



## GS6-D4312S71

G6

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
GS6-D4312S71	1112773

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 ... 10 m	
<b>Sensing range</b>	0 m ... 8 m	
<b>Polarisation filters</b>	No	
<b>Emitted beam</b>		
Light source	PinPoint LED <sup>1)</sup>	
Type of light	Visible red light	
Light spot size (distance)	Ø 1,550 mm (10 m)	
<b>Key LED figures</b>		
Wave length	650 nm	
<b>Adjustment</b>	None	
<b>Special features</b>	Wide optical angle of dispersion Sender only. To work with GE6-P4212S71, 1112774 Mounting holes M3 un-threaded	
<b>Items supplied</b>	Fastening screws included	

<sup>1)</sup> Average service life: 100,000 h at  $T_U = +25^\circ\text{C}$ .

#### Electronics

<b>Supply voltage <math>U_B</math></b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	± 10 % <sup>2)</sup>
<b>Current consumption</b>	30 mA <sup>3)</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.

<b>Protection class</b>	III
<b>Digital output</b>	
Output current $I_{max}$	$\leq 100 \text{ mA}$ <sup>4)</sup>
Response time	$< 350 \mu\text{s}$ <sup>5)</sup>
Switching frequency	1,700 Hz <sup>6)</sup>
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</sup>
<b>Special feature</b>	Sender

<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  $U_V > 24 \text{ V}$ ,  $I_A$  max. = 50 mA.

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> With light/dark ratio 1:1.

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<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>	12 mm x 31.5 mm x 21 mm
<b>Connection</b>	Male connector M8, 4-pin
<b>Material</b>	
Housing	Plastic, ABS/PC
Front screen	Plastic, PMMA
<b>Weight</b>	Approx. 40 g

## Ambient data

<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-25 °C ... +55 °C <sup>1)</sup>
<b>Ambient temperature, storage</b>	-40 °C ... +70 °C
<b>UL File No.</b>	NRKH.E348498 & NRKH7.E348498

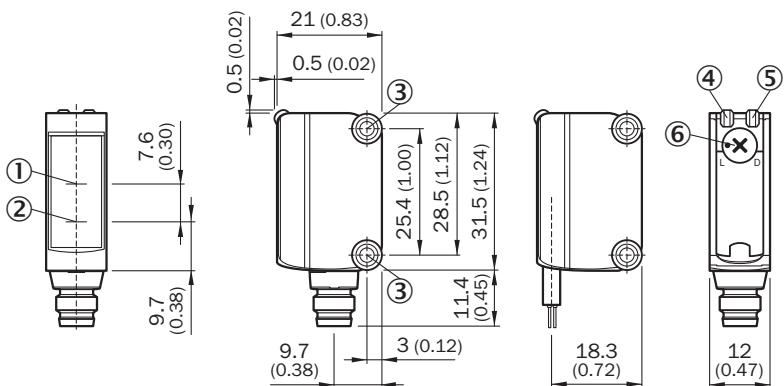
<sup>1)</sup> Temperature stability following adjustment +/-10 °C.

## Classifications

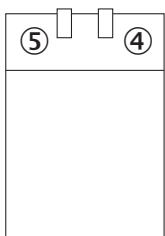
<b>ECLASS 5.0</b>	27270901
<b>ECLASS 5.1.4</b>	27270901
<b>ECLASS 6.0</b>	27270901
<b>ECLASS 6.2</b>	27270901
<b>ECLASS 7.0</b>	27270901
<b>ECLASS 8.0</b>	27270901
<b>ECLASS 8.1</b>	27270901
<b>ECLASS 9.0</b>	27270901
<b>ECLASS 10.0</b>	27270901

<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

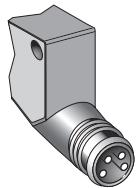


### Adjustments No adjustment possibility

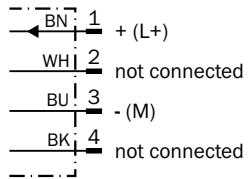


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Connection type

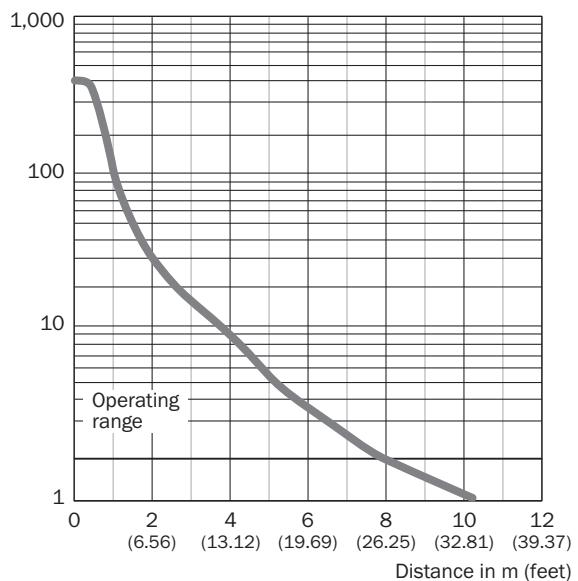


Connection diagram Cd-071

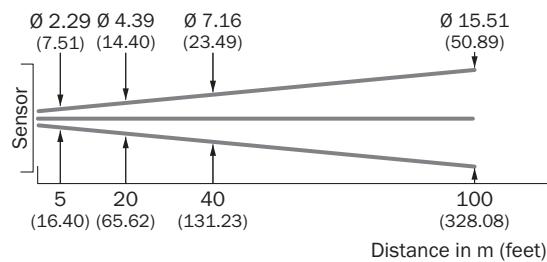


Characteristic curve GS6-D4311S69, GE6-P4211S69; GS6-D4312S71, GE6-P4212S71

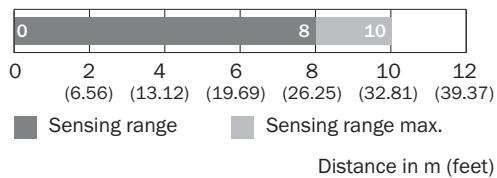
Function reserve



Light spot size GS6-D4311S69, GE6-P4211S69; GS6-D4312S71, GE6-P4212S71



Sensing range diagram GS6-D4311S69, GE6-P4211S69; GS6-D4312S71, GE6-P4212S71



Recommended accessories

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

	<b>Brief description</b>	<b>Type</b>	<b>part no.</b>
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>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel (1.4301)</li> <li><b>Suitable for:</b> W4S</li> </ul>	BEF-WN-G6	2062909
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M8, 4-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></li> </ul>	STE-0804-G	6037323
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</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>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF8U14-050VA3XLEAX	2095889

## 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)