GTB10-R3822

G10

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

GTB10-R3822 | G10
PHOTOELECTRIC SENSORS

Ordering information

Type	Part no.
GTB10-R3822	1065864

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

Illustration may differ

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	20 mm x 50 mm x 51.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	20 mm ... 1,200 mm [1]
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 22 mm (700 mm)
Wave length	850 nm
Adjustment	Potentiometer, 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	24 V AC/DC ... 240 V AC/DC [1]
Ripple	± 5 V_{pp} [2]
Power consumption	≤ 2.5 VA

[1] +- 10 %.
[2] May not exceed or fall below U_v tolerances.
[3] Provide suitable spark suppression for inductive or capacitive loads.
[4] With light/dark ratio 1:1.
[5] Do not bend below 0 °C.
[6] C = interference suppression.
[7] Reference voltage: 250 V AC.
[8] In the case of a DC supply (ref. to EN 61000-6-3) the length of cable between the supply source and the sensor must be < 30 m.
[9] UL: 0 °C ... +50 °C.
[10] Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

Switching output	Relay, SPDT, electrically isolated [3]
Switching load max. (current/voltage)	0.11 A (250 V DC) 3 A (30 V DC) 3 A (250 V AC)
Response time	≤ 10 ms
Switching frequency	20 Hz [4]
Connection type	Cable, 5-wire, 2 m [5]
Cable material	PVC
Conductor cross-section	0.25 mm²
Circuit protection	C [6]
Protection class	II [7]
Weight	115 g
Interference emission	EN 61000-6-3 (2011-09) [8]
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Relay switching cycles min.	100.000 cycles (3 A)
Items supplied	Mounting bracket BEF-G10UC01
Usage category	AC-15, DC-13, according to EN 60947-1
EMC	EN 60947-5-2
Ambient operating temperature	–30 °C ... +60 °C [9]
Ambient storage temperature	–40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498
More standards	UL325 [10]

[1] +- 10 %.

[2] May not exceed or fall below U_v tolerances.

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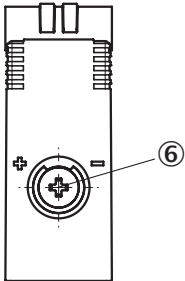
[9] UL: 0 °C ... +50 °C.

[10] Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

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
ETIM 5.0	EC002719

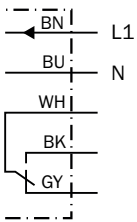| ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Adjustments possible

⑥ Adjustment of sensing range
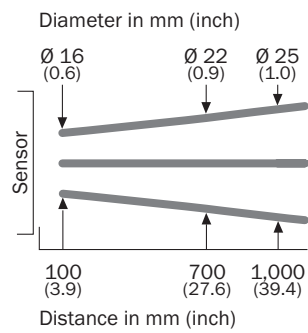
Connection diagram

Cd-163

Characteristic curve

GTB10, infrared light
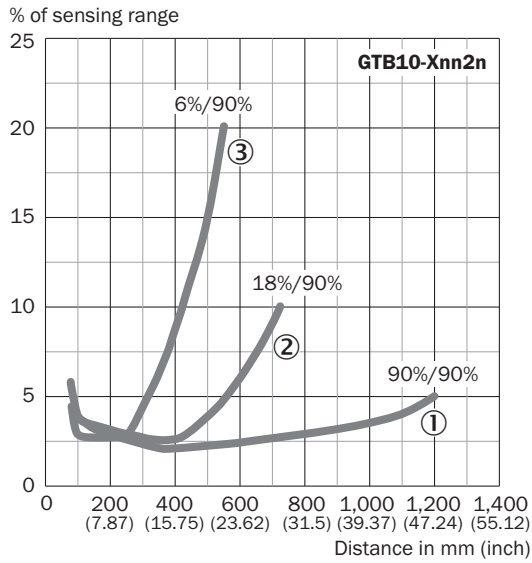
% of sensing range

GTB10-Xnn2n

6%/90%

③

18%/90%

②

90%/90%

①

Distance in mm (inch)

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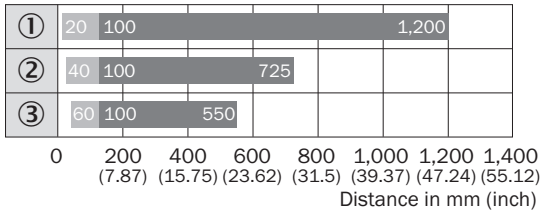② Sensing range on gray, 18 % remission
③ Sensing range on black, 6% remission

Light spot size

GTB10, infrared light

Diameter in mm (inch)

Ø 16 (0.6) Ø 22 (0.9) Ø 25 (1.0)

Sensor

100 (3.9) 700 (27.6) 1,000 (39.4)

Distance in mm (inch)

Sensing range diagram

GTB10, infrared light

①	20 100	1,200
②	40 100	725
③	60 100	550

0	200 (7.87)	400 (15.75)	600 (23.62)	800 (31.5)	1,000 (39.37)	1,200 (47.24)	1,400 (55.12)

Distance in mm (inch)

■ Sensing range   ■ Sensing range max.

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

Dimensional drawing (Dimensions in mm (inch))

GTB10, AC/DC, cable
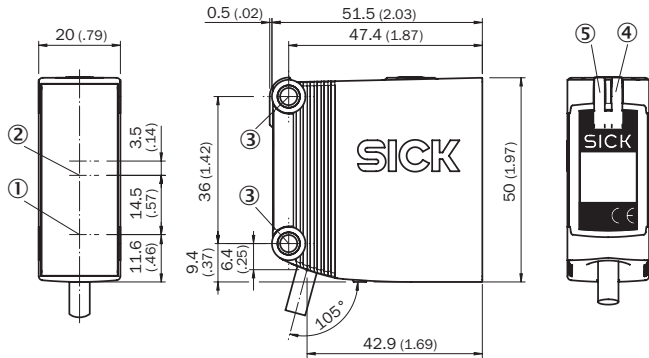
① Center of optical axis, sender
② Center of optical axis, receiver
③ Mounting hole, Ø 4.2 mm
④ LED indicator yellow: Status of received light beam
⑤ LED indicator green: power on

Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Clamp bar to fix G10 sensors on rods of 10 mm, clamp-on design up to 4 mm wall thickness, aluminum (clamp bar), stainless steel (bracket), clamp bar for 10 mm rod mounting and clamp function, mounting bracket, mounting hardware	BEF-KHS-ISG10	2073756
	Q-Lock, bar clamp system for G10 and reflector P250, Die-cast zinc, steel, zinc coated	BEF-KHSQ12R01	2071260
	Bar clamp system for G10 and reflector P250, Die-cast zinc, steel, zinc coated, mounting hardware included	BEF-KHSQ12R02	2087586

	Brief description	Type	Part no.
	Q-Lock, bar clamp system for G10 and reflector P250, Die-cast zinc, steel, zinc coated, incl. slot-in sheet clamp	BEF-KHSQ12ZR01	2071262
	Mounting bar, straight, 200 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12G-A	4056054
	Mounting bar, straight, 300 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12G-B	4056055
	Mounting bar, L-shaped, 150 mm x 150 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12L-A	4056052
	Mounting bar, L-shaped, 250 x 250 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12L-B	4056053
	Mounting bar, Z-shaped, 150 mm x 70 mm x 150 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12Z-A	4056056
	Mounting bar, Z-shaped, 150 mm x 70 mm x 250 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12Z-B	4056057
	Bar clamp for bar diameter of 12 mm (fixing the mounting rod), Aluminum, 2 screws M6 x 30, 2 spring discs	BEF-RMC-D12	5321878

Mounting brackets and plates

	Brief description	Type	Part no.
	Mounting bracket for wall and floor mounting for G10 DC, steel, zinc coated, mounting hardware included	BEF-G10DC01	2071258
	Mounting bracket for wall and floor mounting for G10 AC/DC, steel, zinc coated, mounting hardware included	BEF-G10UC01	2071259

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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