



GSE6-P6212

G6

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

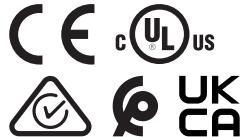


Illustration may differ

Ordering information

Type	part no.
GSE6-P6212	1061848

Included in delivery: BEF-W100-A (1)

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

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Sensing range max.	0 m ... 15 m
Sensing range	0 m ... 10 m
Polarisation filters	No
Emitted beam	
Light source	PinPoint LED ¹⁾
Type of light	Visible red light
Light spot size (distance)	Ø 375 mm (12 m)
Key LED figures	
Wave length	650 nm
Adjustment	Potentiometer, 270°
Items supplied	2 Stainless steel mounting brackets (1.4301/304) BEF-W100-A

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

Safety-related parameters

MTTF_D	887 years
DC_{avg}	0 %

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	± 10 % ²⁾

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 U_V > 24 V, I_A 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.

Current consumption	30 mA ³⁾
Protection class	III
Digital output	
Type	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Signal voltage PNP HIGH/LOW	V _S - (≤ 3 V) / approx. 0 V
Output current I _{max.}	≤ 100 mA ⁴⁾
Response time	< 500 µs ⁵⁾
Switching frequency	1,000 Hz ⁶⁾
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

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³⁾ Without load.

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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 M8 male connector, 4-pin ¹⁾
Connection detail	
Conductor size	0.14 mm ²
Length of cable (L)	300 mm ¹⁾
Material	
Housing	Plastic, ABS/PC
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	170 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.

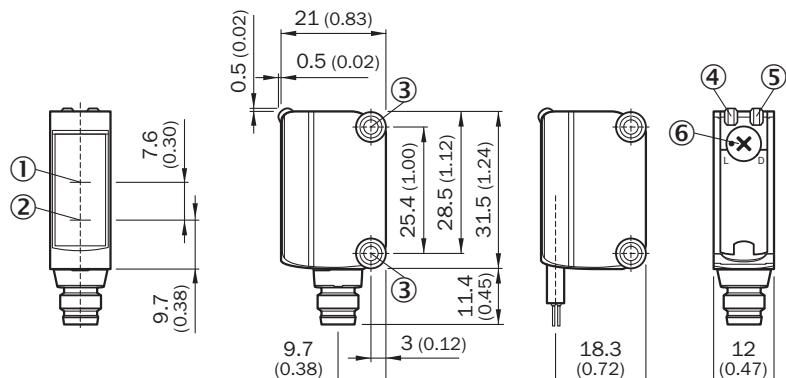
Certificates

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	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



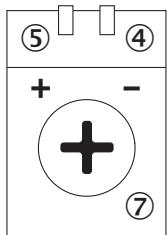
Dimensions in mm (inch)

① Optical axis, receiver

② Optical axis, sender

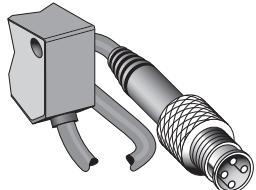
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Adjustments Adjustment possibility

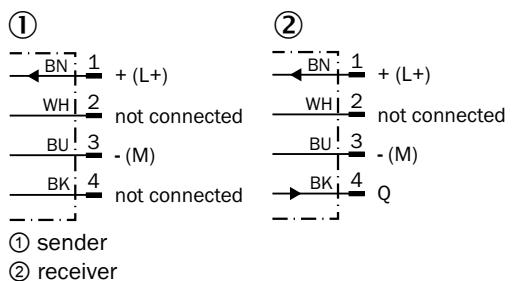


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑦ Sensitivity control: potentiometer

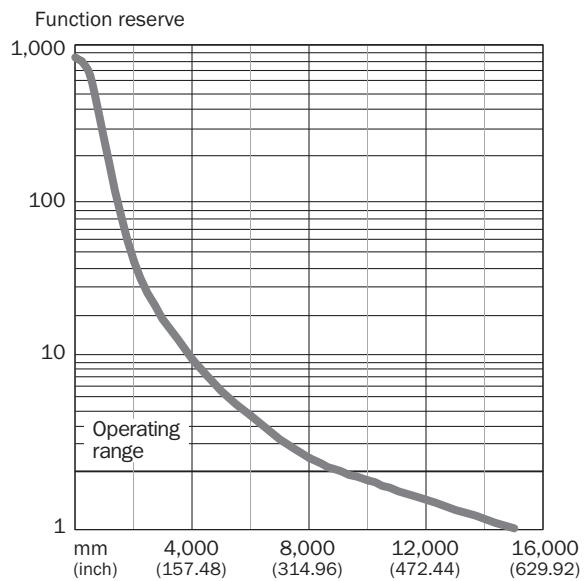
Connection type



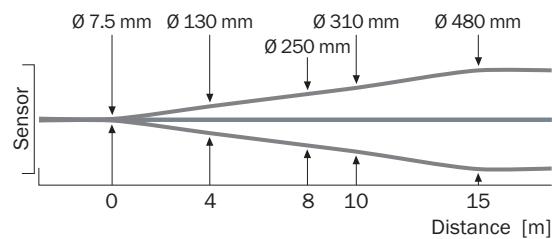
Connection diagram Cd-057



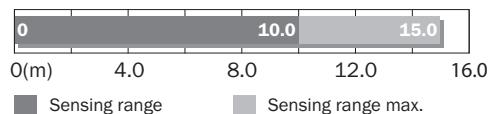
Characteristic curve With GE6-P1111, GE6-N1111, GE6-P1111S63



Light spot size



Sensing range diagram



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 thicknessMaterial: SteelDetails: 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">Material: Stainless steelDetails: Stainless steel (1.4301)Suitable for: W4S	BEF-WN-G6	2062909
connectors and cables			
	<ul style="list-style-type: none">Connection type head A: Female connector, M8, 4-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 5 m, 4-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: Zones with chemicals, Uncontaminated zones	YF8U14-050VA3XLEAX	2095889
	<ul style="list-style-type: none">Connection type head A: Male connector, M8, 4-pin, straight, A-codedDescription: UnshieldedConnection systems: Screw-type terminalsPermitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323

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