

GTE6-P4212 G6

PHOTOELECTRIC SENSORS





Ordering information

Туре	part no.
GTE6-P4212	1051781

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

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

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Sensing range max.	10 mm 300 mm ¹⁾
Sensing range	15 mm 250 mm
Emitted beam	
Light source	PinPoint LED ²⁾
Type of light	Visible red light
Light spot size (distance)	Ø 7 mm (90 mm)
Key LED figures	
Wave length	650 nm
Adjustment	Mechanical spindle, 5 turns
Items supplied	Stainless steel mounting bracket (1.4301/304) BEF-W100-A

 $^{^{1)}\,\}mbox{Object}$ with 90% remission (based on standard white, DIN 5033).

Safety-related parameters

MTTF _D	1,879 years
DC _{avg}	0 %

 $^{^{2)}}$ Average service life: 100,000 h at TU = +25 °C.

Electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	30 mA ³⁾
Protection class	III
Digital output	
Туре	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Signal voltage PNP HIGH/LOW	V_S - ($\leq 3 V$) / approx. 0 V
Signal voltage NPN HIGH/LOW	Approx. $V_S / \leq 3 V$
Output current I _{max.}	\leq 100 mA $^{4)}$
Response time	< 1.25 ms ⁵⁾
Switching frequency	500 Hz ⁶⁾
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

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

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	20 g

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 $^{\circ}\text{C}.$

Certificates

EU declaration of conformity	✓
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 $^{^{2)}}$ May not fall below or exceed 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.

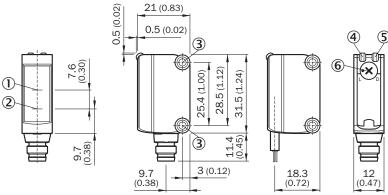
 $^{^{9)}}$ D = outputs overcurrent and short-circuit protected.

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

Classifications

LASS 5.0 27270903	
.ASS 5.1.4 27270903	
ASS 6.0 27270903	
ASS 6.2 27270903	
ASS 7.0 27270903	
ASS 8.0 27270903	
ASS 8.1 27270903	
ASS 9.0 27270903	
ASS 10.0 27270904	
.ASS 11.0 27270904	
ASS 12.0 27270903	
M 5.0 EC001821	
M 6.0 EC001821	
M 7.0 EC002719	
M 8.0 EC002719	
SPSC 16.0901 39121528	

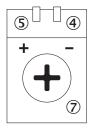
Dimensional drawing



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



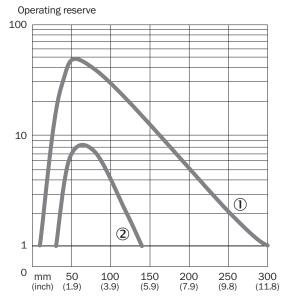
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- Sensitivity control: potentiometer

Connection type



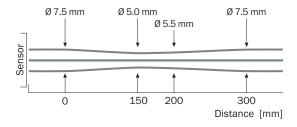
Connection diagram Cd-066

Characteristic curve GTE6

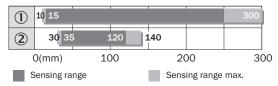


- ① Sensing range on white, 90% remission factor
- 2 Sensing range on gray, 18% remission factor

Light spot size GTE6



Sensing range diagram GTE6



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

Recommended accessories

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

	Brief description	Туре	part no.
Mounting sys	lounting 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
W.	 Material: Stainless steel Details: Stainless steel (1.4301) Suitable for: W4S, W4S 	BEF-WN-G6	2062909
0,0	 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
	 Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E 	BEF-KHS-N11N	2071081
connectors ar	nd cables		
	Connection type head A: Male connector, M8, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm ² 0.5 mm ²	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
0	 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, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U14-050UA3XLEAX	2094792

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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."

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