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Product data sheet



GTB10-P8211

G10

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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GTB10-P8211 | G10

SMALL PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
GTB10-P8211	1070559

Other models and accessories → www.sick.com/G10

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	20 mm x 50 mm x 39 mm
Housing design (light emission)	Rectangular
Sensing range max.	20 mm ... 950 mm [1]
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	Ø 8 mm (700 mm)
Wave length	625 nm
Adjustment	Potentiometer, 5 turns

[1] Object with 90% remission (based on 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]

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not exceed or fall below U_V tolerances.
[3] Signal transit time with resistive load.
[4] With light/dark ratio 1:1.
[5] Do not bend below 0 °C.
[6] A = V_S connections reverse-polarity protected.
[7] B = inputs and output reverse-polarity protected.
[8] C = interference suppression.
[9] D = outputs overcurrent and short-circuit protected.
[10] Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

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Ripple	< 5 V_{pp} [2]
Current consumption	20 mA
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 500 µs [3]
Switching frequency	1,000 Hz [4]
Connection type	Cable, 3-wire, 5 m [5]
Cable material	PVC
Conductor cross section	0.14 mm²
Circuit protection	A [6] B [7] C [8] D [9]
Protection class	III
Weight	180 g
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Electromagnetic compatibility (EMC)	EN 60947-5-2
Ambient operating temperature	–30 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498
More standards	UL325 [10]

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Classifications

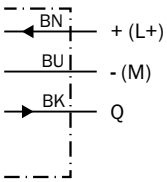
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eCl@ss 8.1	27270904
eCl@ss 9.0	27270904

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eCl@ss 10.0	27270904
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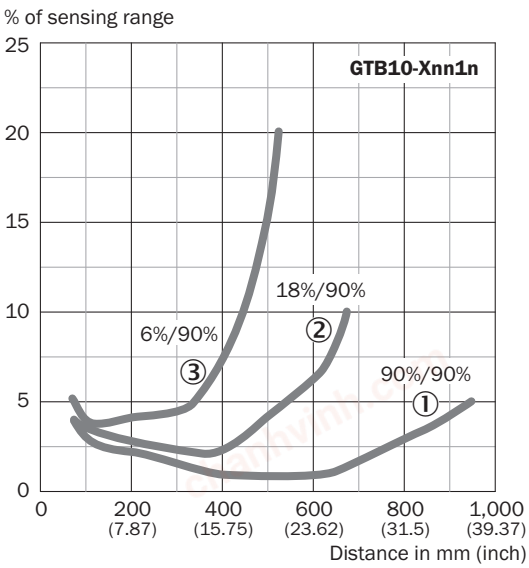
Connection diagram

Cd-044



Characteristic curve

GTB10, redlight

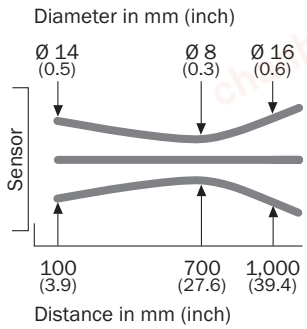


① Sensing range on white, 90% remission
② Sensing range on gray, 18 % remission
③ Sensing range on black, 6% remission

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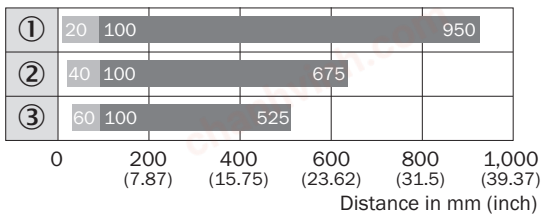
Light spot size

Light spot size



Sensing range diagram

GTB10, redlight

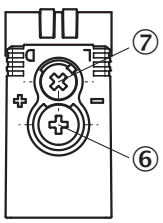


Sensing range Sensing range max.

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

GTB10, GTE10, GL10G, DC

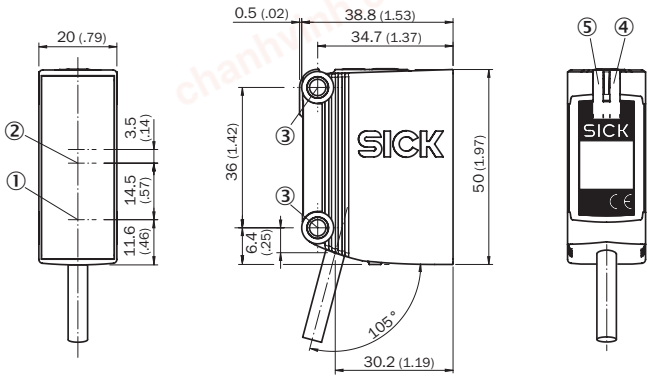


⑥ Adjustment of sensing range
⑦ Light/dark selector

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Dimensional drawing (Dimensions in mm (inch))

GTB10, DC, cable



① Center of optical axis, sender
② Center of optical axis, receiver
③ Mounting hole, Ø 4.2 mm
④ LED indicator yellow: Status of received light beam
⑤ LED indicator green: power on

Recommended accessories

Other models and accessories ➜ www.sick.com/G10

	Brief description	Type	Part no.
Universal bar clamp systems			
	Q-Lock, bar clamp system for G10 and reflector P250, Die-cast zinc, steel, zinc coated	BEF-KHSQ12R01	2071260
Plug connectors and cables			
	Head A: male connector, M8, 3-pin, straight Cable: unshielded	STE-0803-G	6037322

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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."

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