



Photoelectric sensors  
G10, Photoelectric retro-reflective sensor,  
Standard optics

GL10-N4111



**Model Name** > [GL10-N4111](#)  
**Part No.** > [1065883](#)



*Illustration may differ*

**At a glance**

- Long sensing ranges: up to 15 m on PL80A reflector
- PinPoint LED with bright and precise light spot
- Immunity to ambient light
- 10 V DC ... 30 V DC or 24 V AC/DC ... 240 V AC/DC power supply with PNP/NPN or relay output
- With or without sensitivity adjustment
- Small housing design
- Rugged sensor housing with metal-reinforced holes for assembly
- Q-Lock assembly system for mounting and aligning the sensor within a few seconds

**Your benefits**

- Long sensing ranges for maximum operating reserves
- Efficient installation: the GL10 and the Q-Lock assembly system save valuable hours when mounting and commissioning multiple sensors
- Universal DC or AC/DC power supply for even greater application flexibility
- Highly reliable and durable despite optical interference or mechanical loads
- Wide range of accessories simplifies sensor integration: aids for assembly, connecting cables, and reflectors



**Features**

|                                  |  |
|----------------------------------|--|
| Sensor/detection principle:      | Photoelectric retro-reflective sensor, Standard optics |
| Dimensions (W x H x D):          | 20 mm x 50 mm x 39 mm                                  |
| Housing design (light emission): | Rectangular  |
| Sensing range max.:              | 0.08 m ... 12 m, 0.08 m ... 15 m <sup>1) 2)</sup>      |
| Sensing range::                  | 0.15 m ... 10 m, 0.15 m ... 12 m <sup>3) 4)</sup>      |
| Type of light:                   | Visible red light                                      |
| Light source:                    | PinPoint LED <sup>5)</sup>                             |
| Wave length:                     | 625 nm   |
| Light spot size (distance):      | Ø 58 mm (5 m)  |

<sup>1) 3)</sup> PL80A <sup>2) 4)</sup> P250 <sup>5)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C

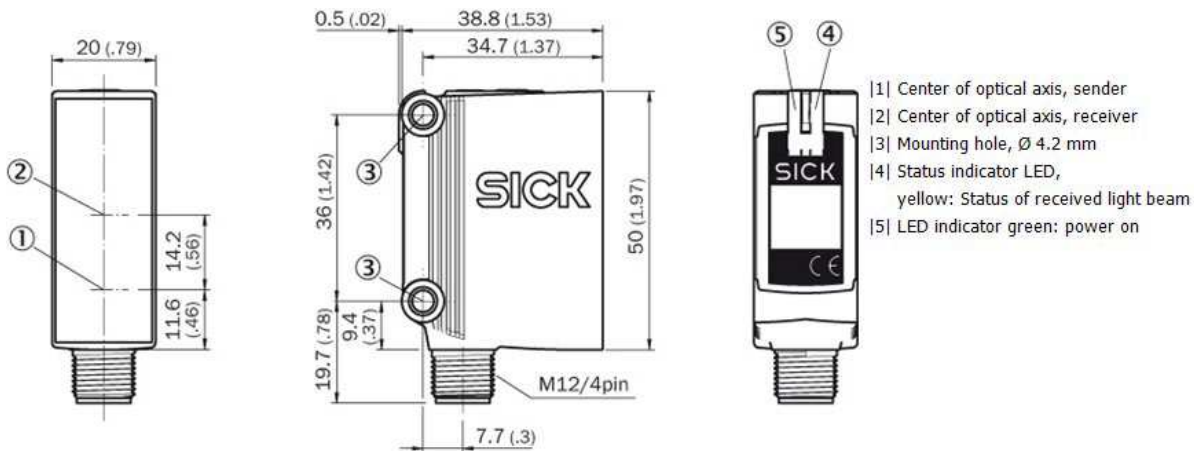
**Mechanics/electronics**

|                    |                                   |
|--------------------|-----------------------------------|
| Supply voltage:    | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:            | ± 5 Vpp <sup>2)</sup>             |
| Power consumption: | ≤ 20 mA                           |

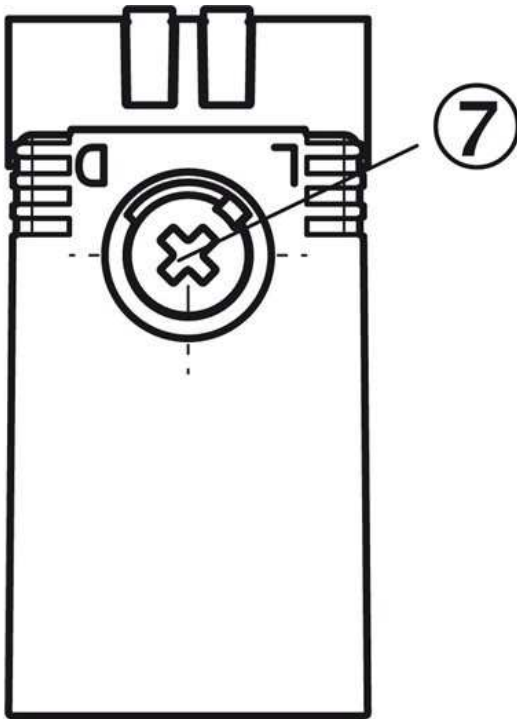
|                                     |                                    |
|-------------------------------------|------------------------------------|
| Output type:                        | NPN, open collector                |
| Switching mode:                     | Light/dark switching               |
| Switching mode selector:            | Selectable via light/dark selector |
| Output current I <sub>max</sub> ..: | ≤ 100 mA                           |
| Response time:                      | ≤ 500 μs <sup>3)</sup>             |
| Connection type:                    | Connector M12, 4-pin               |
| Circuit protection:::               | A, B, C, D <sup>4) 5) 6) 7)</sup>  |
| Protection class:                   | III                                |
| Weight:                             | 35 g                               |
| Polarisation filter:                | ✓                                  |
| Special device:                     | -                                  |
| Enclosure rating:                   | IP 67                              |
| EMC:                                | EN 60947-5-2                       |
| Ambient temperature operation:      | -30 °C ... +60 °C                  |
| Ambient storage temperature:        | -40 °C ... +70 °C                  |
| UL File No.:                        | NRKH.E348498 & NRKH7.E348498       |
| Further standards:                  | UL325 <sup>8)</sup>                |
| Switching frequency max.:           | 1,000 Hz <sup>9)</sup>             |
| Housing material:                   | PVC/PMMA, Plastic                  |

1) Limit values: operation in short-circuit protected network max. 8 A<sup>2)</sup> May not exceed or fall below U<sub>v</sub> tolerances<sup>3)</sup> Signal transit time with resistive load<sup>4)</sup> A = V<sub>S</sub>  
connections reverse-polarity protected<sup>5)</sup> B = inputs and output reverse-polarity protected<sup>6)</sup> C = interference suppression<sup>7)</sup> D = outputs overcurrent and short-circuit  
protected<sup>8)</sup> Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).<sup>9)</sup> With light/dark ratio 1:1

## Dimensional drawing

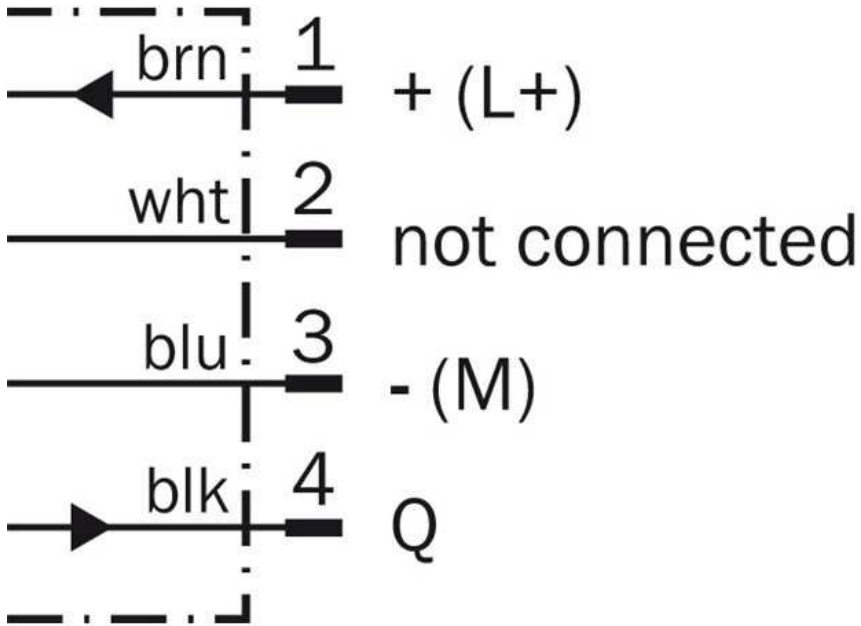


Adjustments possible

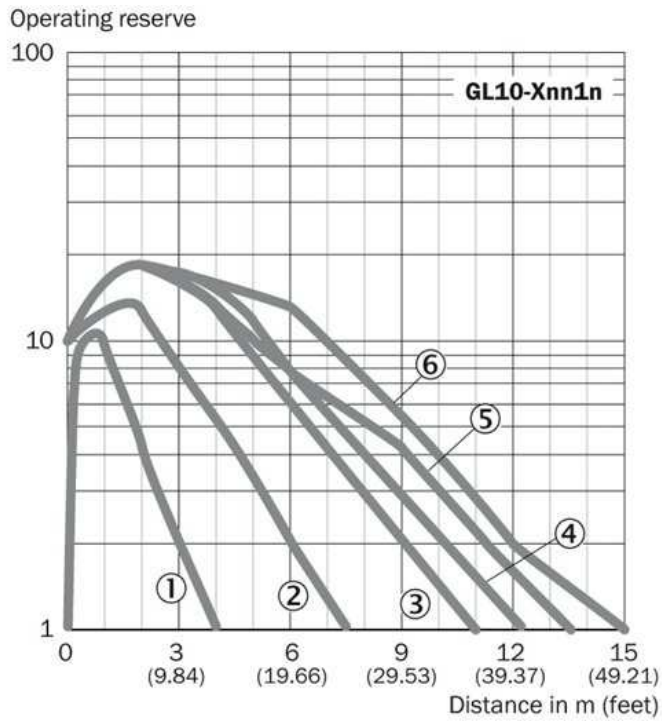


[7] Light/dark selector

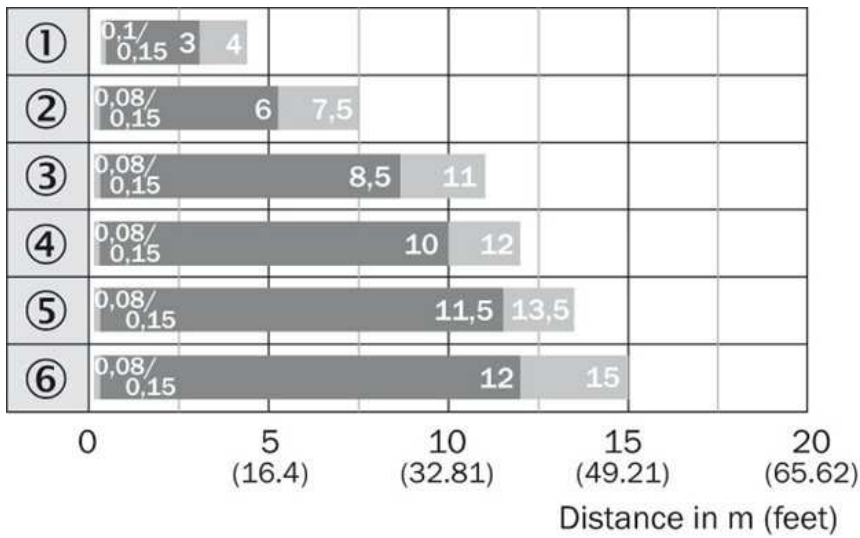
Connection diagram



## Characteristic curve



## Sensing range diagram

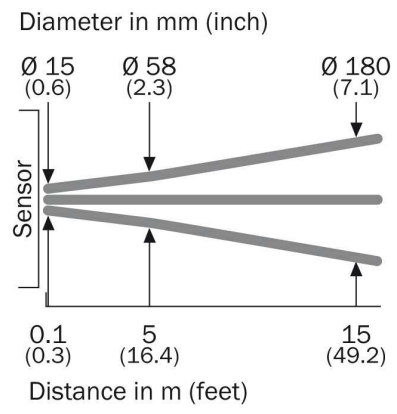


- |1| REF-IRF-56
- |2| PL20A
- |3| PL30A
- |4| P250
- |5| PL40A
- |6| PL80A

■ Sensing range                      ■ Sensing range max.

## Light spot size

---



**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)