



# GSE10-R3711

G10

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



## Ordering information

| Type        | part no. |
|-------------|----------|
| GSE10-R3711 | 1065910  |

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

Illustration may differ



## Detailed technical data

### Features

|                                        |                                   |
|----------------------------------------|-----------------------------------|
| <b>Functional principle</b>            | Through-beam photoelectric sensor |
| <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>              | 0 m ... 40 m                      |
| <b>Sensing range</b>                   | 0 m ... 35 m                      |
| <b>Type of light</b>                   | Visible red light                 |
| <b>Light source</b>                    | PinPoint LED <sup>1)</sup>        |
| <b>Light spot size (distance)</b>      | Ø 180 mm (15 m)                   |
| <b>Wave length</b>                     | 625 nm                            |
| <b>Adjustment</b>                      | None                              |

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

### Mechanics/electronics

|                                     |                                          |
|-------------------------------------|------------------------------------------|
| <b>Supply voltage U<sub>e</sub></b> | 24 V AC/DC ... 240 V AC/DC <sup>1)</sup> |
| <b>Ripple</b>                       | < 10 %                                   |
| <b>Power consumption, sender</b>    | ≤ 2 VA                                   |
| <b>Power consumption, receiver</b>  | ≤ 2.5 VA                                 |

<sup>1)</sup> ± 10 %.

<sup>2)</sup> Provide suitable spark suppression for inductive or capacitive loads.

<sup>3)</sup> With light/dark ratio 1:1.

<sup>4)</sup> Do not bend below 0 °C.

<sup>5)</sup> C = interference suppression.

<sup>6)</sup> Reference voltage: 250 V AC.

<sup>7)</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>8)</sup> UL: 0 °C ... +50 °C.

<sup>9)</sup> Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

|                                              |                                                                    |
|----------------------------------------------|--------------------------------------------------------------------|
| <b>Switching output</b>                      | Relay, SPDT, electrically isolated <sup>2)</sup>                   |
| <b>Switching mode</b>                        | Light/dark switching <sup>2)</sup>                                 |
| <b>Switching load max. (current/voltage)</b> | 0.11 A (250 V DC)<br>3 A (30 V DC)<br>3 A (250 V AC)               |
| <b>Response time</b>                         | ≤ 10 ms                                                            |
| <b>Switching frequency</b>                   | 20 Hz <sup>3)</sup>                                                |
| <b>Connection type</b>                       | Cable, 5-wire, 2 m <sup>4)</sup>                                   |
| <b>Cable material</b>                        | Plastic, PVC                                                       |
| <b>Conductor cross section</b>               | 0.25 mm <sup>2</sup>                                               |
| <b>Circuit protection</b>                    | C <sup>5)</sup>                                                    |
| <b>Protection class</b>                      | II <sup>6)</sup>                                                   |
| <b>Weight</b>                                | 230 g                                                              |
| <b>Interference emission</b>                 | EN 61000-6-3 (2011-09) <sup>7)</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>Usage category</b>                        | DC-13 (according to EN 60947-1)<br>AC-15 (according to EN 60947-1) |
| <b>Electromagnetic compatibility (EMC)</b>   | EN 60947-5-2<br>EN 61000-6-3 (2011-09)                             |
| <b>Ambient operating temperature</b>         | -30 °C ... +60 °C <sup>8)</sup>                                    |
| <b>Ambient temperature, storage</b>          | -40 °C ... +70 °C                                                  |
| <b>UL File No.</b>                           | NRKH.E348498 & NRKH7.E348498                                       |
| <b>More standards</b>                        | UL325 <sup>9)</sup>                                                |

<sup>1)</sup> +/- 10 %.

<sup>2)</sup> Provide suitable spark suppression for inductive or capacitive loads.

<sup>3)</sup> With light/dark ratio 1:1.

<sup>4)</sup> Do not bend below 0 °C.

<sup>5)</sup> C = interference suppression.

<sup>6)</sup> Reference voltage: 250 V AC.

<sup>7)</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>8)</sup> UL: 0 °C ... +50 °C.

<sup>9)</sup> Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

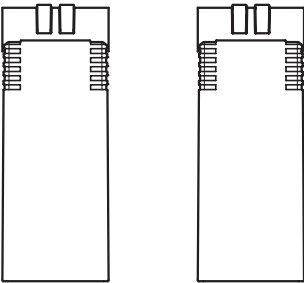
## Certificates

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

Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270901 |
| <b>ECLASS 5.1.4</b>   | 27270901 |
| <b>ECLASS 6.0</b>     | 27270901 |
| <b>ECLASS 6.2</b>     | 27270901 |
| <b>ECLASS 7.0</b>     | 27270901 |
| <b>ECLASS 8.0</b>     | 27270901 |
| <b>ECLASS 8.1</b>     | 27270901 |
| <b>ECLASS 9.0</b>     | 27270901 |
| <b>ECLASS 10.0</b>    | 27270901 |
| <b>ECLASS 11.0</b>    | 27270901 |
| <b>ECLASS 12.0</b>    | 27270901 |
| <b>ETIM 5.0</b>       | EC002716 |
| <b>ETIM 6.0</b>       | EC002716 |
| <b>ETIM 7.0</b>       | EC002716 |
| <b>ETIM 8.0</b>       | EC002716 |
| <b>UNSPSC 16.0901</b> | 39121528 |

Adjustments

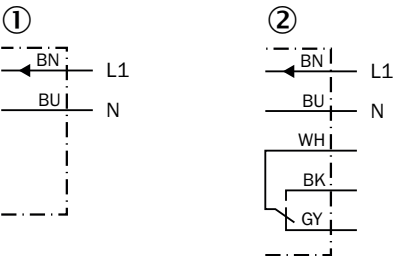


⑧

⑨

- ⑧ sender
- ⑨ receiver

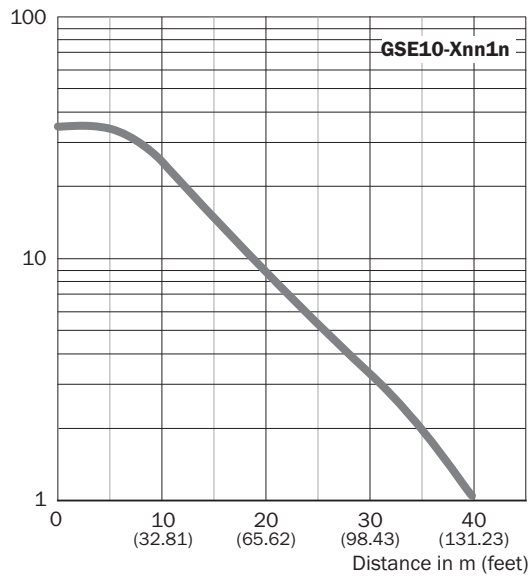
Connection diagram Cd-170



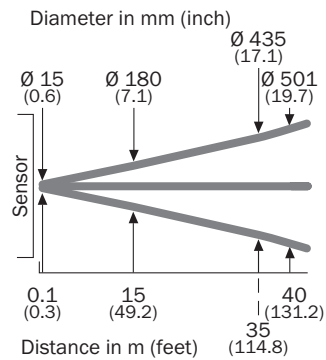
- ① sender
- ② receiver

## Characteristic curve GSE10, red light

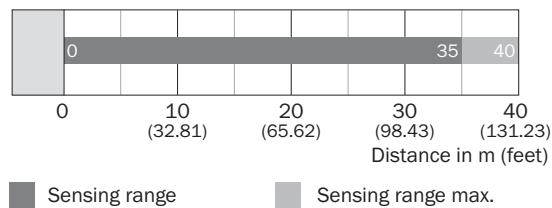
Operating reserve



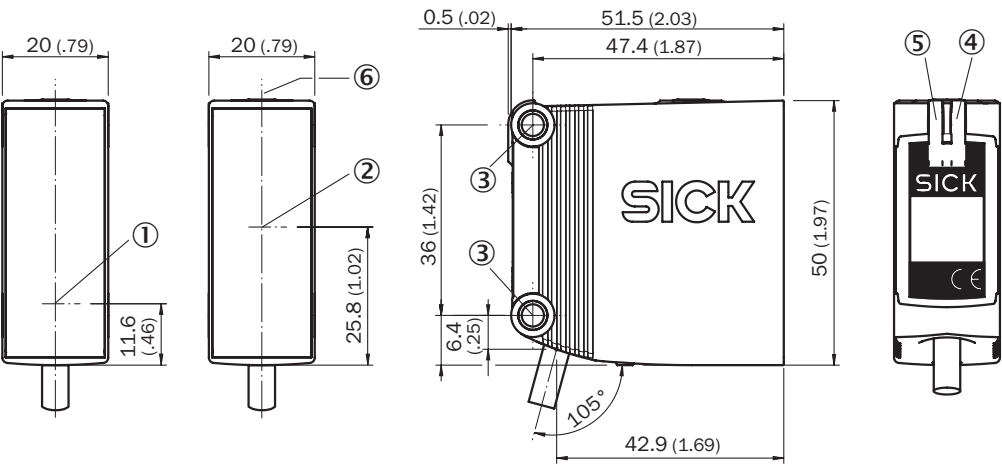
## Light spot size GSE10, red light



## Sensing range diagram GSE10, red light



Dimensional drawing GSE10, AC/DC, cable



Recommended accessories

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

| Brief description                                                                   |                                                                                                                                                                                                                                                                                                                              | Type          | part no. |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                                              |               |          |
|  | <ul style="list-style-type: none"><li><b>Description:</b> Q-Lock, bar clamp system for G10 and reflector P250</li><li><b>Material:</b> Zinc diecast, steel</li><li><b>Details:</b> Die-cast zinc, steel, zinc coated</li><li><b>Suitable for:</b> G10 and reflector P250</li></ul>                                           | BEF-KHSQ12R01 | 2071260  |
|                                                                                     |                                                                                                                                                                                                                                           | BEF-WN-MULTI2 | 2093945  |
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                              |               |          |
|  | <ul style="list-style-type: none"><li><b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li><li><b>Description:</b> Unshielded</li><li><b>Connection systems:</b> Screw-type terminals</li><li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li><li><b>Note:</b> For field bus technology</li></ul> | 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](http://www.sick.com)