



# GL6-P7411V

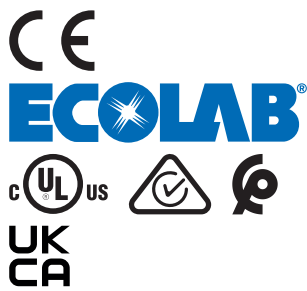
G6

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

| Type       | part no. |
|------------|----------|
| GL6-P7411V | 1104194  |

Other models and accessories → [www.sick.com/G6](http://www.sick.com/G6)

Detailed technical data

Features

|                                    |                            |                                                       |
|------------------------------------|----------------------------|-------------------------------------------------------|
| <b>Functional principle</b>        |                            | Photoelectric retro-reflective sensor                 |
| <b>Functional principle detail</b> |                            | With minimum distance to reflector (dual lens system) |
| <b>Sensing range max.</b>          |                            | 0.03 m ... 6 m <sup>1)</sup>                          |
| <b>Sensing range</b>               |                            | 0.07 m ... 5 m <sup>1)</sup>                          |
| <b>Polarisation filters</b>        |                            | Yes                                                   |
| <b>Emitted beam</b>                |                            |                                                       |
|                                    | Light source               | PinPoint LED <sup>2)</sup>                            |
|                                    | Type of light              | Visible red light                                     |
|                                    | Light spot size (distance) | Ø 8 mm (350 mm)                                       |
| <b>Key LED figures</b>             |                            |                                                       |
|                                    | Wave length                | 650 nm                                                |
| <b>Adjustment</b>                  |                            | Potentiometer, 270°                                   |
| <b>Special applications</b>        |                            | Hygienic and washdown zones                           |

<sup>1)</sup> Reflector PL80A.  
<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

## Electronics

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>Supply voltage <math>U_B</math></b> | 10 V DC ... 30 V DC <sup>1)</sup>                      |
| <b>Ripple</b>                          | $\pm 10\%$ <sup>2)</sup>                               |
| <b>Current consumption</b>             | 30 mA <sup>3)</sup>                                    |
| <b>Protection class</b>                | III                                                    |
| <b>Digital output</b>                  |                                                        |
| Type                                   | PNP                                                    |
| Switching mode                         | Dark switching                                         |
| Signal voltage PNP HIGH/LOW            | $V_S - (\leq 3\text{ V}) / \text{approx. } 0\text{ V}$ |
| Output current $I_{\max}$              | $\leq 100\text{ mA}$ <sup>4)</sup>                     |
| Response time                          | $< 625\text{ }\mu\text{s}$ <sup>5)</sup>               |
| Switching frequency                    | 1,000 Hz <sup>6)</sup>                                 |
| <b>Circuit protection</b>              | A <sup>7)</sup><br>B <sup>8)</sup><br>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

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| <b>Housing</b>                | Rectangular                                        |
| <b>Dimensions (W x H x D)</b> | 15 mm x 44 mm x 22 mm                              |
| <b>Connection</b>             | Cable with M12 male connector, 4-pin <sup>1)</sup> |
| <b>Connection detail</b>      |                                                    |
| Length of cable (L)           | 300 mm <sup>1)</sup>                               |
| <b>Material</b>               |                                                    |
| Housing                       | Metal, Stainless steel V4A (1.4404, 316L)          |
| Front screen                  | Plastic, PMMA                                      |
| Cable                         | Plastic, PVC                                       |
| <b>Weight</b>                 | 70 g                                               |

<sup>1)</sup> Do not bend below 0 °C.

## Ambient data

|                                      |                                 |
|--------------------------------------|---------------------------------|
| <b>Enclosure rating</b>              | IP67<br>IP69K <sup>1)</sup>     |
| <b>Ambient operating temperature</b> | -25 °C ... +55 °C <sup>2)</sup> |
| <b>Ambient temperature, storage</b>  | -30 °C ... +75 °C               |

<sup>1)</sup> According to ISO 20653:2013-03.

<sup>2)</sup> Temperature stability following adjustment +/-10 °C.

|                    |                              |
|--------------------|------------------------------|
| <b>UL File No.</b> | NRKH.E348498 & NRKH7.E348498 |
|--------------------|------------------------------|

<sup>1)</sup> According to ISO 20653:2013-03.

<sup>2)</sup> Temperature stability following adjustment +/-10 °C.

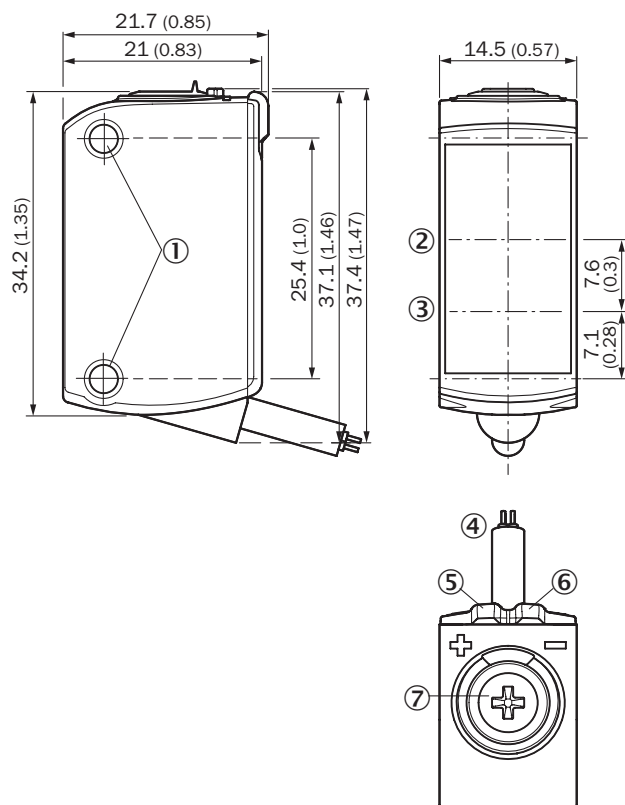
## Certificates

|                                                          |   |
|----------------------------------------------------------|---|
| <b>EU declaration of conformity</b>                      | ✓ |
| <b>UK declaration of conformity</b>                      | ✓ |
| <b>ACMA declaration of conformity</b>                    | ✓ |
| <b>Moroccan declaration of conformity</b>                | ✓ |
| <b>China-RoHS</b>                                        | ✓ |
| <b>ECOLAB certificate</b>                                | ✓ |
| <b>cULus certificate</b>                                 | ✓ |
| <b>Photobiological safety (DIN EN 62471) certificate</b> | ✓ |

## Classifications

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

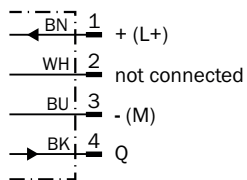
Dimensional drawing GTB6, GTE6, GL6, GSE6 Inox, cable (with male connector)



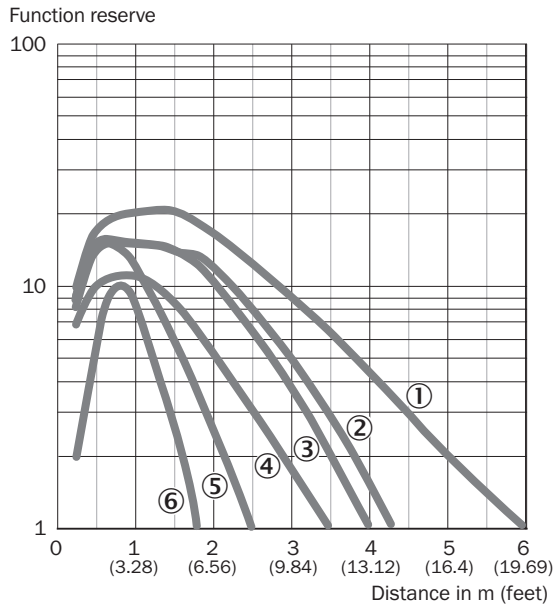
Dimensions in mm (inch)

- 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

Connection diagram Cd-067

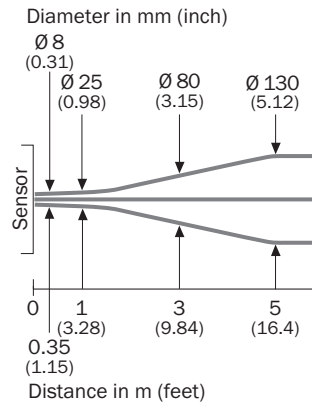


## Characteristic curve GL6 Inox, Red, Standard

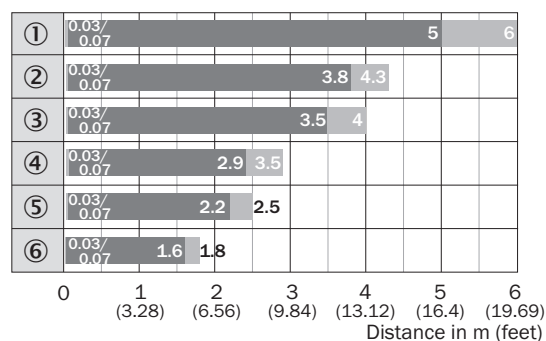


- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector P250 CHEM
- ⑤ Reflector PL20A
- ⑥ reflective tape REF-IRF-56

## Light spot size GL6 Inox, Red, Standard



## Sensing range diagram GL6 Inox, Red, Standard



■ Sensing range      ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector P250 CHEM
- ⑤ Reflector PL20A
- ⑥ reflective tape REF-IRF-56

## Recommended accessories

Other models and accessories → [www.sick.com/G6](http://www.sick.com/G6)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                     | Type           | part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                                                                                                       |                |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Aluminum (clamp bar), stainless steel (bracket)</li> <li><b>Items supplied:</b> Clamp bar mounting and clamp function, mounting bracket, mounting hardware</li> </ul>     | BEF-KHS-IS12G6 | 2086865  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for wall mounting</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel</li> <li><b>Items supplied:</b> Mounting hardware included</li> <li><b>Suitable for:</b> W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S</li> </ul> | BEF-W100-A     | 5311520  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Universal mounting bracket for reflectors</li> <li><b>Dimensions (W x H x L):</b> 85 mm x 90 mm x 35 mm</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated</li> <li><b>Suitable for:</b> C110A, P250, PL20, PL30A, PL40A, PL80A</li> </ul>                                                        | BEF-WN-REFX    | 2064574  |
| reflectors and optics                                                               |                                                                                                                                                                                                                                                                                                                                                                                       |                |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Chemically resistant, screw connection</li> <li><b>Dimensions:</b> 52 mm 61 mm</li> <li><b>Ambient operating temperature:</b> -20 °C ... +140 °C</li> </ul>                                                                                                                                                                | P250 CHEM      | 5321097  |

|                                                                                   | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Type            | part no. |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|
| connectors and cables                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |          |
|  | <ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight</li><li>• <b>Connection type head B:</b> Flying leads</li><li>• <b>Signal type:</b> Sensor/actuator cable</li><li>• <b>Cable:</b> 5 m, 4-wire, PVC</li><li>• <b>Description:</b> Sensor/actuator cable, unshielded</li><li>• <b>Connection systems:</b> Flying leads</li><li>• <b>Note:</b> This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid &amp; hydrogen peroxide (H2O2)</li><li>• <b>Application:</b> Hygienic and washdown zones</li></ul> | DOL-1204-G05MNI | 6052615  |



## 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](http://www.sick.com)