



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

GL10-P4554



Type > [GL10-P4554](#)
Part No. > [1065893](#)



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, Dual lens |
| Dimensions (W x H x D): | 20 mm x 50 mm x 39 mm |
| Housing design (light emission): | Rectangular |
| Sensing range max.: | 0.15 m ... 10 m, 0.15 m ... 12 m ^{1) 2)} |
| Sensing range:: | 0.3 m ... 8 m, 0.3 m ... 9.5 m ^{3) 4)} |
| Type of light: | Visible red light |
| Light source: | PinPoint LED ⁵⁾ |
| Wave length: | 625 nm |
| Special features: | High functional reliability on foil-wrapped objects |
| Light spot size (distance): | Ø 58 mm (5 m) |

^{1) 3)} PL80A ^{2) 4)} P250 ⁵⁾ Average service life: 100,000 h at T_U = +25 °C

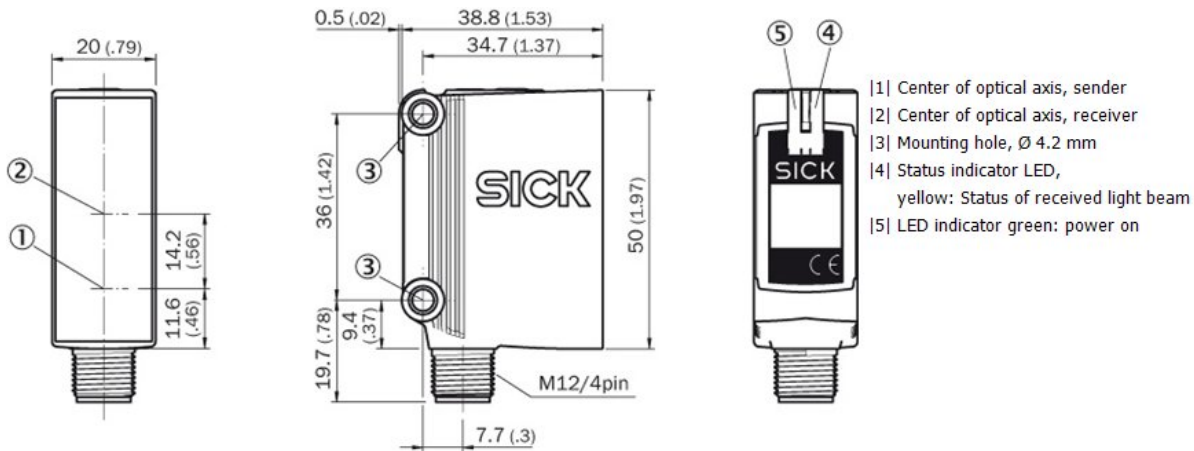
Mechanics/electronics

| | |
|-----------------|-----------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Ripple: | ± 5 Vpp ²⁾ |

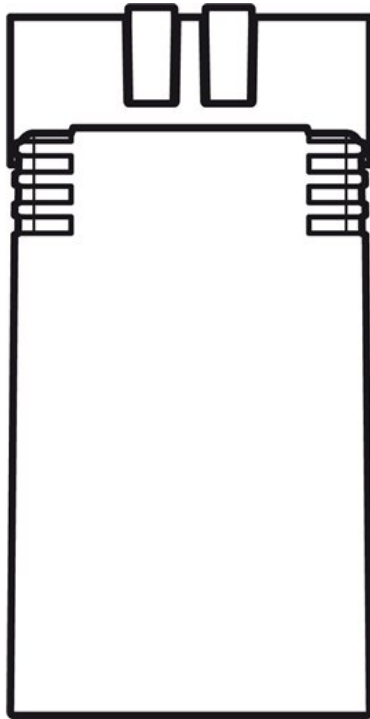
| | |
|-----------------------------------|--------------------------------------|
| Power consumption: | ≤ 20 mA |
| Output type: | PNP |
| Switching mode: | Light switching |
| Output current I _{max} : | ≤ 100 mA |
| Response time: | ≤ 1 ms ³⁾ |
| Connection type: | M12, 4-pin male connector |
| Circuit protection::: | A, B, C, D ^{4) 5) 6) 7)} |
| Protection class: | III |
| Weight: | 90 g |
| Polarisation filter: | ✓ |
| Special device: | - |
| Enclosure rating: | IP 67 |
| Items supplied: | Q-Lock mounting system BEF-KHSQ12R01 |
| 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 |
| Further standards: | UL325 ⁸⁾ |
| Switching frequency max.: | 500 Hz ⁹⁾ |
| Housing material: | PVC/PMMA, Plastic |

1) Limit values: operation 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) A = V_S
connections reverse-polarity protected 5) B = inputs and output reverse-polarity protected 6) C = interference suppression 7) D = outputs overcurrent and short-circuit
protected 8) Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960). 9) With light/dark ratio 1:1

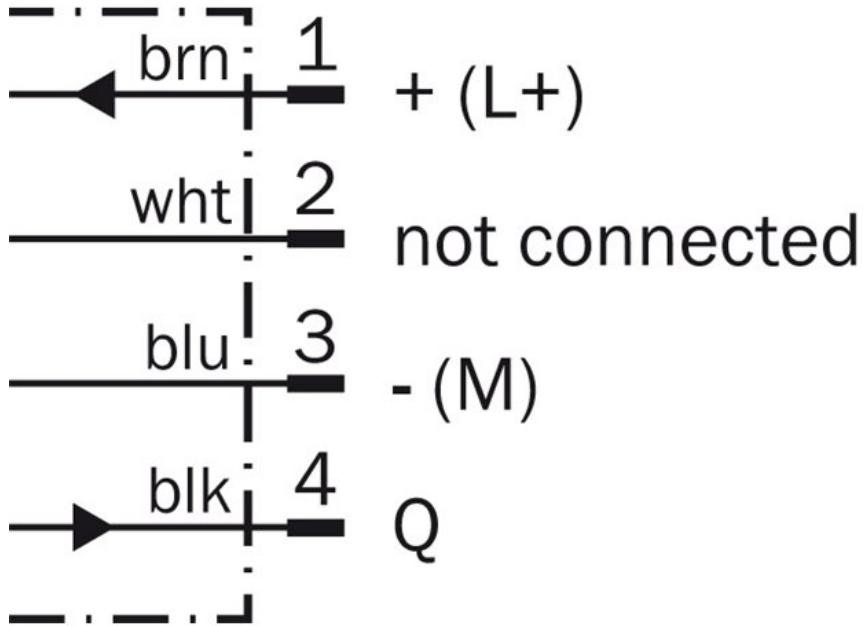
Dimensional drawing



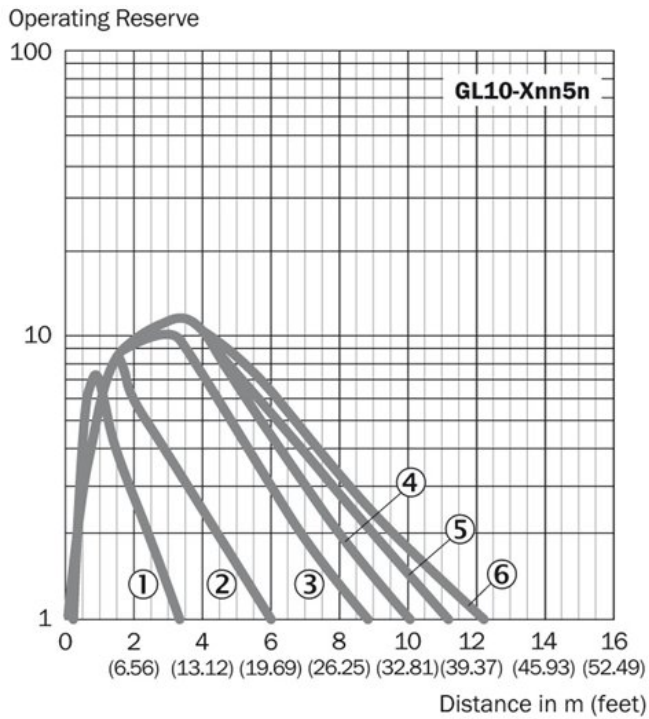
Adjustments possible



Connection diagram

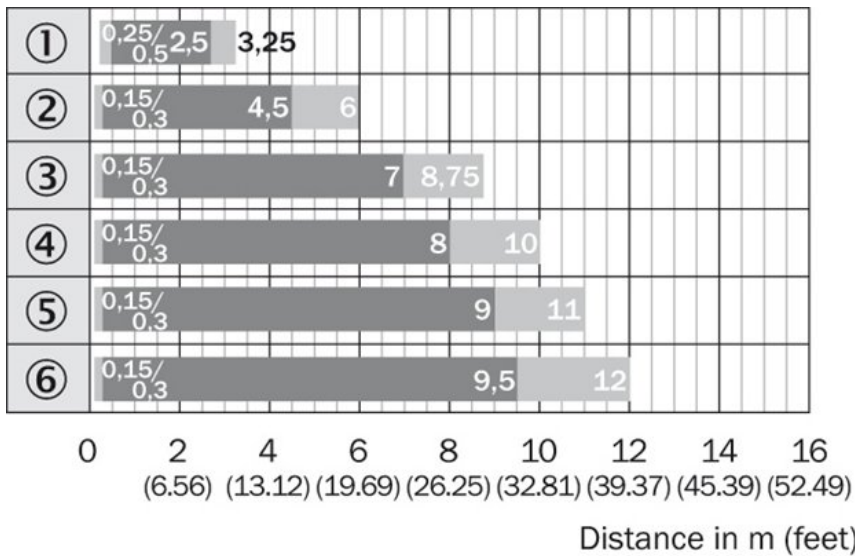


Characteristic curve



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

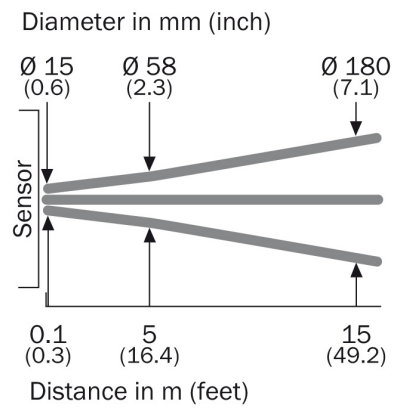
Sensing range diagram



- |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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