



GE6-P4211S69

G6

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
GE6-P4211S69	2115957

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

Detailed technical data

Features

Functional principle		Through-beam photoelectric sensor
Sensing range max.		0 m ... 10 m
Sensing range		0 m ... 8 m
Polarisation filters		No
Emitted beam		
	Light source	PinPoint LED ¹⁾
	Type of light	Visible red light
	Light spot size (distance)	Ø 1,550 mm (10 m)
Key LED figures		
	Wave length	650 nm
Adjustment		Potentiometer, 270 °
Special features		Wide optical angle of dispersion Receiver only. For use with GS6-D4311S69, 2115956 Mounting holes M3 un-threaded

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

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
-------------------------------------	-----------------------------------

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.

Ripple	$\pm 10 \% ^{2)}$
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	$V_S - (\leq 3 \text{ V}) / \text{approx. } 0 \text{ V}$
Output current I_{max}	$\leq 100 \text{ mA} ^{4)}$
Response time	$< 350 \mu\text{s} ^{5)}$
Switching frequency	1,700 Hz ⁶⁾
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾
Special feature	Receiver

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

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

Ambient data

Enclosure rating	IP67
Ambient operating temperature	$-25 \text{ }^{\circ}\text{C} \dots +55 \text{ }^{\circ}\text{C} ^{1)}$
Ambient temperature, storage	$-40 \text{ }^{\circ}\text{C} \dots +70 \text{ }^{\circ}\text{C}$
UL File No.	NRKH.E348498 & NRKH7.E348498

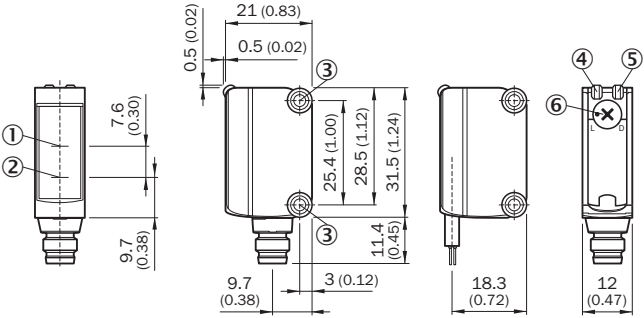
¹⁾ Temperature stability following adjustment $\pm 10 \text{ }^{\circ}\text{C}$.

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

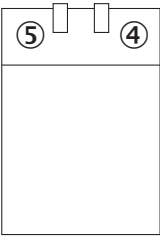
Dimensional drawing (Dimensions in mm (inch))



- 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

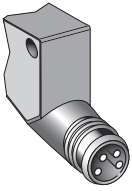
Adjustments

No adjustment possibility



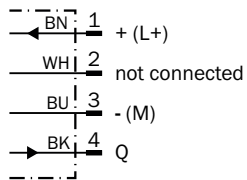
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Connection type



Connection diagram

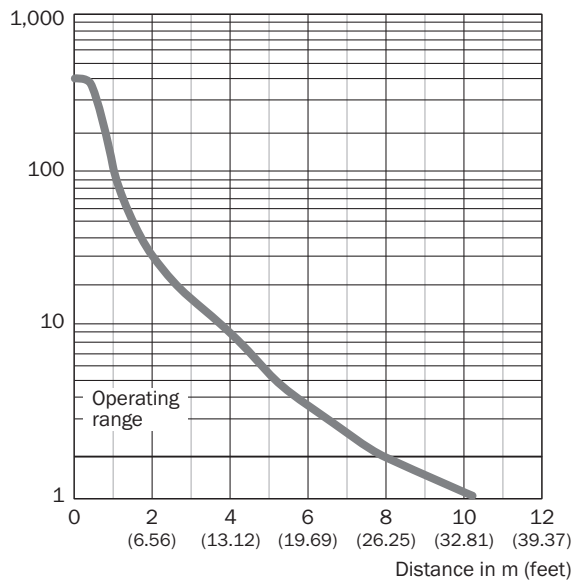
Cd-066



Characteristic curve

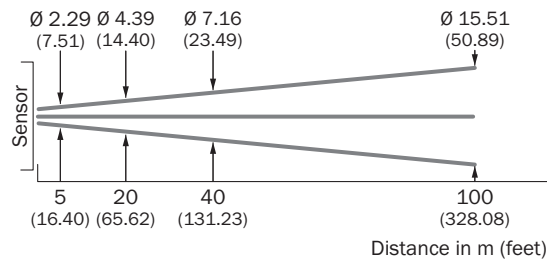
GS6-D4311S69, GE6-P4211S69; GS6-D4312S71, GE6-P4212S71

Function reserve



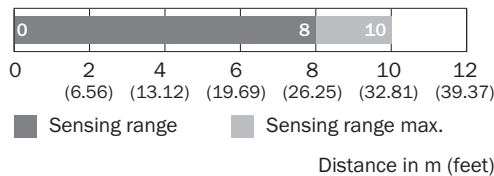
Light spot size

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Material: Stainless steel Details: Stainless steel (1.4301) Suitable for: W4S	BEF-WN-G6	2062909
Universal bar clamp systems			
	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
Others			
	Connection type head A: Male connector, M8, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323
	Connection type head A: Female connector, M8, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	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