



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

GL10-R3811



**Model Name** > [GL10-R3811](#)  
**Part No.** > [1064689](#)



*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 51.5 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
Adjustment:	Potentiometer, 270 °
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

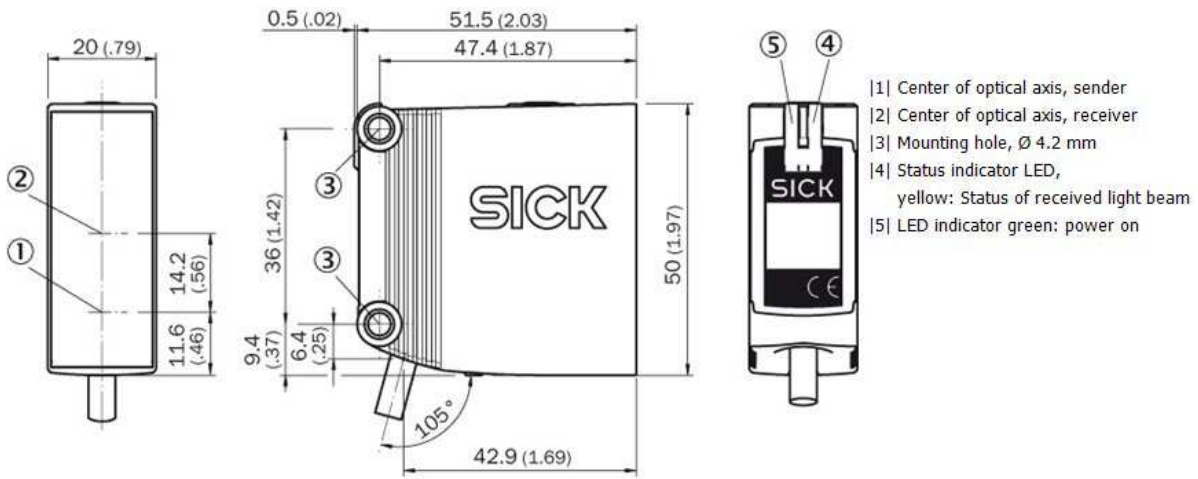
**Mechanics/electronics**

Supply voltage:	24 V AC/DC ... 240 V AC/DC <sup>1)</sup>
Ripple:	± 5 Vpp <sup>2)</sup>

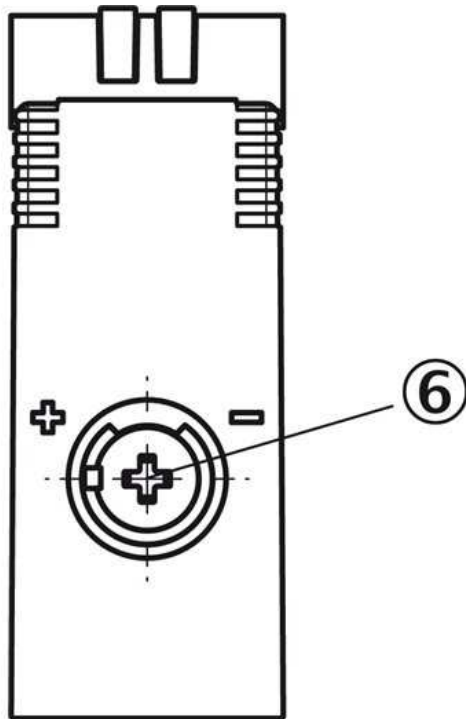
Power consumption:	≤ 2.5 VA
Output type:	Relay, SPDT, electrically isolated <sup>3)</sup>
Response time:	≤ 10 ms
Connection type:	Cable, 5-wire, 2 m <sup>4)</sup>
Cable material:	PVC
Conductor cross-section:	0.25 mm <sup>2</sup>
Circuit protection:	C <sup>5)</sup>
Protection class:	II <sup>6)</sup>
Weight:	115 g
Polarisation filter:	✓
Interference emission:	EN 61000-6-3 (2011-09) <sup>7)</sup>
Special device:	-
Enclosure rating:	IP 67
Usage category:	AC-15, DC-13, According to EN 60947-1
EMC:	EN 60947-5-2
Ambient temperature operation:	-30 °C ... +60 °C <sup>8)</sup>
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Further standards:	UL325 <sup>9)</sup>
Switching frequency max.:	20 Hz
Switching load max. (current/voltage):	0.11 A (250 V DC), 3 A (250 V AC), 3 A (30 V DC)
Relay switching cycles min.:	100.000 cycles (3 A)
Housing material:	PVC/PMMA, Plastic

<sup>1)</sup> +/- 10 % <sup>2)</sup> May not exceed or fall below U<sub>v</sub> tolerances <sup>3)</sup> Provide suitable spark suppression for inductive or capacitive loads <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 ... +60 °C <sup>9)</sup> Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

**Dimensional drawing**

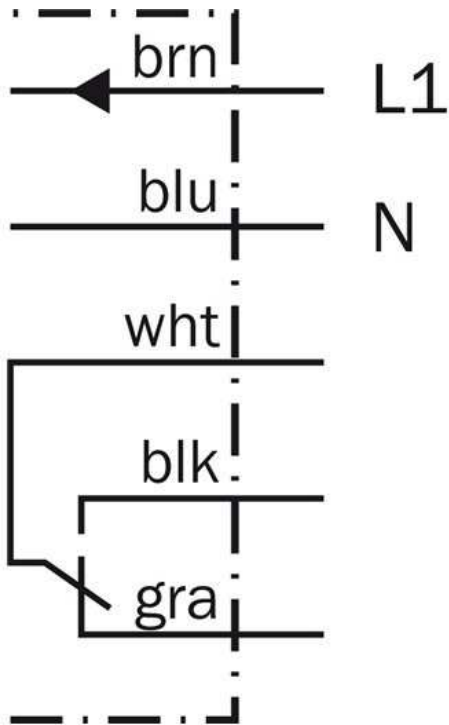


**Adjustments possible**

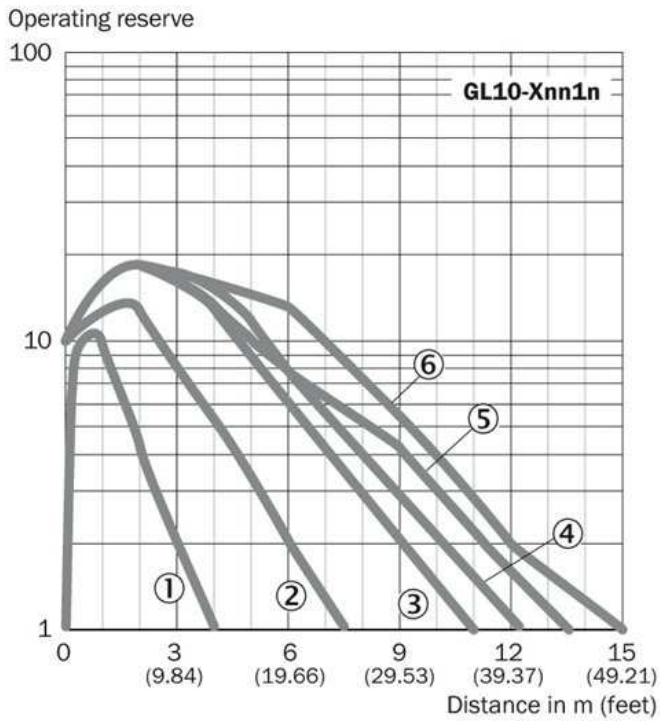


[6] Sensing range adjustment

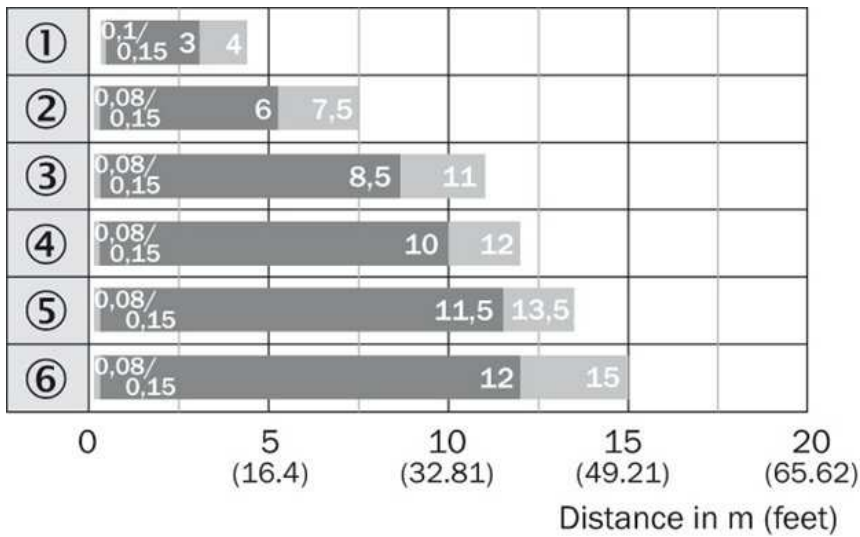
Connection diagram



Characteristic curve



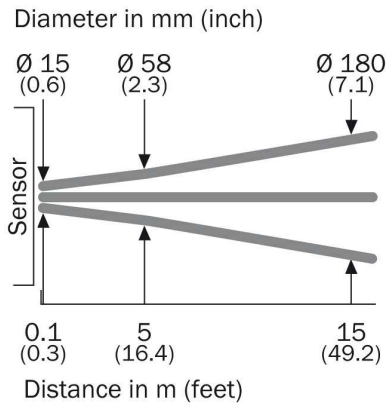
### Sensing range diagram



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

Sensing range     
  Sensing range max.

### Light spot size



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