



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

GL10-R3812



Type > [GL10-R3812](#)
Part No. > [1065898](#)



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 51.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.08 m ... 12 m, 0.08 m ... 15 m ^{1) 2)}
Sensing range::	0.15 m ... 10 m, 0.15 m ... 12 m ^{3) 4)}
Type of light:	Visible red light
Light source:	PinPoint LED ⁵⁾
Wave length:	625 nm
Adjustment:	Potentiometer, 270°
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

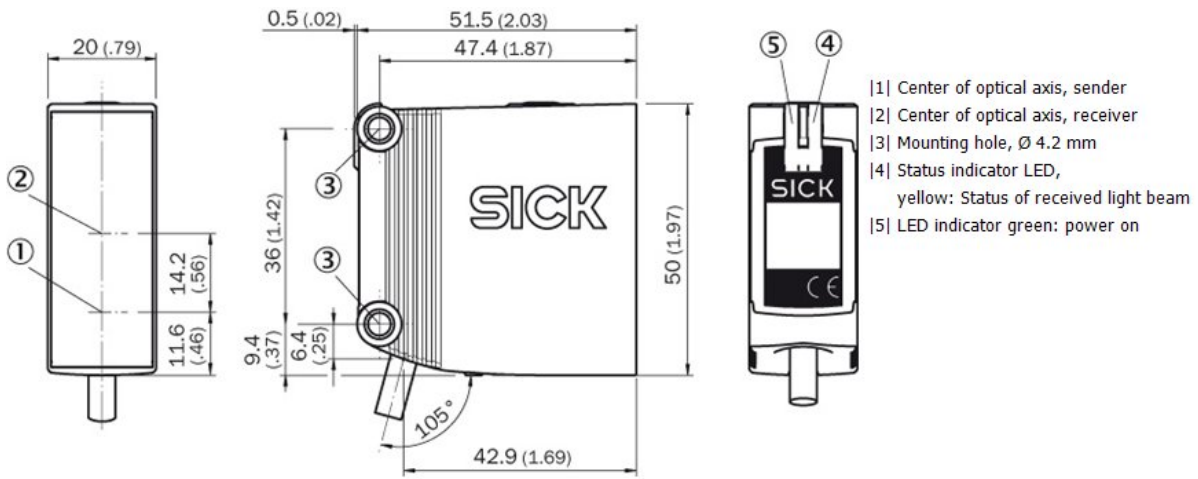
Mechanics/electronics

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

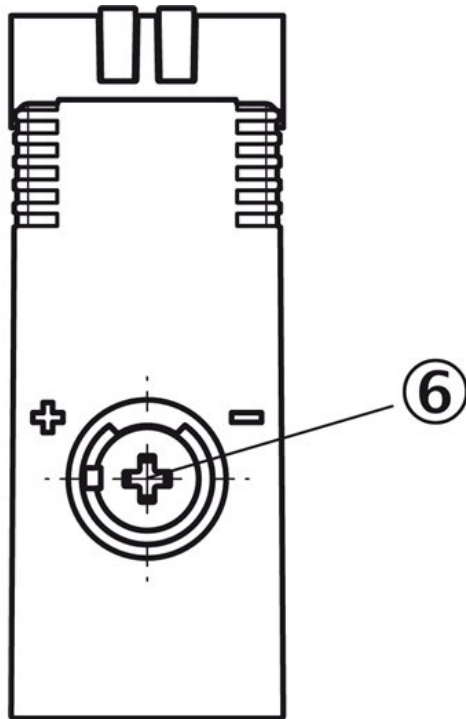
Power consumption:	≤ 2.5 VA
Output type:	Relay, SPDT, electrically isolated ³⁾
Response time:	≤ 10 ms
Connection type:	Cable, 5-wire, 2 m ⁴⁾
Cable material:	PVC
Conductor cross-section:	0.25 mm ²
Circuit protection:	C ⁵⁾
Protection class:	II ⁶⁾
Weight:	115 g
Polarisation filter:	✓
Interference emission:	EN 61000-6-3 (2011-09) ⁷⁾
Special device:	-
Enclosure rating:	IP 67
Items supplied:	Mounting bracket BEF-G10UC01, Reflector P250
Usage category:	AC-15, DC-13, According to EN 60947-1
EMC:	EN 60947-5-2
Ambient operating temperature:	-30 °C ... +60 °C ⁸⁾
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Further standards:	UL325 ⁹⁾
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

¹⁾ +/- 10 % ²⁾ May not exceed or fall below U_v tolerances ³⁾ Provide suitable spark suppression for inductive or capacitive loads ⁴⁾ Do not bend below 0 °C ⁵⁾ C = interference suppression ⁶⁾ Reference voltage: 250 V AC ⁷⁾ 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 ⁸⁾ UL: 0 °C ... +60 °C ⁹⁾ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

Dimensional drawing

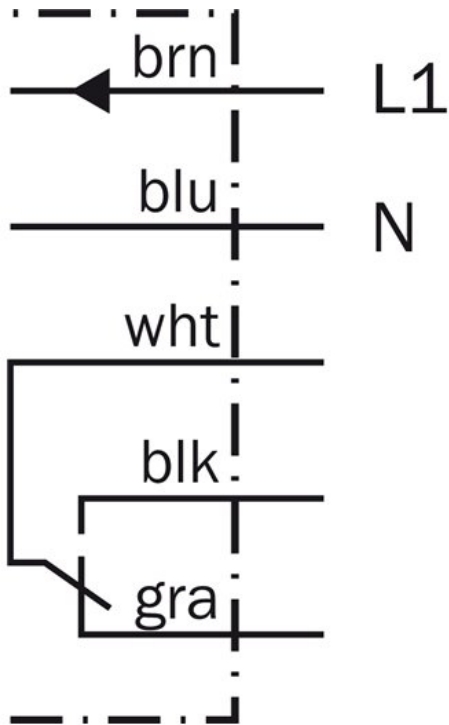


Adjustments possible

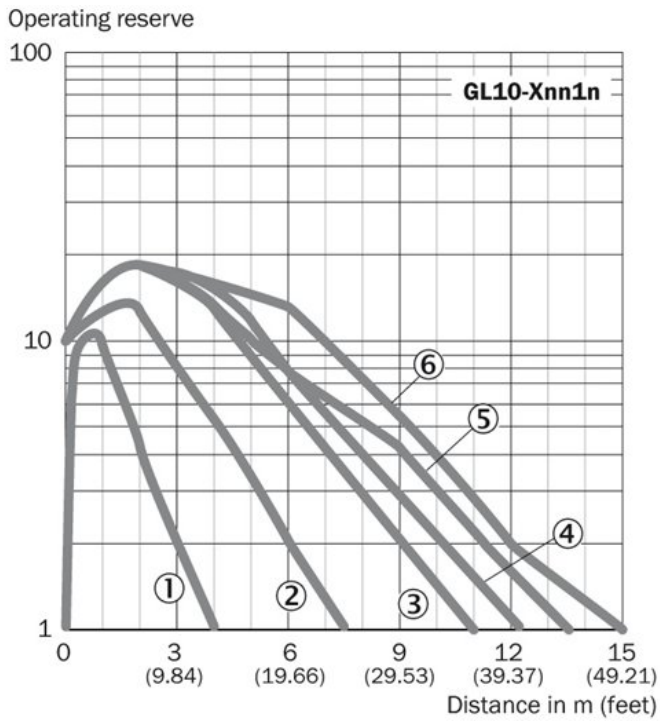


[6] Sensing range adjustment

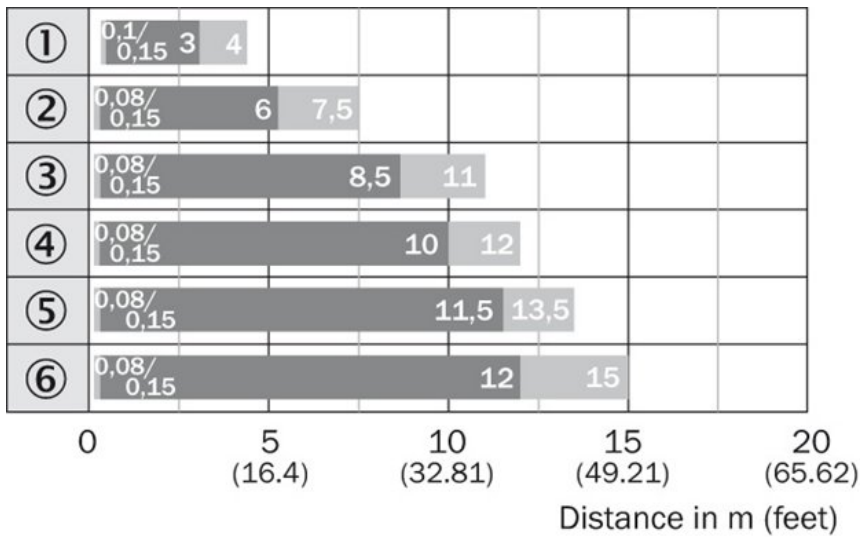
Connection diagram



Characteristic curve



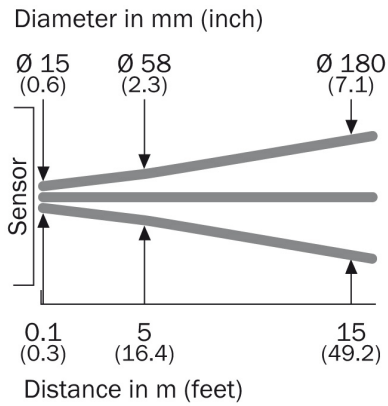
Sensing range diagram



- |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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