

GTB10-P0211P02

G10

PHOTOELECTRIC SENSORS



Ordering information

Туре	part no.
GTB10-P0211P02	1077419

Included in delivery: GTB10-P0211S04 (84)

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

Illustration may differ



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
Special features	Cable length 480 mm

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

Mechanics/electronics

Supply voltage \mathbf{U}_{B}	10 V DC 30 V DC ¹⁾
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 $^{^{1)}}$ Limit values when operated in short-circuit protected network: max. 8 A.

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

 $^{^{2)}\,\}mbox{May}$ not fall below or exceed $\mbox{U}_{\mbox{\sc V}}$ tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

 $^{^{5)}}$ Do not bend below 0 $^{\circ}\text{C}.$

 $^{^{6)}}$ 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).

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, 480 mm ⁵⁾
Cable material	Plastic, PVC
Conductor cross section	0.14 mm ²
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	55 g
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Items supplied	84 x GTB10-P0211S04 (1077416)
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⁾

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

Certificates

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

 $^{^{2)}\,\}text{May}$ not fall below or exceed U_{V} tolerances.

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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.

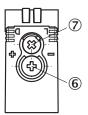
⁹⁾ D = outputs overcurrent and short-circuit protected.

 $^{^{10)}}$ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

Classifications

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

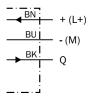
Adjustments GTB10, GTE10, GL10G, DC



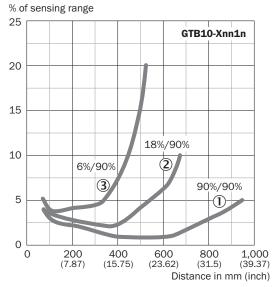
6 Adjustment of sensing range

① Light/dark selector

Connection diagram Cd-044

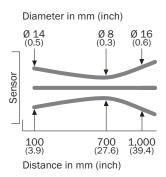


Characteristic curve GTB10, redlight



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

Light spot size

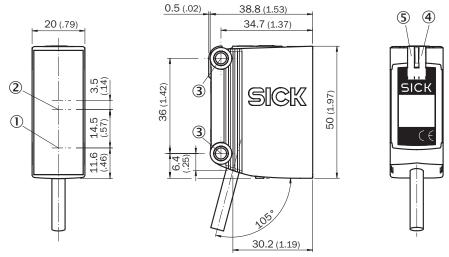


Sensing range diagram GTB10, redlight



- Sensing range
- Sensing range max.
- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor
- 3 Sensing range on black, 6% remission factor

Dimensional drawing GTB10, DC, cable



Dimensions in mm (inch)

- 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	Туре	part no.	
connectors and cables				
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² 0.5 mm²	STE-0803-G	6037322	
Mounting systems				
1013	 Description: Q-Lock, bar clamp system for G10 and reflector P250 Material: Zinc diecast, steel Details: Die-cast zinc, steel, zinc coated Suitable for: G10 and reflector P250 	BEF-KHSQ12R01	2071260	
	 Description: Mounting bracket with articulated arm Material: Steel Details: Steel, zinc coated Items supplied: Mounting hardware included Suitable for: W16, W26, W11, W12, W23, W27, Dx50, W280, G10 	BEF-WN-MULTI2	2093945	

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