



# GTB10-R3812

G10

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
GTB10-R3812	1065862

**Included in delivery:** BEF-G10UC01 (1)

Other models and accessories → [www.sick.com/G10](http://www.sick.com/G10)

### Detailed technical data

#### Features

<b>Sensor/ detection principle</b>	Photoelectric proximity sensor, Background suppression
<b>Dimensions (W x H x D)</b>	20 mm x 50 mm x 51.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	20 mm ... 950 mm <sup>1)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	PinPoint LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 8 mm (700 mm)
<b>Wave length</b>	625 nm
<b>Adjustment</b>	Potentiometer, 5 turns

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033).

<sup>2)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

#### Mechanics/electronics

<b>Supply voltage</b>	24 V AC/DC ... 240 V AC/DC <sup>1)</sup>
<b>Ripple</b>	± 5 V <sub>pp</sub> <sup>2)</sup>

<sup>1)</sup> ± 10 %.

<sup>2)</sup> May not exceed or fall below U<sub>v</sub> tolerances.

<sup>3)</sup> Provide suitable spark suppression for inductive or capacitive loads.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> Do not bend below 0 °C.

<sup>6)</sup> C = interference suppression.

<sup>7)</sup> Reference voltage: 250 V AC.

<sup>8)</sup> 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.

<sup>9)</sup> UL: 0 °C ... +50 °C.

<sup>10)</sup> Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

<b>Power consumption</b>	≤ 2.5 VA
<b>Switching output</b>	Relay, SPDT, electrically isolated <sup>3)</sup>
<b>Switching load max. (current/voltage)</b>	0.11 A (250 V DC) 3 A (30 V DC) 3 A (250 V AC)
<b>Response time</b>	≤ 10 ms
<b>Switching frequency</b>	20 Hz <sup>4)</sup>
<b>Connection type</b>	Cable, 5-wire, 2 m <sup>5)</sup>
<b>Cable material</b>	PVC
<b>Conductor cross-section</b>	0.25 mm <sup>2</sup>
<b>Circuit protection</b>	C <sup>6)</sup>
<b>Protection class</b>	II <sup>7)</sup>
<b>Weight</b>	115 g
<b>Interference emission</b>	EN 61000-6-3 (2011-09) <sup>8)</sup>
<b>Housing material</b>	Plastic, ABS/PMMA
<b>Enclosure rating</b>	IP67
<b>Relay switching cycles min.</b>	100.000 cycles (3 A)
<b>Items supplied</b>	Mounting bracket BEF-G10UC01
<b>Usage category</b>	AC-15, DC-13, according to EN 60947-1
<b>EMC</b>	EN 60947-5-2
<b>Ambient operating temperature</b>	-30 °C ... +60 °C <sup>9)</sup>
<b>Ambient storage temperature</b>	-40 °C ... +70 °C
<b>UL File No.</b>	NRKH.E348498 & NRKH7.E348498
<b>More standards</b>	UL325 <sup>10)</sup>

1) +- 10 %.

2) May not exceed or fall below U<sub>y</sub> 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.

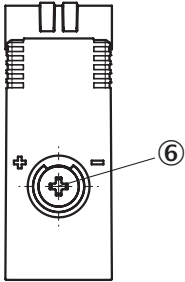
10) Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

## Classifications

<b>ECl@ss 5.0</b>	27270904
<b>ECl@ss 5.1.4</b>	27270904
<b>ECl@ss 6.0</b>	27270904
<b>ECl@ss 6.2</b>	27270904
<b>ECl@ss 7.0</b>	27270904
<b>ECl@ss 8.0</b>	27270904
<b>ECl@ss 8.1</b>	27270904
<b>ECl@ss 9.0</b>	27270904

<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

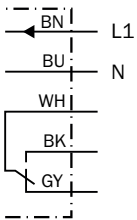
Adjustments possible



⑥ Adjustment of sensing range

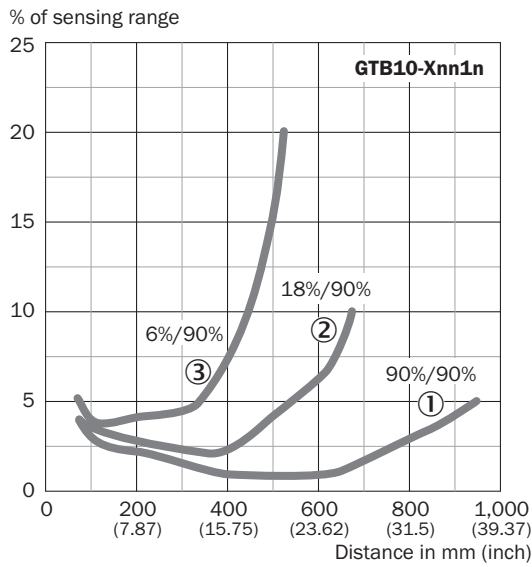
Connection diagram

Cd-163



### Characteristic curve

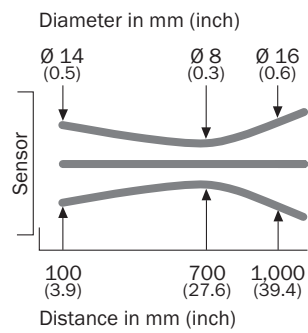
GTB10, redlight



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

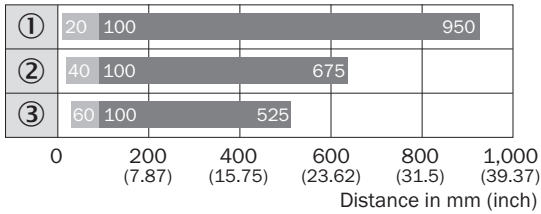
### Light spot size

GTB10, redlight



**Sensing range diagram**

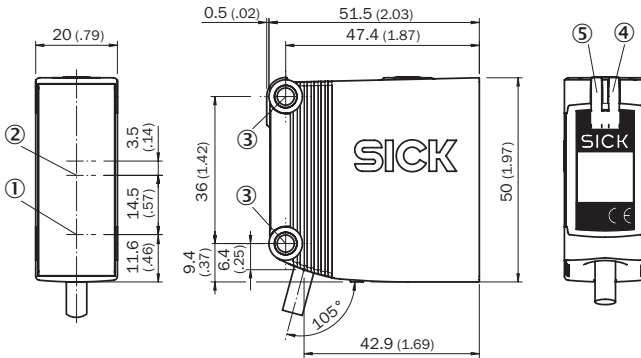
GTB10, redlight



- 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](http://www.sick.com/G10)

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
<b>Universal bar clamp systems</b>			
	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 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

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
	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-MS12LA	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
<b>Mounting brackets and plates</b>			
	Mounting bracket for wall and floor mounting for G10 DC, Stainless steel (1.4301), 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:

Contacts and other locations –[www.sick.com](http://www.sick.com)