GTB6-P4211

G6

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
GTB6-P4211	1052438

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

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Housing design (light emission)	Rectangular
Sensing range max.	5 mm ... 250 mm [1]
Sensing range	35 mm ... 140 mm
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	Ø 6 mm (100 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.

Current consumption	30 mA [3]
Switching output	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
Output current I_max.	≤ 100 mA [4]
Response time	< 625 µs [5]
Switching frequency	1,000 Hz [6]
Connection type	Male 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
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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Safety-related parameters

MTTF_D	1,886 years
DC_avg	0%

Classifications

ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ECl@ss 10.0	27270904

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ECl@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

Cd-066

```
    BN   1    + (L+)
    WH   2    not connected
    BU   3    - (M)
    BK   4    Q
```
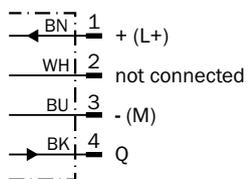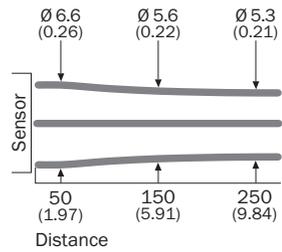
Characteristic curve

GTB6
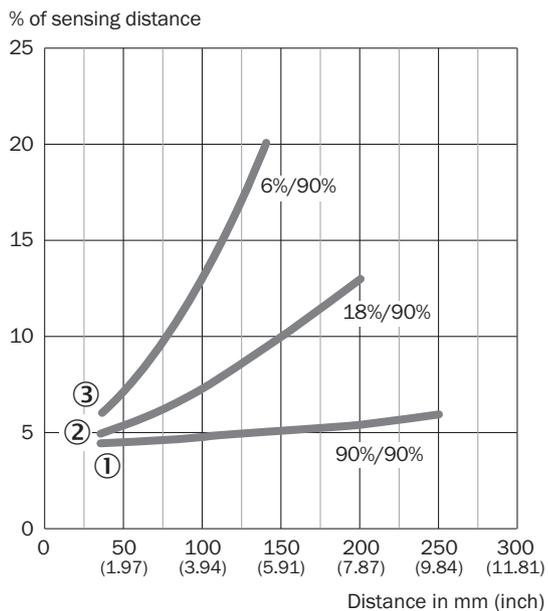
% of sensing distance

① Object with 90% remission (based on standard white DIN 5033)
② Sensing range on gray, 18 % remission
③ Sensing range on black, 6% remission

Light spot size

GTB6

Ø 6.6 (0.26)   Ø 5.6 (0.22)   Ø 5.3 (0.21)

Sensor

50 (1.97)   150 (5.91)   250 (9.84)

Distance

All dimensions in mm (inch)

Sensing range diagram

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①	5	35	140		250
②	7	35	140	200	
③	10	35	140		

0   100 (3.94)   200 (7.87)   300 (11.81)

Distance in mm (inch)
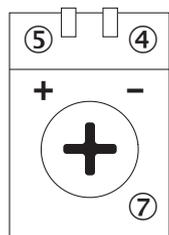
Sensing range max.   Sensing range

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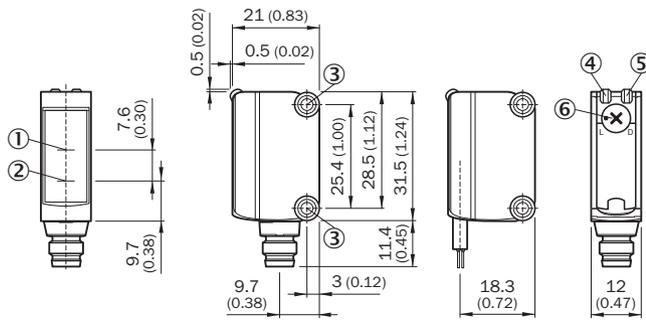## Adjustments possible

Adjustment possibility

⑤ ④

+   −

＋

⑦

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

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.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323

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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