



## GSE6-F7311V

G6

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.

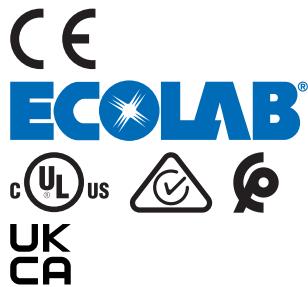


## Ordering information

Type	part no.
GSE6-F7311V	1092108

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

Illustration may differ



## Detailed technical data

## Features

<b>Functional principle</b>	Through-beam photoelectric sensor						
<b>Sensing range max.</b>	0 m ... 14.5 m						
<b>Sensing range</b>	0 m ... 10 m						
<b>Polarisation filters</b>	No						
<b>Emitted beam</b>	<table border="1"> <tbody> <tr> <td>Light source</td><td>PinPoint LED <sup>1)</sup></td></tr> <tr> <td>Type of light</td><td>Visible red light</td></tr> <tr> <td>Light spot size (distance)</td><td>Ø 310 mm (10 m)</td></tr> </tbody> </table>	Light source	PinPoint LED <sup>1)</sup>	Type of light	Visible red light	Light spot size (distance)	Ø 310 mm (10 m)
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Type of light	Visible red light						
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<b>Key LED figures</b>	<table border="1"> <tbody> <tr> <td>Wave length</td><td>650 nm</td></tr> </tbody> </table>	Wave length	650 nm				
Wave length	650 nm						
<b>Adjustment</b>	None						
<b>Special applications</b>	Hygienic and washdown zones						

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

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	849 years
<b>DC<sub>avg</sub></b>	0 %

## 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	Light/dark switching
Signal voltage PNP HIGH/LOW	$V_S$ - ( $\leq 3$ V) / approx. 0 V
Output current $I_{max.}$	$\leq 100$ mA <sup>4)</sup>
Response time	< 625 $\mu$ s <sup>5)</sup>
Switching frequency	1,000 Hz <sup>6)</sup>
<b>Output function</b>	Complementary switching output
<b>Circuit protection</b>	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  $U_V > 24$  V,  $I_A$  max. = 50 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
<b>Connection detail</b>	
Length of cable (L)	300 mm
<b>Material</b>	
Housing	Metal, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
<b>Weight</b>	90 g

## Ambient data

<b>Enclosure rating</b>	IP67 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
<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.

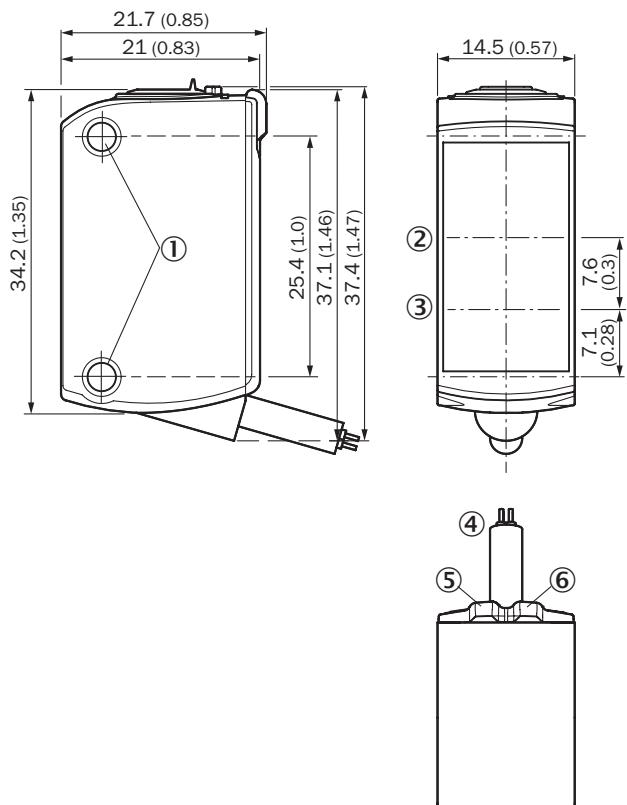
## Certificates

<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>	27270901
<b>ECLASS 5.1.4</b>	27270901
<b>ECLASS 6.0</b>	27270901
<b>ECLASS 6.2</b>	27270901
<b>ECLASS 7.0</b>	27270901
<b>ECLASS 8.0</b>	27270901
<b>ECLASS 8.1</b>	27270901
<b>ECLASS 9.0</b>	27270901
<b>ECLASS 10.0</b>	27270901
<b>ECLASS 11.0</b>	27270901
<b>ECLASS 12.0</b>	27270901
<b>ETIM 5.0</b>	EC002716
<b>ETIM 6.0</b>	EC002716
<b>ETIM 7.0</b>	EC002716
<b>ETIM 8.0</b>	EC002716
<b>UNSPSC 16.0901</b>	39121528

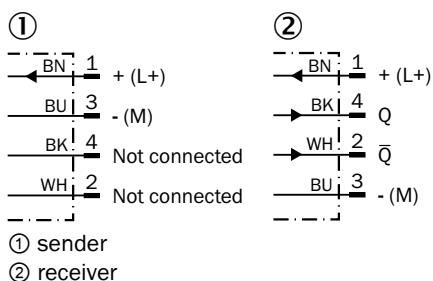
Dimensional drawing



Dimensions in mm (inch)

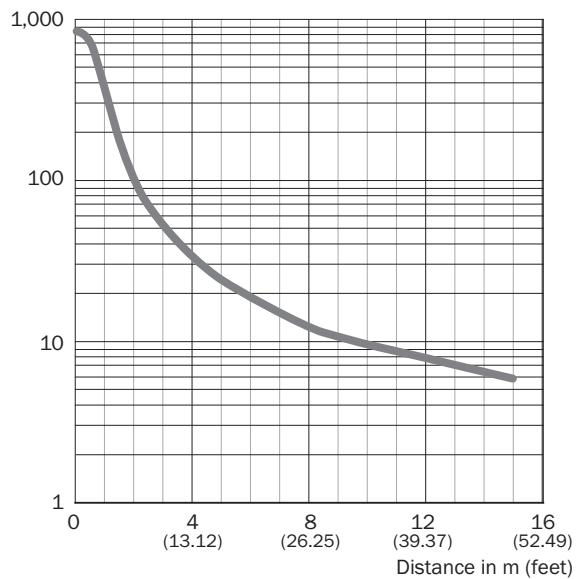
- ① M3 mounting hole
- ② Optical axis, receiver
- ③ Optical axis, sender
- ④ Connection
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ LED indicator green: Supply voltage active

Connection diagram Cd-232

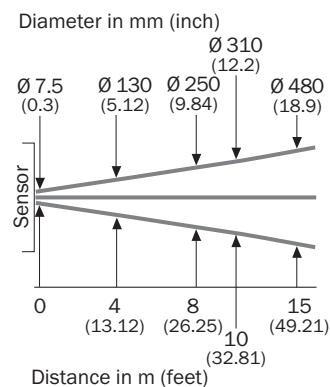


## Characteristic curve GSE6 Inox, Red, Standard

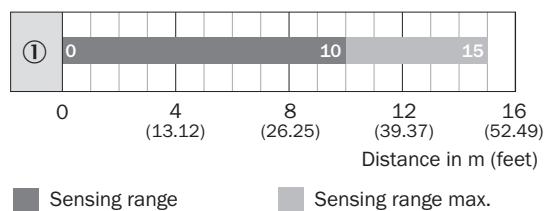
Function reserve



## Light spot size GSE6 Inox, Red, Standard



## Sensing range diagram GSE6 Inox, Red, Standard



## 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
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)