

ONLINE DATA SHEET
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Photoelectric sensors
G10, Photoelectric retro-reflective sensor, Standard optics

GL10-N1212



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Type > GL10-N1212
Part No. > 1065889





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.::	0.08 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:	10 V DC ... 30 V DC [1)]
Ripple:	± 5 Vpp [2)]

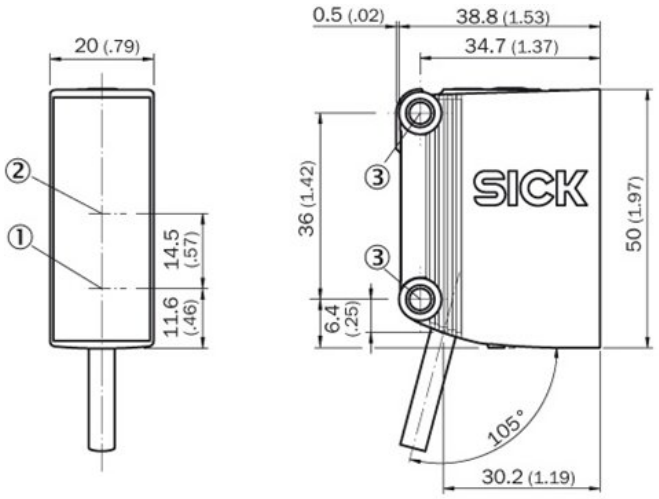
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Power consumption:	≤ 20 mA
Output type:	NPN, open collector
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current Imax.:	≤ 100 mA
Response time:	≤ 500 µs [3]
Connection type:	Cable, 3-wire, 2 m [4]
Cable material:	PVC
Conductor cross-section:	0.14 mm²
Circuit protection::::	A, B, C, D [5] [6] [7] [8]
Protection class:	III
Weight:	90 g
Polarisation filter:	✓
Special device:	-
Enclosure rating:	IP 67
Items supplied:	Mounting bracket BEF-G10DC01, Reflector P250
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 [9]
Switching frequency max.:	1,000 Hz [10]
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] Do not bend below 0 °C [5] A = V_S connections reverse-polarity protected [6] B = inputs and output reverse-polarity protected [7] C = interference suppression [8] D = outputs overcurrent and short-circuit protected [9] Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960). [10] With light/dark ratio 1:1

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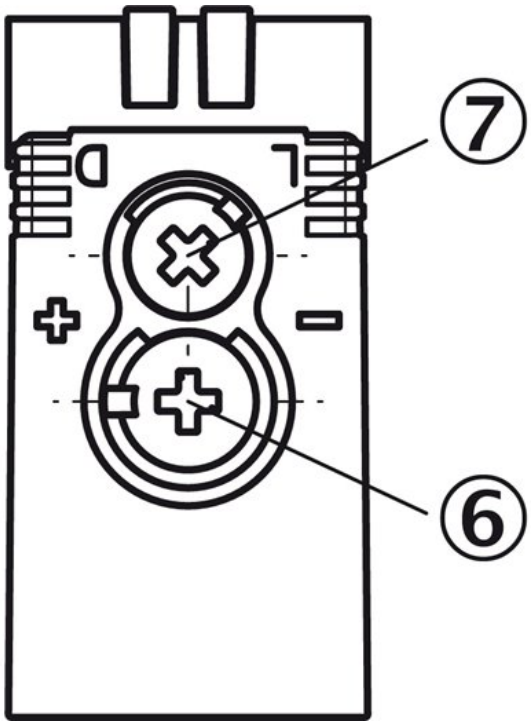
Dimensional drawing





|1| Center of optical axis, sender
|2| Center of optical axis, receiver
|3| Mounting hole, Ø 4.2 mm
|4| Status indicator LED,
yellow: Status of received light beam
|5| LED indicator green: power on

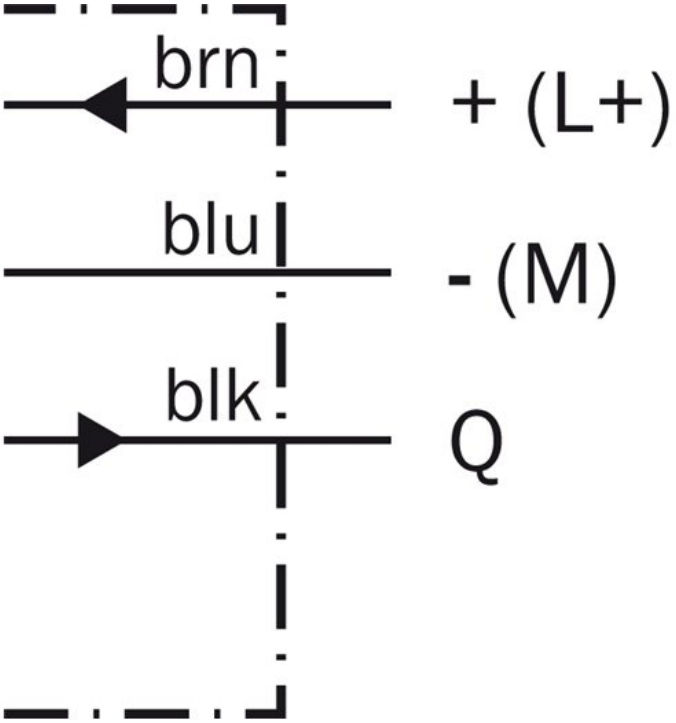
Adjustments possible



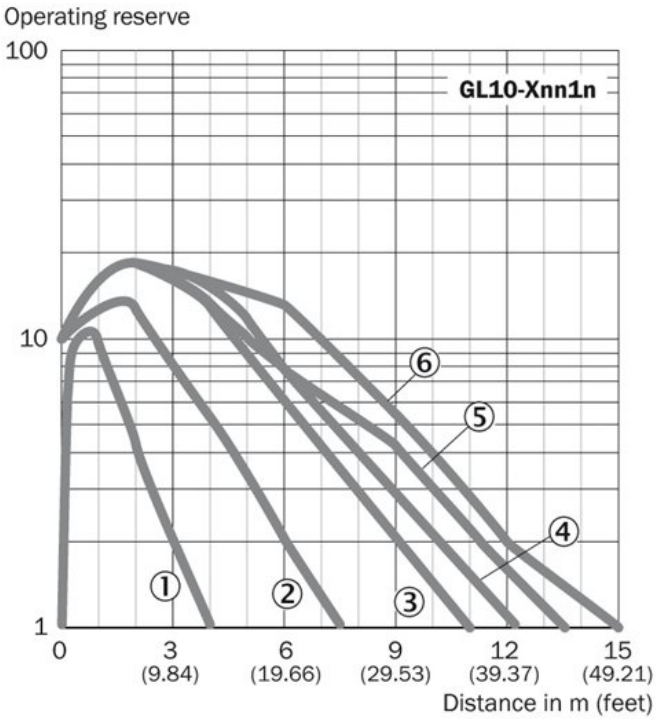
|6| Sensing range adjustment
|7| Light/dark selector

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Connection diagram

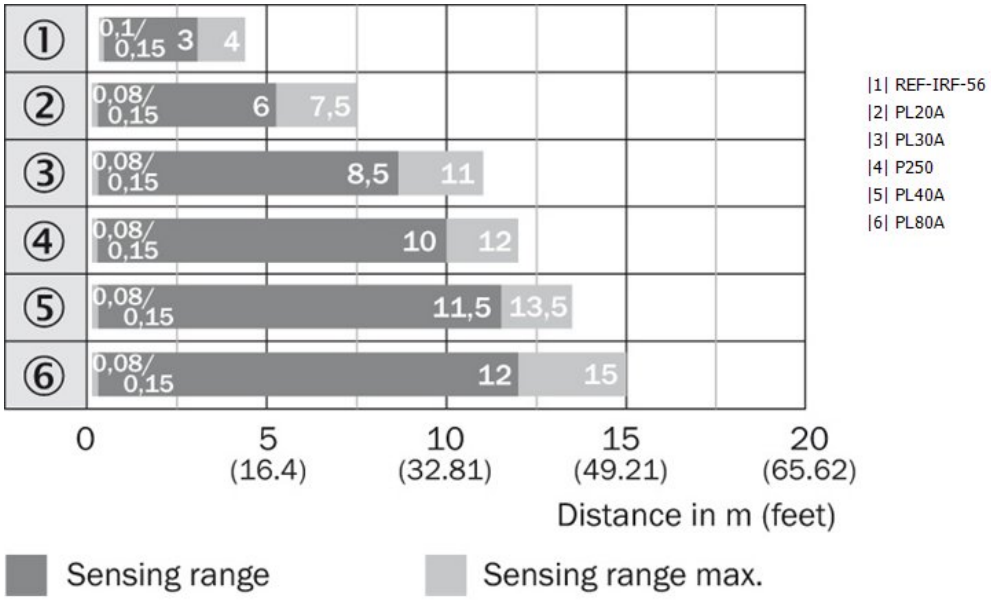


Characteristic curve

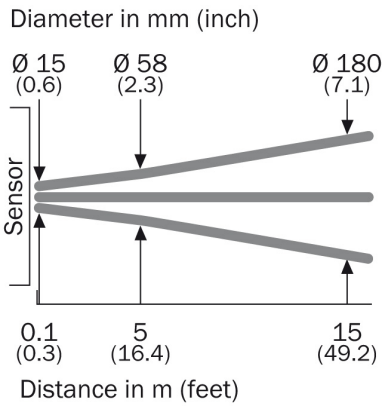


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Sensing range diagram



Light spot size



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