Data sheet




# GL2S-N0311S16

G2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

## Ordering information

| Type | part no. |
|---|---|
| GL2S-N0311S16 | 1113645 |

Other models and accessories ➜ www.sick.com/G2

## Detailed technical data

### Features

| | |
|---|---|
| **Functional principle** | Photoelectric retro-reflective sensor |
| **Functional principle detail** | With minimum distance to reflector (dual lens system) |
| **Dimensions (W x H x D)** | 7.7 mm x 21.8 mm x 13.5 mm |
| **Housing design (light emission)** | Rectangular |
| **Sensing range max.** | 0.02 m ... 3 m [1] |
| **Sensing range** | 0.03 m ... 2.5 m [1] |
| **Type of light** | Visible red light |
| **Light source** | PinPoint LED [2] |
| **Light spot size (distance)** | Ø 11 mm (250 mm) |
| **Wave length** | 640 nm |
| **Adjustment** | None |
| **Special features** | Cable with special connector Typ 3M (37104-4101-G00 FL), 4-wire |

[1] Reflector PL40A.
[2] Average service life: 100,000 h at $T_U$ = +25 °C.

### Mechanics/electronics

| | |
|---|---|
| **Supply voltage $U_B$** | 10 V DC ... 30 V DC [1] |

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not fall below or exceed $U_V$ tolerances.
[3] Without load.
[4] Signal transit time with resistive load.
[5] With light/dark ratio 1:1.
[6] Do not bend below 0 °C.
[7] A = $V_S$ connections reverse-polarity protected.
[8] C = interference suppression.
[9] D = outputs overcurrent and short-circuit protected.

| | |
|---|---|
| **Ripple** | < 5 $V_{pp}$ [2] |
| **Current consumption** | 20 mA [3] |
| **Switching output** | NPN |
| **Switching mode** | Light/dark switching |
| **Output current $I_{max.}$** | ≤ 50 mA |
| **Response time** | < 0.6 ms [4] |
| **Switching frequency** | 800 Hz [5] |
| **Connection type** | Cable with special connector 3M, 4-wire, 1.45 m [6] |
| **Cable material** | Plastic, PVC |
| **Cable diameter** | Ø 3 mm |
| **Circuit protection** | A [7]<br>C [8]<br>D [9] |
| **Weight** | 12 g |
| **Polarisation filter** | ✓ |
| **Special device** | ✓ |
| **Housing material** | Plastic, ABS |
| **Optics material** | Plastic, PMMA |
| **Enclosure rating** | IP67 |
| **Ambient operating temperature** | –25 °C ... +50 °C |
| **Ambient temperature, storage** | –40 °C ... +75 °C |
| **UL File No.** | NRKH.E181493 |

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## Certificates

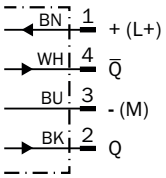
| | |
|---|---|
| **EU declaration of conformity** | ✓ |
| **UK declaration of conformity** | ✓ |
| **ACMA declaration of conformity** | ✓ |
| **Moroccan declaration of conformity** | ✓ |
| **China-RoHS** | ✓ |
| **cULus certificate** | ✓ |
| **Photobiological safety (DIN EN 62471) certificate** | ✓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

## Classifications

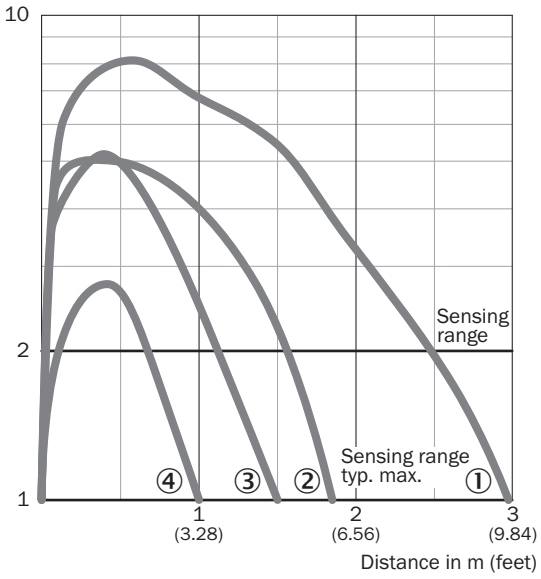
| | |
|---|---|
| **ECLASS 5.0** | 27270902 |
| **ECLASS 5.1.4** | 27270902 |

| | |
|---|---|
| **ECLASS 6.0** | 27270902 |
| **ECLASS 6.2** | 27270902 |
| **ECLASS 7.0** | 27270902 |
| **ECLASS 8.0** | 27270902 |
| **ECLASS 8.1** | 27270902 |
| **ECLASS 9.0** | 27270902 |
| **ECLASS 10.0** | 27270902 |
| **ECLASS 11.0** | 27270902 |
| **ECLASS 12.0** | 27270902 |
| **ETIM 5.0** | EC002717 |
| **ETIM 6.0** | EC002717 |
| **ETIM 7.0** | EC002717 |
| **ETIM 8.0** | EC002717 |
| **UNSPSC 16.0901** | 39121528 |

## Connection diagram Cd-464



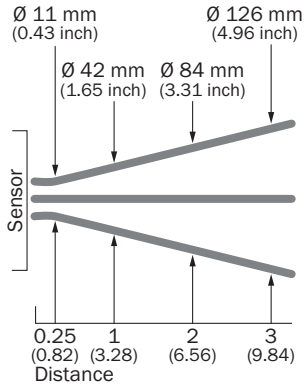

## Characteristic curve GL2S



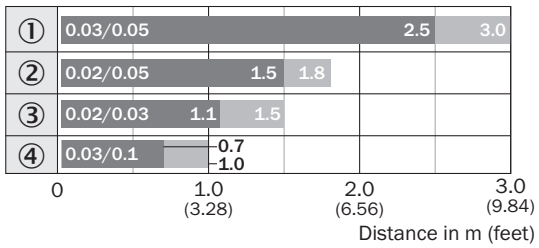

① Reflector PL40A
② Reflector PL20A
③ PL10F reflector

④ Reflective tape IREF6000 (REF-IRF-56)

## Light spot size GL2S



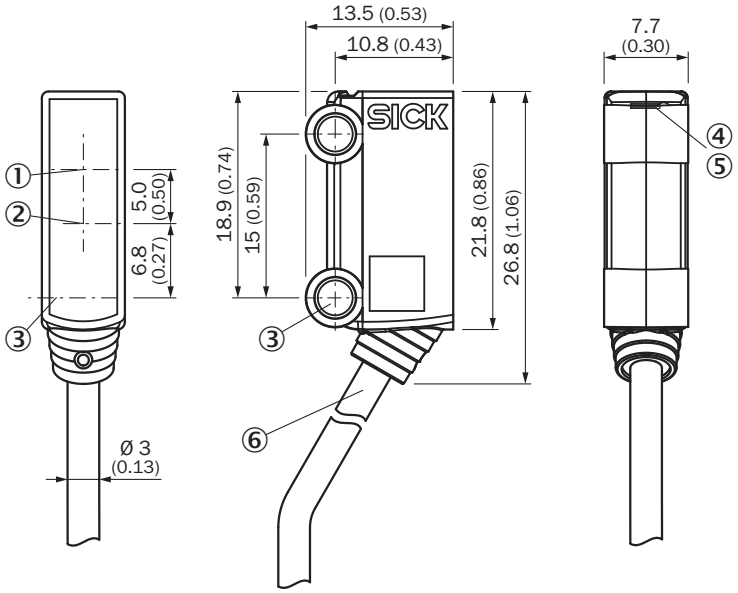

## Sensing range diagram GL2S




Sensing range  Sensing range typ. max.

① Reflector PL40A
② Reflector PL20A
③ PL10F reflector
④ Reflective tape IREF6000 (REF-IRF-56)

## Dimensional drawing




Dimensions in mm (inch)
① optical axis, receiver
② optical axis, sender
③ Mounting hole, Ø 3.2 mm
④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑥ cable with special connector 3M, 4-wire

## Recommended accessories

Other models and accessories ➜ www.sick.com/G2

| | Brief description | Type | part no. |
|---|---|---|---|
| reflectors and optics | | | |
|  | • **Description:** Fine triple reflector, screw connection, suitable for laser sensors<br>• **Dimensions:** 20 mm 32 mm<br>• **Ambient operating temperature:** –30 °C ... +65 °C | PL10F | 5311210 |
| connectors and cables | | | |
|  | • **Connection type head A:** Male connector, M8, 4-pin, straight, A-coded<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** 0.14 mm² ... 0.5 mm² | STE-0804-G | 6037323 |

# 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:

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