

GTE6-P4212 G6

MINIATURE 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
Polarisation filters	No
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

 $^{^{1)}}$ 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 T_U = +25 °C.

Electronics

Supply voltage \mathbf{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 - ($\leq 3 \text{ V}$) / 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⁾

 $^{^{1)}\,\}mathrm{Limit}$ 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 $^{\circ}\text{C}.$

Classifications

ECLASS 5.0	27270903
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 $^{^{2)}\,\}mbox{May}$ not fall below or exceed $\mbox{U}_{\mbox{\scriptsize V}}$ 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.

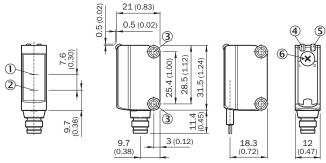
 $^{^{7)}}$ A = V_S connections reverse-polarity protected.

 $^{^{8)}}$ B = inputs and output reverse-polarity protected.

⁹⁾ D = outputs overcurrent and short-circuit protected.

ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

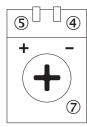
Dimensional drawing (Dimensions in mm (inch))



- 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
- $\ensuremath{\mathfrak{G}}$ LED indicator yellow: Status of received light beam
- ⑦ Sensitivity control: potentiometer

Connection type

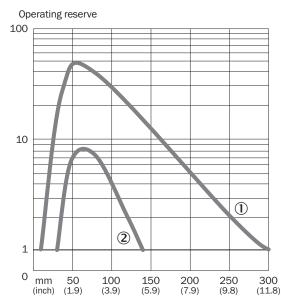


Connection diagram

Cd-066

Characteristic curve

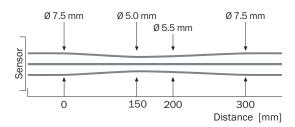
GTE6



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

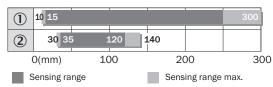
Light spot size

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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 bra	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	

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