



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

GL10-F4551



Model Name > [GL10-F4551](#)
Part No. > [1071153](#)



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.:	0.15 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

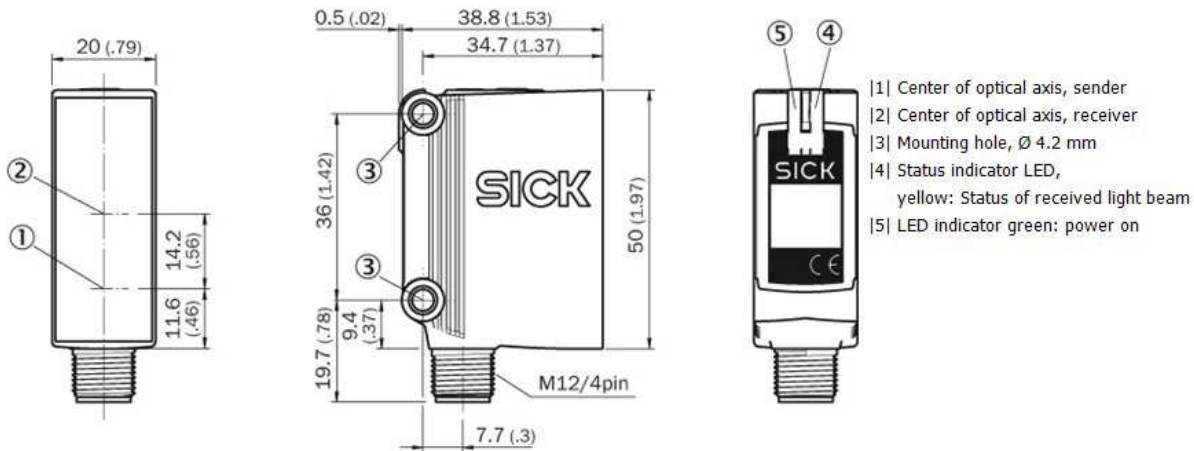
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	± 5 Vpp ²⁾

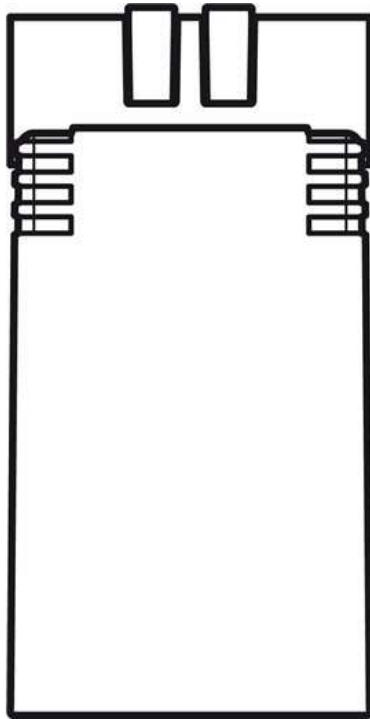
Power consumption:	≤ 20 mA
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I _{max} :	≤ 100 mA
Response time:	≤ 1 ms ³⁾
Electrical connection:	Connector M12, 4-pin
Circuit protection:::	A, B, C, D ^{4) 5) 6) 7)}
Protection class:	III
Weight:	90 g
Polarisation filter:	✓
Special device:	-
Enclosure rating:	IP 67
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

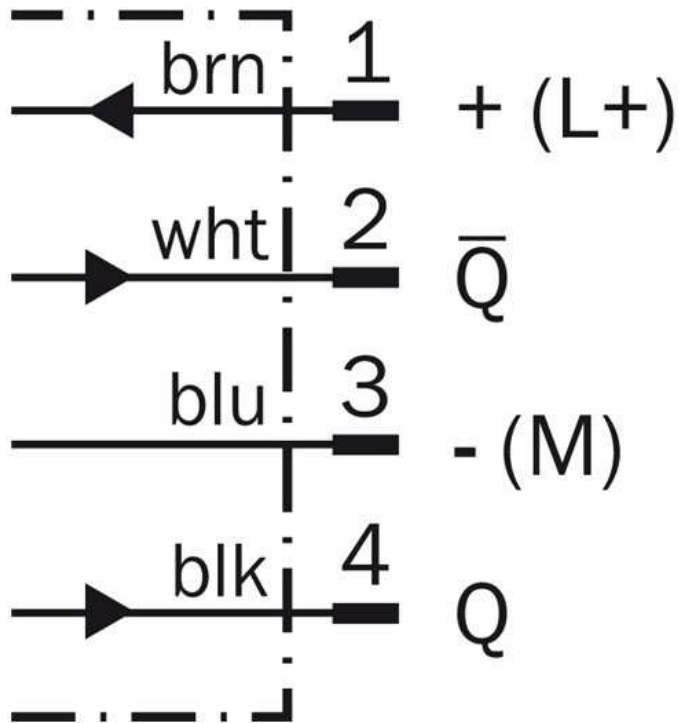
Dimensional drawing



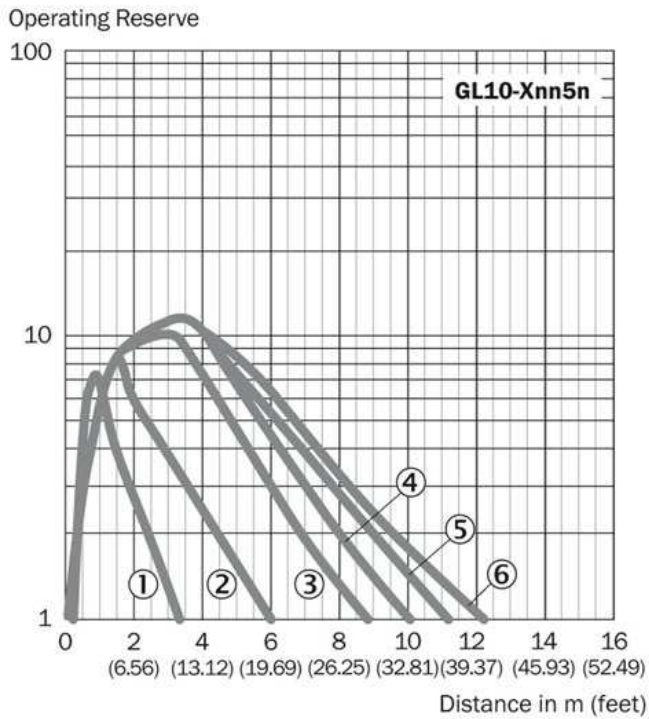
Adjustments possible



Connection diagram

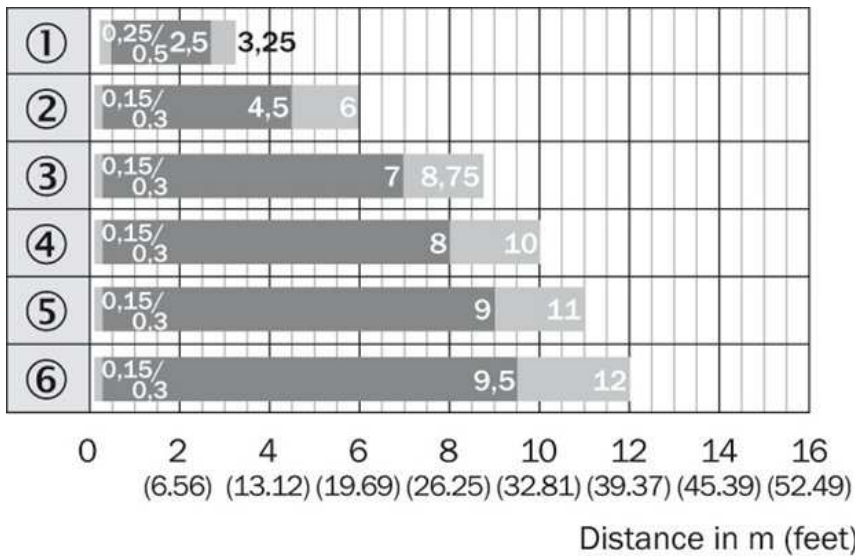


Characteristic curve



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

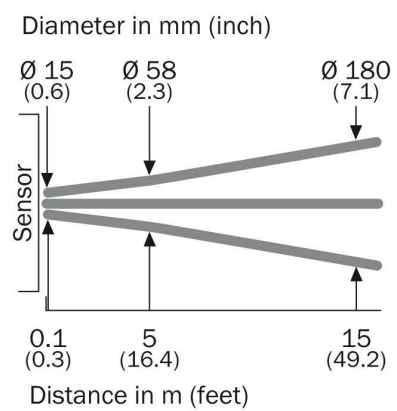
Sensing range diagram



- |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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