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Online data sheet



GTE6-P4212

G6

PHOTOELECTRIC SENSORS

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Sensor Intelligence.

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GTE6-P4212 | G6

PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
GTE6-P4212	1051781

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

Detailed technical data

Features

Sensor/detection principle	Photoelectric proximity sensor, energetic
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Housing design (light emission)	Rectangular
Sensing range max.	≤ 300 mm [1]
Sensing range	≤ 250 mm
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	Ø 7 mm (90 mm)
Wave length	650 nm
Adjustment	Mechanical spindle, 5 turns

[1] Object with 90 % reflectance (referred to standard white, DIN 5033).
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	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 exceed or fall below U_V tolerances.
[3] Without load.
[4] At Uv > 24 V, IA 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.
[10] Temperature stability following adjustment +/-10 °C.

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Power consumption	≤ 30 mA [3]
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
Signal voltage NPN HIGH/LOW	Approx. V_S / ≤ 3 V
Output current $I_{max.}$	≤ 100 mA [4]
Response time	< 1,250 ms [5]
Switching frequency	500 Hz [6]
Connection type	Connector M8, 4-pin
Circuit protection	A [7] B [8] D [9]
Protection class	III
Weight	20 g
Housing material	Plastic, ABS/PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Stainless steel mounting bracket (1.4301/304) BEF-W100-A
Ambient operating temperature	–25 °C ... +55 °C [10]
Ambient storage temperature	–40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

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Classifications

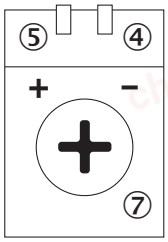
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ECl@ss 5.1.4	27270903
ECl@ss 6.0	27270903
ECl@ss 6.2	27270903
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ECl@ss 8.0	27270903
ECl@ss 8.1	27270903
ECl@ss 9.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821

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UNSPSC 16.0901	39121528

Adjustments possible

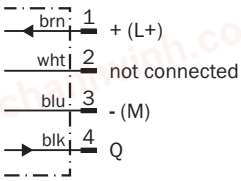
Adjustment possibility



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

Connection diagram

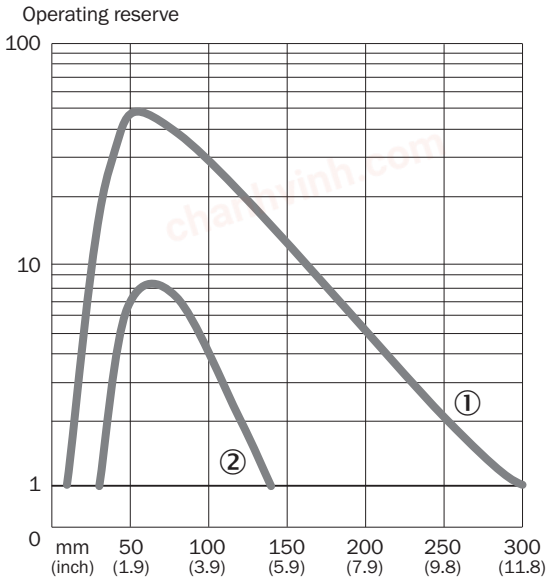
Cd-066



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Characteristic curve

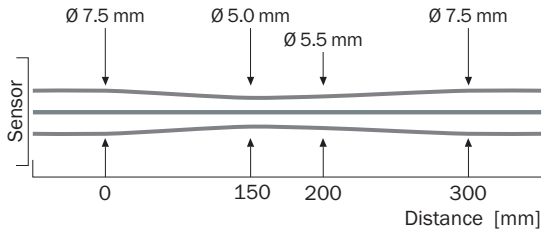
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① Sensing range on white, 90% remission
② Sensing range on gray, 18 % remission

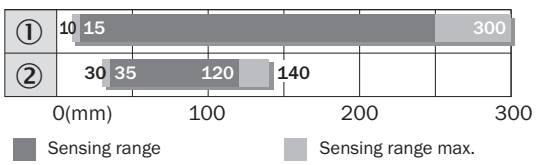
Light spot size

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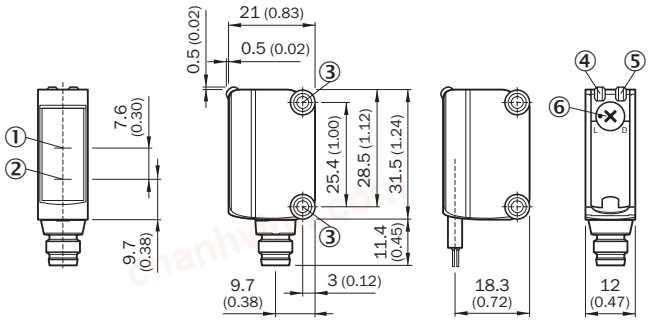
Sensing range diagram

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① Object with 90% remission (based on standard white DIN 5033)
② Sensing range on gray, 18 % remission

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

Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Clamp bar to fix G6 sensors on rods of 10 mm, clamp-on design up to 4 mm wall thickness, aluminum (clamp bar), stainless steel (bracket), clamp bar for 10 mm rod mounting and clamp function, mounting bracket, mounting hardware	BEF-KHS-ISG6	2075080
Device protection (mechanical)			
	Stainless steel 1.4301 (SVS 304), 3 mm thick protective sleeve for G6, stainless steel 1.4301, mounting hardware included	BEF-SG-G6	2069044
Mounting brackets and plates			
		BEF-WN-G6	2062909
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-0804-G02M	6009870
	Head A: female connector, M8, 4-pin, straight Head B: cable Cable: PVC, unshielded, 5 m	DOL-0804-G05M	6009872
	Head A: female connector, M8, 4-pin, angled Head B: cable Cable: PVC, unshielded, 2 m	DOL-0804-W02M	6009871
	Head A: female connector, M8, 4-pin, angled Head B: cable Cable: PVC, unshielded, 5 m	DOL-0804-W05M	6009873
	Head A: female connector, M8, 4-pin, straight Head B: - Cable: unshielded	DOS-0804-G	6009974

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	Brief description	Type	Part no.
	Head A: female connector, M8, 4-pin, angled Head B: - Cable: unshielded	DOS-0804-W	6009975
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323
Masks			
	Slit mask, vertical slots, slot width: 1.0 mm, 2 pieces, black, Aluminum, Slit mask (2 pieces)	BEF-SLIT MASK-G6	2075254

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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:

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