



GTE10-P4211

G10

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------|----------|
| GTE10-P4211 | 1064697 |

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

Detailed technical data

Features

| | |
|--|---|
| Sensor/detection principle | Photoelectric proximity sensor, energetic |
| Dimensions (W x H x D) | 20 mm x 50 mm x 39 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 20 mm ... 1,300 mm ¹⁾ |
| Sensing range | 40 mm ... 950 mm ¹⁾ |
| Type of light | Visible red light |
| Light source | PinPoint LED ²⁾ |
| Light spot size (distance) | Ø 28 mm (1,400 mm) |
| Wave length | 625 nm |
| Adjustment | Potentiometer, 270° |

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 | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ± 5 V _{pp} ²⁾ |
| Power consumption | ≤ 20 mA |

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

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

| | |
|---|--|
| Output type | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark selector |
| Output current I_{\max} | $\leq 100 \text{ mA}$ |
| Response time | $\leq 500 \mu\text{s}$ ³⁾ |
| Switching frequency | 1,000 Hz ⁴⁾ |
| Connection type | M12, 4-pin male connector |
| Circuit protection | A ⁵⁾ B ⁶⁾ C ⁷⁾ D ⁸⁾ |
| Protection class | III |
| Weight | 35 g |
| Housing material | ABS/PMMAplastic |
| Enclosure rating | IP 67 |
| EMC | EN 60947-5-2 |
| Ambient operating temperature | -30 °C ... +60 °C |
| Ambient storage temperature | -40 °C ... +70 °C |
| UL File No. | NRKH.E348498 & NRKH7.E348498 |
| More standards | UL325 ⁹⁾ |

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²⁾ May not exceed or fall below U_V tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

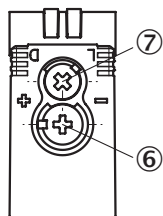
⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

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

Adjustments possible

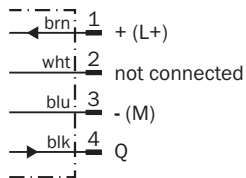


⑥ Sensing range adjustment

⑦ Light/dark selector

Connection diagram

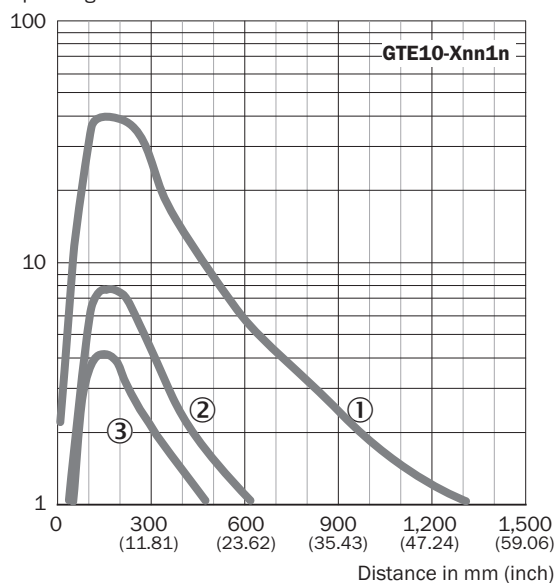
Cd-066



Characteristic curve

GTE10, red light

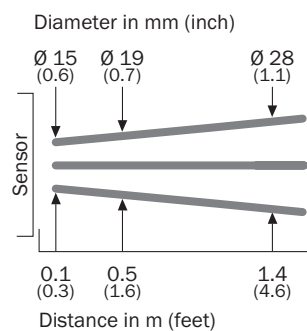
Operating reserve



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

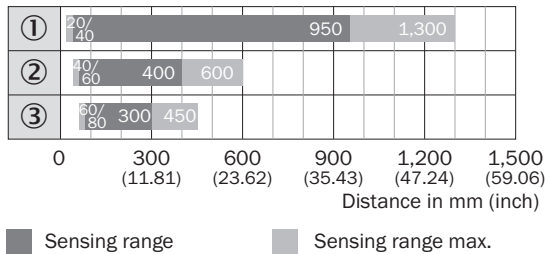
Light spot size

GTE10, red light



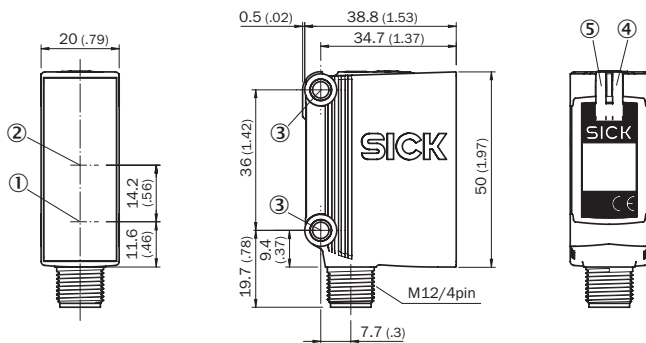
Sensing range diagram

GTE10, red light



Dimensional drawing (Dimensions in mm (inch))

GTE10, GL10, GL10G, DC, connector



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting hole, Ø 4.2 mm
- ④ Status indicator LED, 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 |
| | 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 |

| | Brief description | Type | Part no. |
|--|--|---------------|----------|
|  | 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 mounting plates | | | |
|  | 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 |
| Plug connectors and cables | | | |
|  | Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 2 m | DOL-1204-G02M | 6009382 |
| | Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 5 m | DOL-1204-G05M | 6009866 |
| | Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 2 m | DOL-1204-W02M | 6009383 |
| | Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 5 m | DOL-1204-W05M | 6009867 |

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.”

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