



GSE10-R9812

G10

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|-------------|----------|
| GSE10-R9812 | 1105594 |

Included in delivery: BEF-G10UC01 (2)

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

Illustration may differ



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 | Potentiometer, 270 ° |

¹⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

| | |
|-------------------------------------|--|
| Supply voltage U_B | 24 V AC/DC ... 240 V AC/DC ¹⁾ |
| Ripple | < 10 % |
| Power consumption, sender | ≤ 2 VA |
| Power consumption, receiver | ≤ 2.5 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, 5 m ⁴⁾ |
| Cable material | Plastic, PVC |
| Conductor cross section | 0.25 mm ² |
| 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) |
| Electromagnetic compatibility (EMC) | EN 60947-5-2 EN 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⁾ |

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).

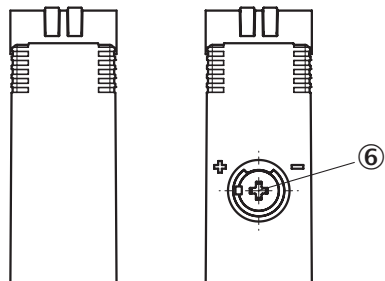
Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270901 |
| ECLASS 5.1.4 | 27270901 |
| ECLASS 6.0 | 27270901 |
| ECLASS 6.2 | 27270901 |
| ECLASS 7.0 | 27270901 |
| ECLASS 8.0 | 27270901 |
| ECLASS 8.1 | 27270901 |
| ECLASS 9.0 | 27270901 |
| ECLASS 10.0 | 27270901 |
| ECLASS 11.0 | 27270901 |
| 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

GSE10, AC/DC



⑧

⑨

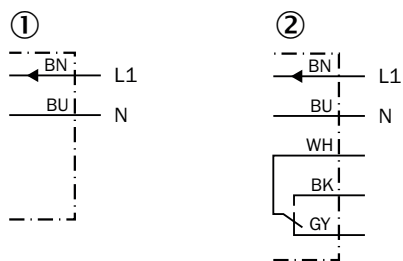
⑥ Adjustment of sensing range

⑧ Sender

⑨ Receiver

Connection diagram

Cd-170



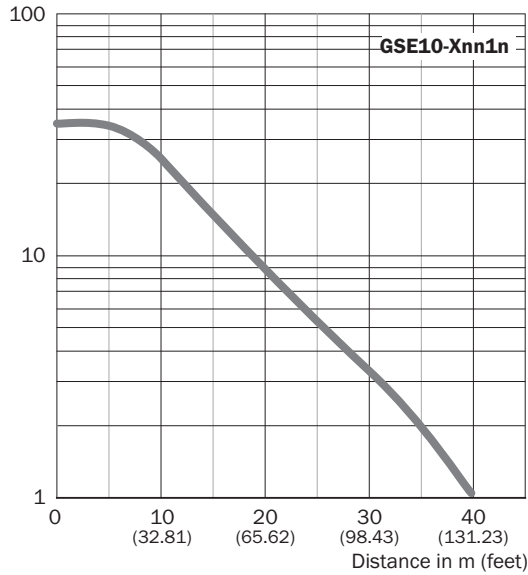
① Sender

② Receiver

Characteristic curve

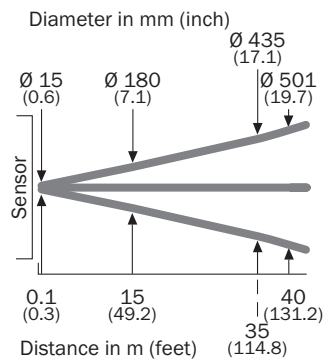
GSE10, red light

Operating reserve



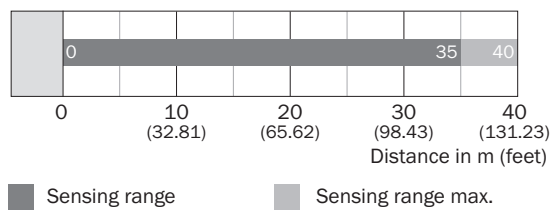
Light spot size

GSE10, red light



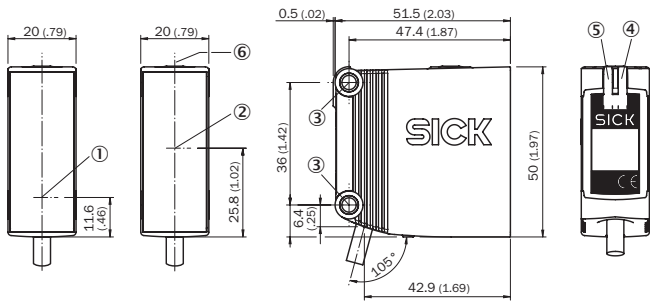
Sensing range diagram

GSE10, red light



Dimensional drawing (Dimensions in mm (inch))



GSE10, 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 | | | |
|  | Q-Lock, bar clamp system for G10 and reflector P250, Die-cast zinc, steel, zinc coated | BEF-KHSQ12R01 | 2071260 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 5-pin, straight, A-coded • Description: Unshielded, Head A: male connector, M12, 5-pin, straight, unshielded, for cable diameter 4 mm ... 6 mm Head B: - • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² • Note: For field bus technology | STE-1205-G | 6022083 |

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