



GSE6-F7311V

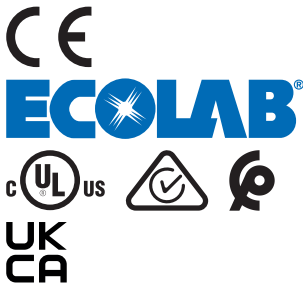
G6

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
GSE6-F7311V	1092108

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

Detailed technical data

Features

Functional principle		Through-beam photoelectric sensor
Sensing range max.		0 m ... 14.5 m
Sensing range		0 m ... 10 m
Polarisation filter		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		None
Special applications		Hygienic and washdown zones

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

Safety-related parameters

MTTF_D	849 years
DC_{avg}	0 %

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Current consumption	30 mA ³⁾
Protection class	III
Digital output	
Type	PNP
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	$V_S - (\leq 3\text{ V}) / \text{approx. } 0\text{ V}$
Output current I_{\max}	$\leq 100\text{ mA}$ ⁴⁾
Response time	$< 625\text{ }\mu\text{s}$ ⁵⁾
Switching frequency	1,000 Hz ⁶⁾
Output function	Complementary switching output
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_Y tolerances.

³⁾ Without load.

⁴⁾ At $U_V > 24\text{ V}$, $I_A \text{ max.} = 50\text{ mA}$.

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)	15 mm x 44 mm x 22 mm
Connection	Cable with M12 male connector, 4-pin
Connection detail	
Length of cable (L)	300 mm
Material	
Housing	Metal, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
Weight	90 g

Ambient data

Enclosure rating	IP67 IP69K ¹⁾
Ambient operating temperature	$-25\text{ }^{\circ}\text{C} \dots +55\text{ }^{\circ}\text{C}$ ²⁾
Ambient temperature, storage	$-30\text{ }^{\circ}\text{C} \dots +75\text{ }^{\circ}\text{C}$
UL File No.	NRKH.E348498 & NRKH7.E348498

¹⁾ According to ISO 20653:2013-03.

²⁾ Temperature stability following adjustment $\pm 10\text{ }^{\circ}\text{C}$.

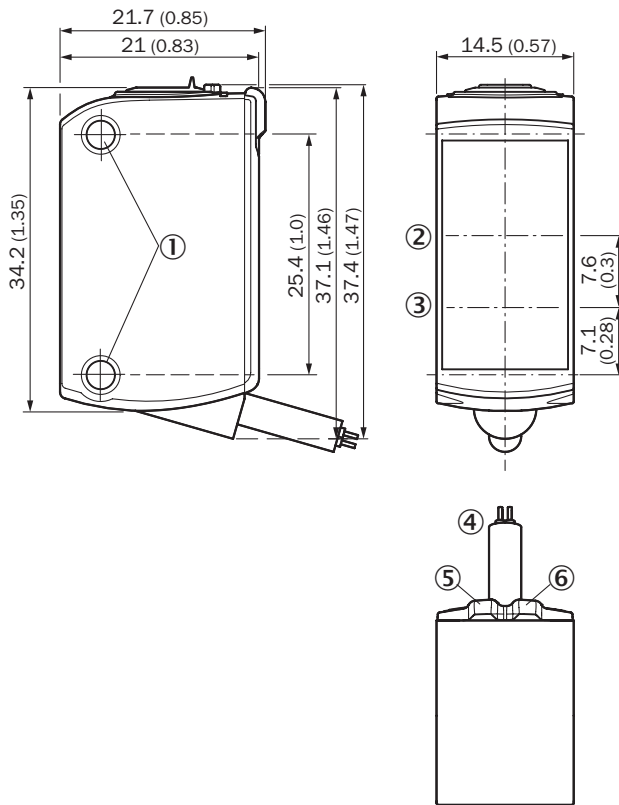
Certificates

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

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

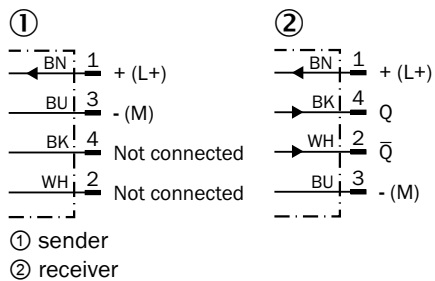
Dimensional drawing



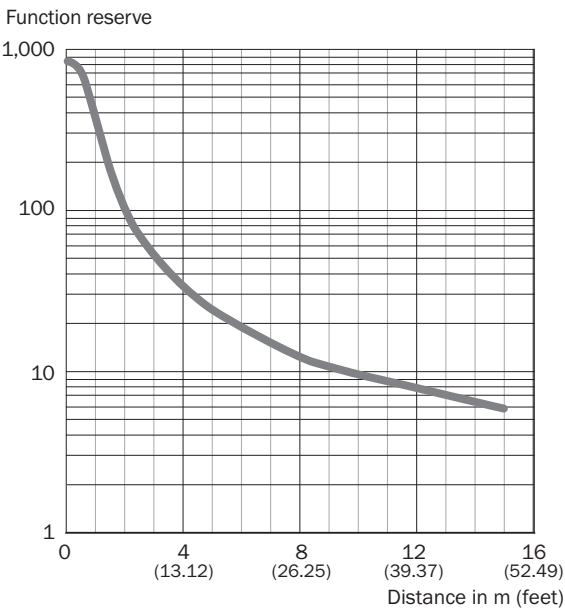
Dimensions in mm (inch)

- 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

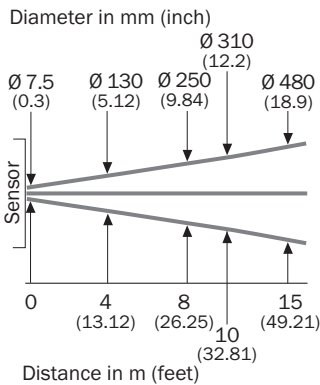
Connection diagram Cd-232



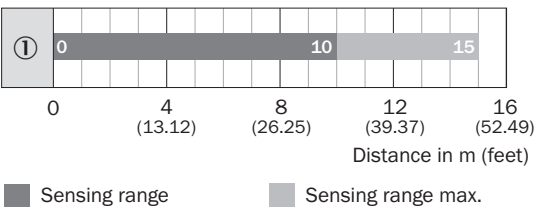
Characteristic curve GSE6 Inox, Red, Standard



Light spot size GSE6 Inox, Red, Standard








Sensing range diagram GSE6 Inox, Red, Standard



Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness Material: Steel Details: Aluminum (clamp bar), stainless steel (bracket) Items supplied: Clamp bar mounting and clamp function, mounting bracket, mounting hardware 	BEF-KHS-IS12G6	2086865
	<ul style="list-style-type: none"> Description: Mounting bracket for wall mounting Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S 	BEF-W100-A	5311520
	<ul style="list-style-type: none"> Material: Stainless steel Details: Stainless steel (1.4301) Suitable for: W4S, W4S 	BEF-WN-G6	2062909
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: 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 & hydrogen peroxide (H2O2) Application: Uncontaminated zones, Hygienic and washdown zones, Zones with chemicals 	DOL-1204-G05MNI	6052615
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones, Drag chain operation, Robot, cold bending resistant, seawater resistant 	DOL-1204-G05MRN	6058476

SICK AT A GLANCE

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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:

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