Data sheet



GS10-R3712S02

G10

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
GS10-R3712S02	2104835

Included in delivery: BEF-G10UC01 (1)

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

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	20 mm x 50 mm x 51.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 40 m
Sensing range	0 m ... 35 m
Type of light	Visible red light
Light source	PinPoint LED [1]
Light spot size (distance)	Ø 180 mm (15 m)
Wave length	625 nm
Adjustment	None
Special feature	Sender

[1] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	24 V AC/DC ... 240 V AC/DC [1]
Ripple	< 10 %
Power consumption, sender	≤ 2 VA

[1] +- 10 %.
[2] Provide suitable spark suppression for inductive or capacitive loads.
[3] With light/dark ratio 1:1.
[4] Do not bend below 0 °C.
[5] C = interference suppression.
[6] Reference voltage: 250 V AC.
[7] 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.
[8] UL: 0 °C ... +50 °C.
[9] Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

Switching output	Relay, SPDT, electrically isolated [2]
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 [3]
Connection type	Cable, 5-wire, 2 m [4]
Cable material	Plastic, PVC
Conductor cross section	0.25 mm²
Circuit protection	C [5]
Protection class	II [6]
Weight	230 g
Interference emission	EN 61000-6-3 (2011-09) [7]
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Relay switching cycles min.	100.000 cycles (3 A)
Items supplied	Mounting bracket BEF-G10UC01 (2x)
Special feature	Sender
Usage category	AC-15, DC-13 According to EN 60947-1
Electromagnetic compatibility (EMC)	EN 60947-5-2EN 61000-6-3 (2011-09)
Ambient operating temperature	–30 °C ... +60 °C [8]
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498
More standards	UL325 [9]

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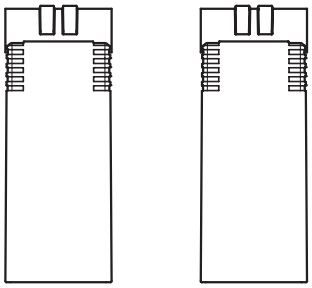
Certificates

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

Classifications

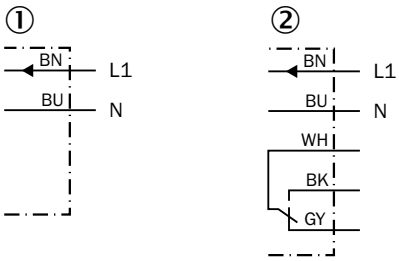
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ECLASS 8.1	27270901
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ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments



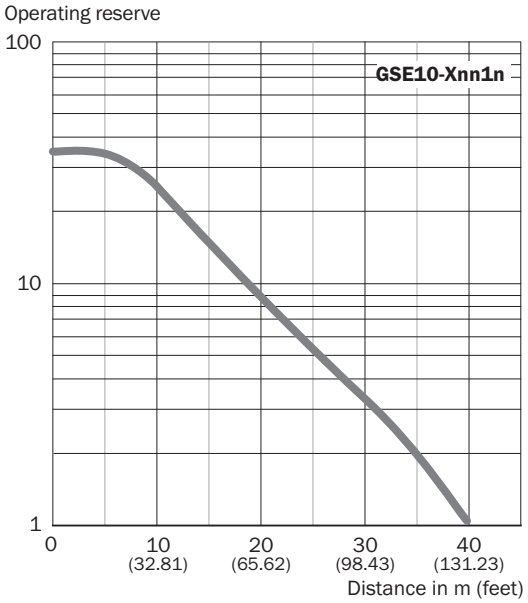
⑧ sender
⑨ receiver

Connection diagram Cd-170

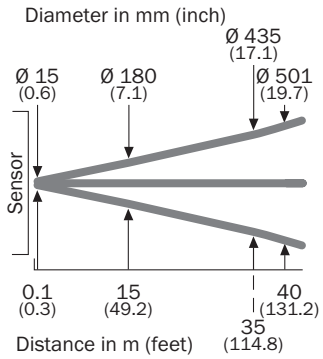


① sender
② receiver

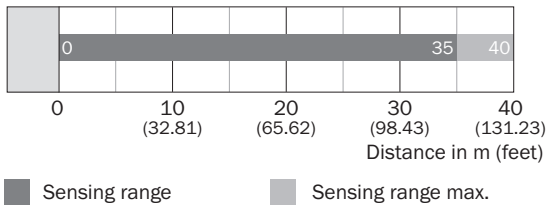
Characteristic curve GSE10, red light



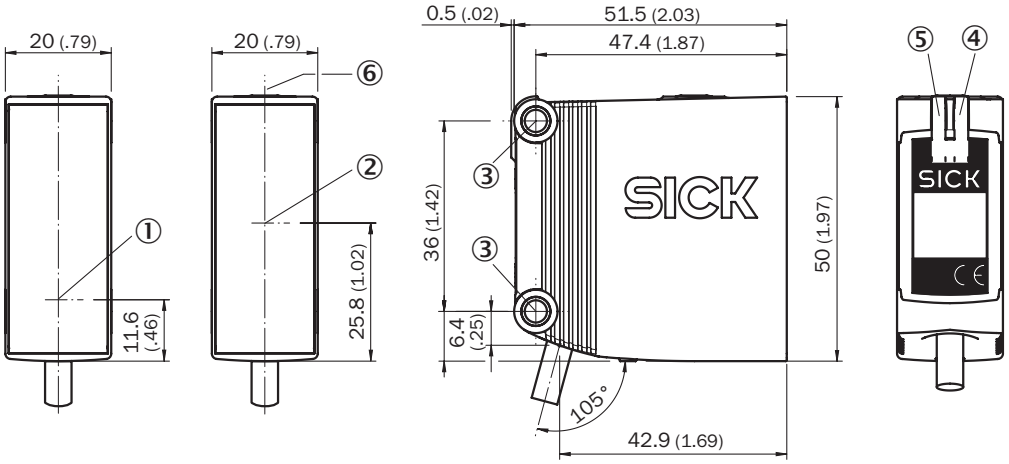
Light spot size GSE10, red light



Sensing range diagram GSE10, red light



Dimensional drawing GSE10, AC/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	Type	part no.
Mounting systems			
	• **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
connectors and cables			
	• **Connection type head A:** Male connector, M12, 5-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Note:** For field bus technology	STE-1205-G	6022083

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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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