



DATA SHEET

GE6L-P4211S01

G6
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

GE6L-P4211S01

ORDERING INFORMATION

Type	part no.
GE6L-P4211S01	2134031

Further device versions and accessories at www.sick.com/G6

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor	
Sensing range	Sensing range min.	0 m
	Sensing range max.	40 m
	Recommended sensing range for the best performance	0 m ... 30 m
Polarisation filter	No	
Smallest detectable object (MDO) typ.	3.5 mm, at 1 m distance (object with 90% remission factor (corresponds to standard white according to DIN 5033))	
Adjustment	Potentiometer	For setting the sensing range
	Operating mode switch	For inverting the switching function (light/dark switching)
Display	LED green	Operating indicator Static on: power on
	LED yellow	Status of received light beam
		Static on: object present Static off: object not present
Special features	Receiver only. For use with GS6L-D4311S01 #2134030	

SAFETY-RELATED PARAMETERS

MTTF _D	1,005 years
DC _{avg}	0 %
T _M (mission time)	10 years

ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp}
Usage category	DC-13 (According to EN 60947-5-2)
Current consumption	≤ 20 mA, without load. At $U_B = 24$ V
Protection class	III
Digital output	Number Type Switching mode Signal voltage NPN HIGH/LOW Output current I_{max} Circuit protection outputs Response time Switching frequency 2 PNP Light/dark switching Approx. $U_B / \leq 3$ V ≤ 100 mA ²⁾ Reverse polarity protected Overcurrent protected Short-circuit protected ≤ 625 μs 1,000 Hz ³⁾
Pin/Wire assignment	Function of pin 4/black (BK) Function of pin 4/black (BK) – detail Digital output, light switching, object present → output Q HIGH The pin 4 function of the sensor can be switched Additional possible settings via operating mode switch
Special feature	Receiver

¹⁾ Limit values.²⁾ At $U_B > 24$ V, $I_{max} = 50$ mA.³⁾ With light/dark ratio 1:1.**MECHANICS**

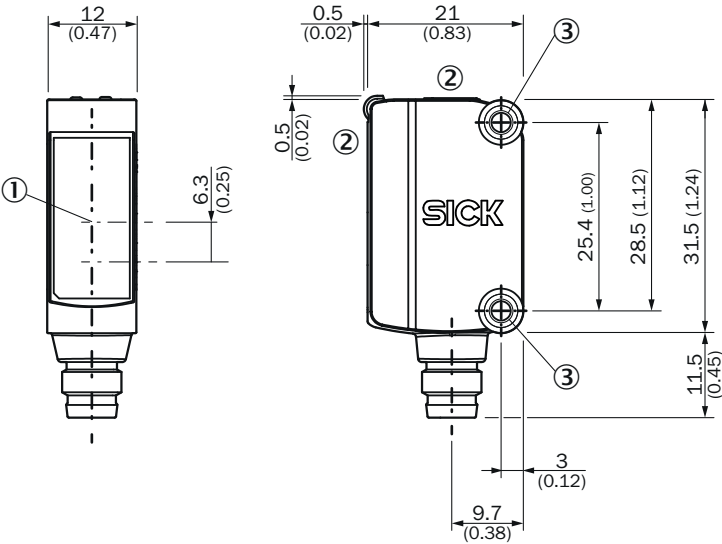
Housing	Rectangular
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Connection	Male connector M8, 4-pin
Material	Housing Front screen Cable Male connector Plastic, ABS Plastic, PMMA Plastic, PVC Metal, copper alloy (C3604 CUZN39PB3)
Weight	Approx. 28 g

AMBIENT DATA

Enclosure rating	IP67 (EN 60529)
Ambient operating temperature	-20 °C ... +50 °C ^{1) 2)}
Ambient temperature, storage	-40 °C ... +70 °C
Typ. Ambient light immunity	Sunlight: ≤ 13,000 lx
Shock resistance	30 g, 11 ms (3 positive and 3 negative shocks along X, Y, Z axes, 18 total shocks (EN60068-2-27))
Vibration resistance	10 Hz ... 55 Hz (Amplitude 0.5 mm, 3 x 30 min (EN60068-2-6))
Air humidity	35 % ... 95 %, relative humidity (no condensation)
Electromagnetic compatibility (EMC)	EN 60947-5-2
UL File No.	NRKH.E348498 & NRKH7.E348498

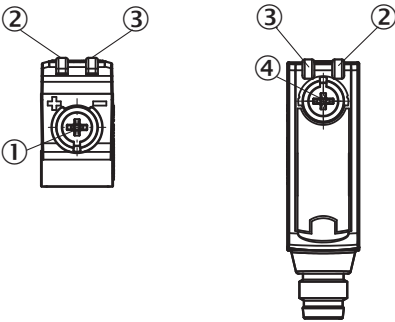
¹⁾ As of $T_a \Rightarrow > 45$ °C, a max. supply voltage $U_B = 24$ V and a max. load current $I_{max} = 50$ mA is permitted.²⁾ Below $T_a = -20$ °C, a warm-up time of 3 seconds is required.

DIMENSIONAL DRAWING



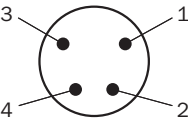
- Dimensions in mm (inch)
- ① Center of optical axis, receiver
 - ② display and adjustment elements
 - ③ Mounting holes M3

DISPLAY AND ADJUSTMENT ELEMENTS

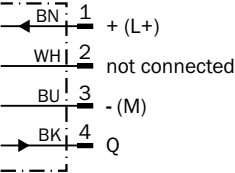


- ① Potentiometer
- ② LED yellow
- ③ LED green
- ④ operating mode switch

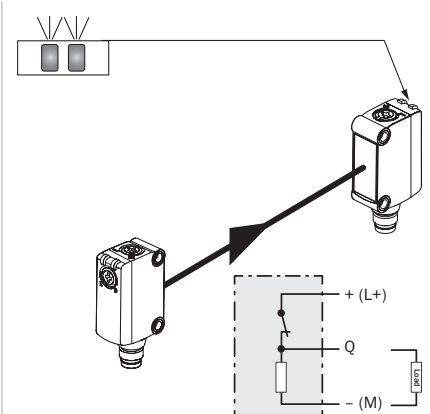
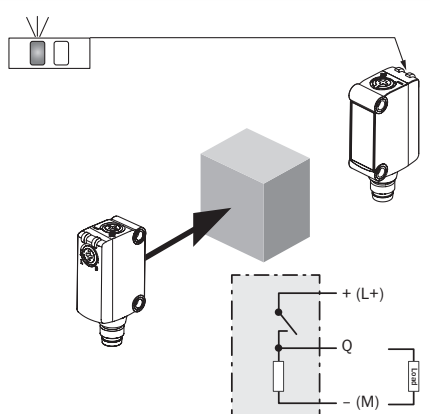
CONNECTION TYPE MALE CONNECTOR M8, 4-PIN



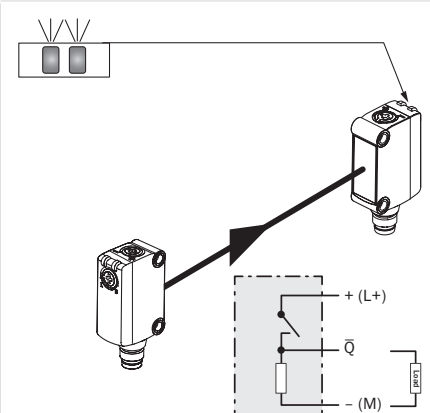
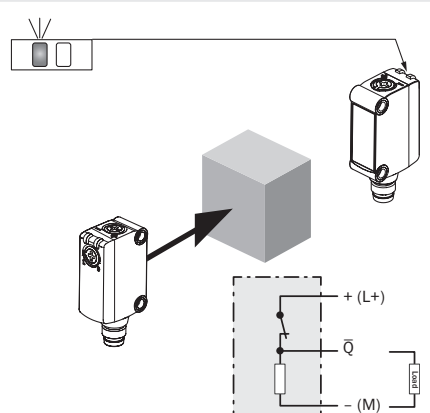
CONNECTION DIAGRAM CD-067



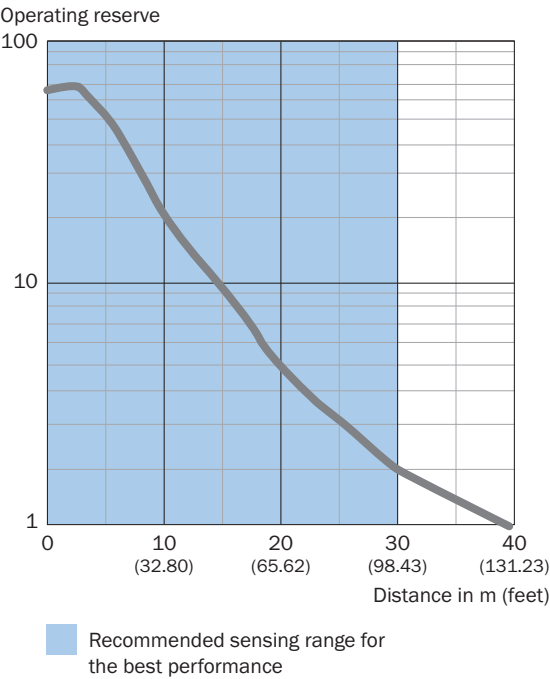
TRUTH TABLE PNP - LIGHT SWITCHING

	Light switching Q (normally closed)	
	Object not present → Output HIGH	Object present → Output LOW
Light receive	✓	✗
Light receive indicator	☀	✗
Load resistance	⚡	✗
		

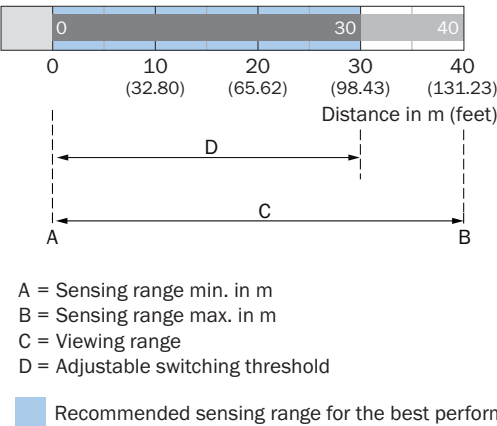
TRUTH TABLE PNP - DARK SWITCHING

	Dark switching $\bar{Q}$ (normally open)	
	Object not present → Output LOW	Object present → Output HIGH
Light receive	✓	✗
Light receive indicator	☀	✗
Load resistance	✗	⚡
		

CHARACTERISTIC CURVE



SENSING RANGE DIAGRAM



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/2134031



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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