

ONLINE DATA SHEET
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Photoelectric sensors
G10, Through-beam photoelectric sensor

GSE10-R3811



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G10, Through-beam photoelectric sensor

Type > GSE10-R3811
Part No. > 1064691



Illustration may differ

At a glance

- Long sensing ranges: up to 40 m
- PinPoint LED with bright and precise light spot
- With or without sensitivity adjustment
- 10 V DC ... 30 V DC or 24 V AC/DC … 240 V AC/DC power supply with PNP/NPN or relay output
- Small housing design
- Rugged sensor housing with metal-reinforced holes for assembly
- Weatherproof housing: ideal for outdoor applications

Your benefits

- Long sensing ranges for maximum operating reserves
- 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 and connectors
- Long service life even when used in outdoor applications thanks to rugged weatherproof housing

Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	20 mm x 50 mm x 51.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 40 m
Sensing range:	0 m ... 35 m
Type of light:	Visible red light
Light source:	PinPoint LED [1]
Wave length:	625 nm
Adjustment:	Potentiometer, 270°
Light spot size (distance):	Ø 180 mm (15 m)

[1] 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, sender:	≤ 2 VA

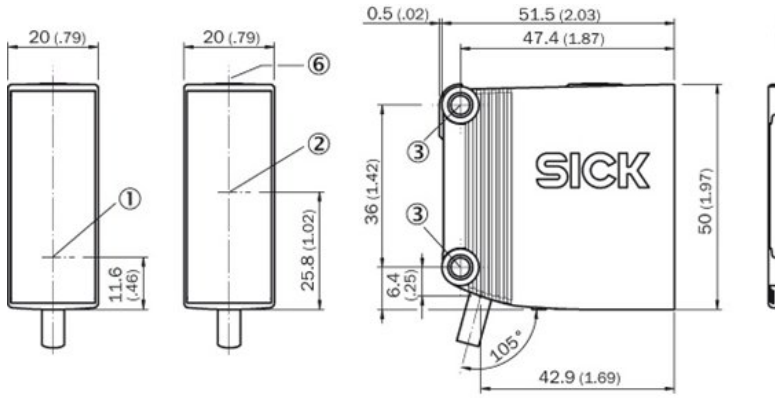
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Power consumption, receiver:	≤ 2.5 VA
Output type:	Relay, SPDT, electrically isolated [3]
Response time:	≤ 10 ms
Connection type:	Cable, 5-wire, 2 m [4]
Cable material:	PVC
Conductor cross-section:	0.25 mm²
Circuit protection:	C [5]
Protection class:	II [6]
Weight:	230 g
Polarisation filter:	-
Interference emission:	EN 61000-6-3 (2011-09) [7]
Special device:	-
Enclosure rating:	IP 67
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 [10]
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). [10] With light/dark ratio 1:1

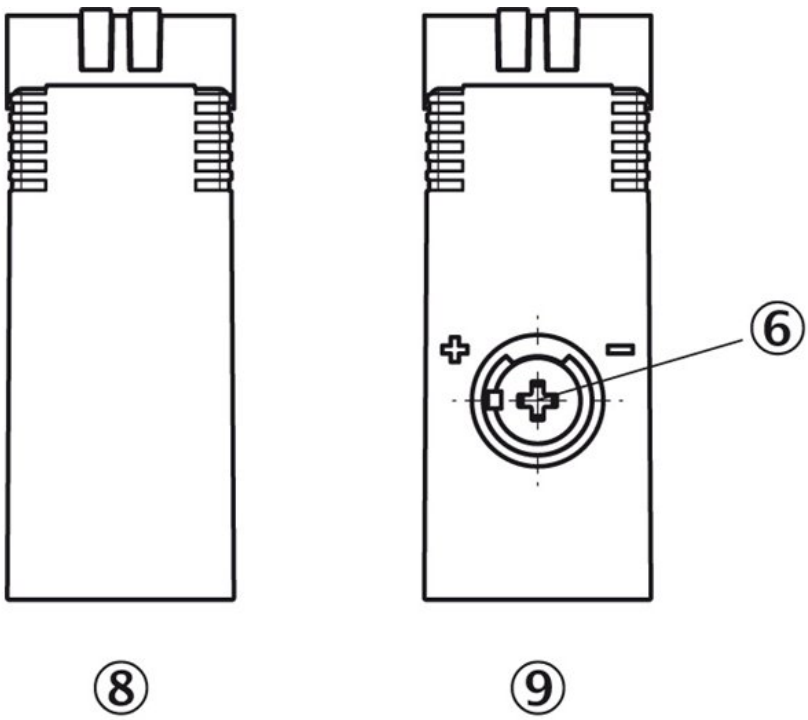
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Dimensional drawing



|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

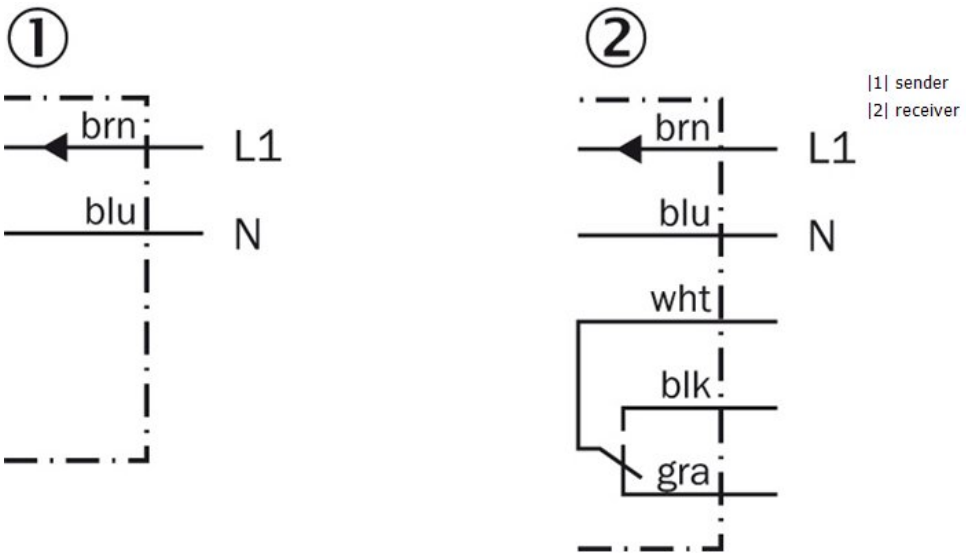
Adjustments possible



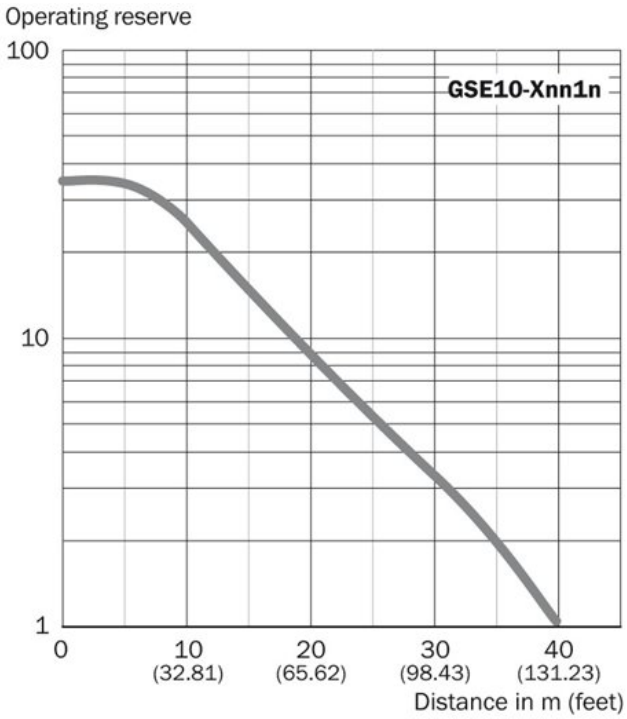
|6| Sensing range adjustment
|8| sender
|9| receiver

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Connection diagram

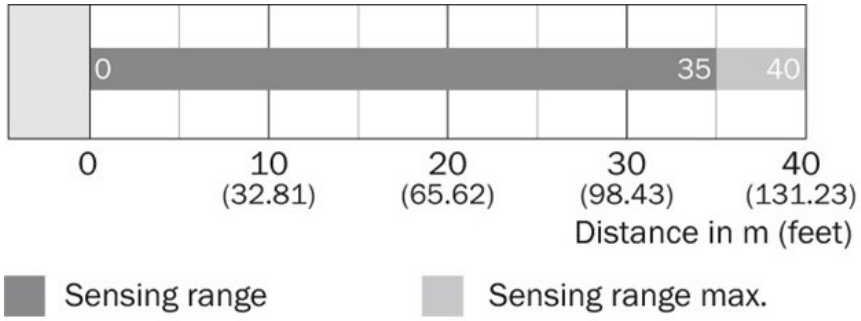


Characteristic curve

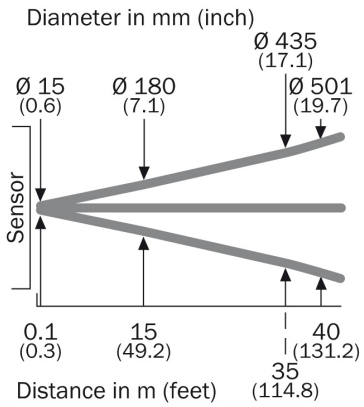


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Sensing range diagram



Light spot size



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