** | 0.03 m ... 4 m [1] |
| **Sensing range** | 0.07 m ... 3.5 m [1] |
| **Polarisation filters** | Yes |
| **Emitted beam** | |
| Light source | PinPoint LED |
| Type of light | Visible red light |
| Light spot size (distance) | Ø 8 mm (350 mm) |
| **Key LED figures** | |
| Wave length | 650 nm |
| **Adjustment** | None |
| **Special features** | This product is made for use with deTem4 LT Muting A/P. It fits deTem4 LT Muting Active (1096014). |

[1] Reflector P250.

## Electronics

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

## Mechanics

| | |
|---|---|
| **Housing** | Rectangular |
| **Dimensions (W x H x D)** | 12 mm x 31.5 mm x 21 mm |
| **Connection** | Cable with connector M12, 5-pin, with dual cable, 0.57 m and 0.27 m cable length [1] |
| **Connection detail** | |
| Conductor size | 0.14 mm² |
| **Material** | |
| Housing | Plastic, ABS/PC |
| Front screen | Plastic, PMMA |
| Cable | Plastic, PVC |
| **Weight** | 42 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.

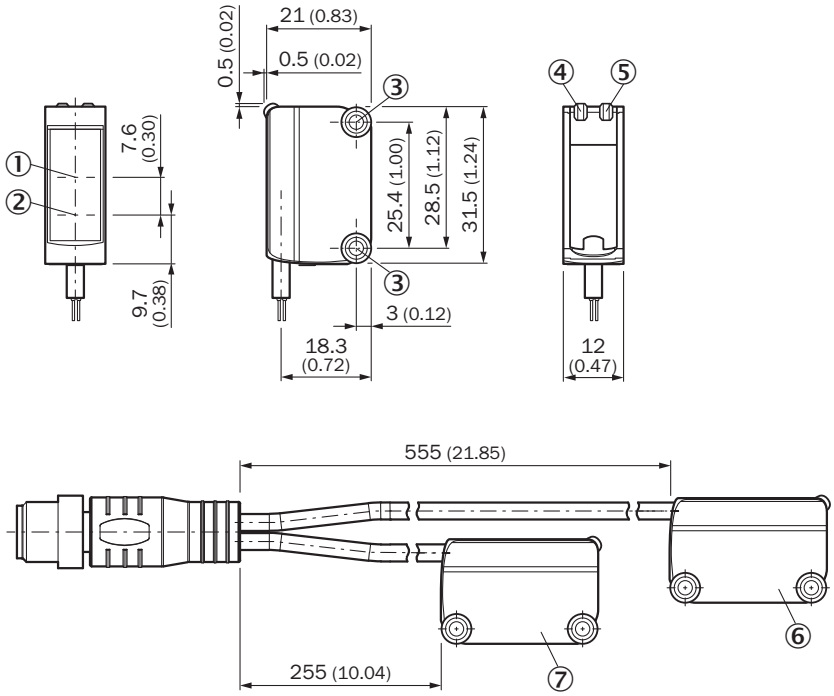
## Certificates

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

## Classifications

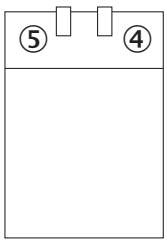
| | |
|---|---|
| **ECLASS 5.0** | 27270902 |
| **ECLASS 5.1.4** | 27270902 |
| **ECLASS 6.0** | 27270902 |
| **ECLASS 6.2** | 27270902 |
| **ECLASS 7.0** | 27270902 |
| **ECLASS 8.0** | 27270902 |
| **ECLASS 8.1** | 27270902 |
| **ECLASS 9.0** | 27270902 |
| **ECLASS 10.0** | 27270902 |
| **ECLASS 11.0** | 27270902 |
| **ECLASS 12.0** | 27270902 |
| **ETIM 5.0** | EC002717 |
| **ETIM 6.0** | EC002717 |
| **ETIM 7.0** | EC002717 |
| **ETIM 8.0** | EC002717 |
| **UNSPSC 16.0901** | 39121528 |

## Dimensional drawing



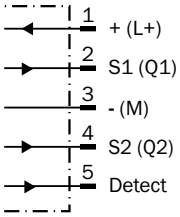

Dimensions in mm (inch)
① optical axis, receiver
② optical axis, sender
③ Mounting holes M3
④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑥ sensor S1
⑦ sensor S2

## Adjustments No adjustment possibility

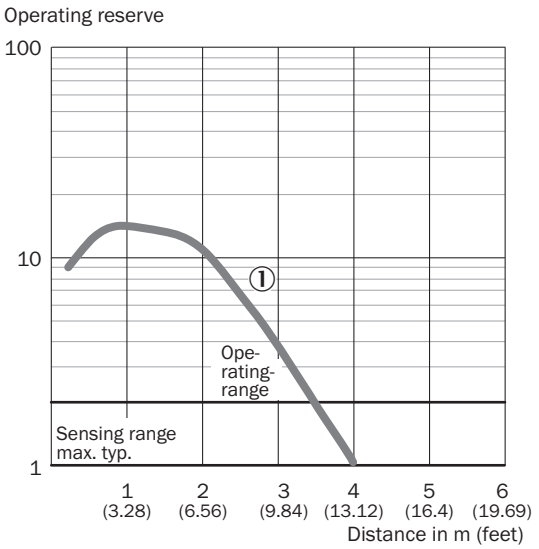


④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam

## Connection diagram Cd-487

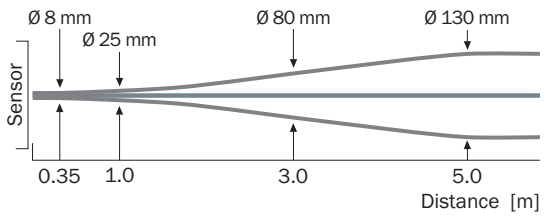



## Characteristic curve

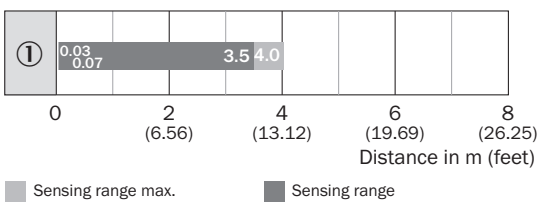



① Reflector P250

## Light spot size GL6, GL6G




## Sensing range diagram



① Reflector P250

## Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|---|---|
| Mounting systems | | | |
|  | • **Description:** Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness<br>• **Material:** Steel<br>• **Details:** Aluminum (clamp bar), stainless steel (bracket)<br>• **Items supplied:** Clamp bar mounting and clamp function, mounting bracket, mounting hardware | BEF-KHS-IS12G6 | 2086865 |
|  | • **Material:** Stainless steel<br>• **Details:** Stainless steel (1.4301)<br>• **Suitable for:** W4S | BEF-WN-G6 | 2062909 |
|  | • **Description:** Universal mounting bracket for reflectors<br>• **Dimensions (W x H x L):** 85 mm x 90 mm x 35 mm<br>• **Material:** Steel<br>• **Details:** Steel, zinc coated<br>• **Suitable for:** C110A, P250, PL20, PL30A, PL40A, PL80A | BEF-WN-REFX | 2064574 |
| reflectors and optics | | | |
|  | • **Description:** Rectangular, screw connection<br>• **Dimensions:** 51 mm 61 mm<br>• **Ambient operating temperature:** –30 °C ... +65 °C | P250 | 5304812 |

# 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.”**

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