



Photoelectric sensors  
G10, Through-beam photoelectric sensor

GSE10-N1212



**Model Name** > [GSE10-N1212](#)  
**Part No.** > [1065905](#)



*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 39 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 <sup>1)</sup>
Wave length:	625 nm
Adjustment:	Potentiometer, 270 °
Light spot size (distance):	Ø 180 mm (15 m)

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C

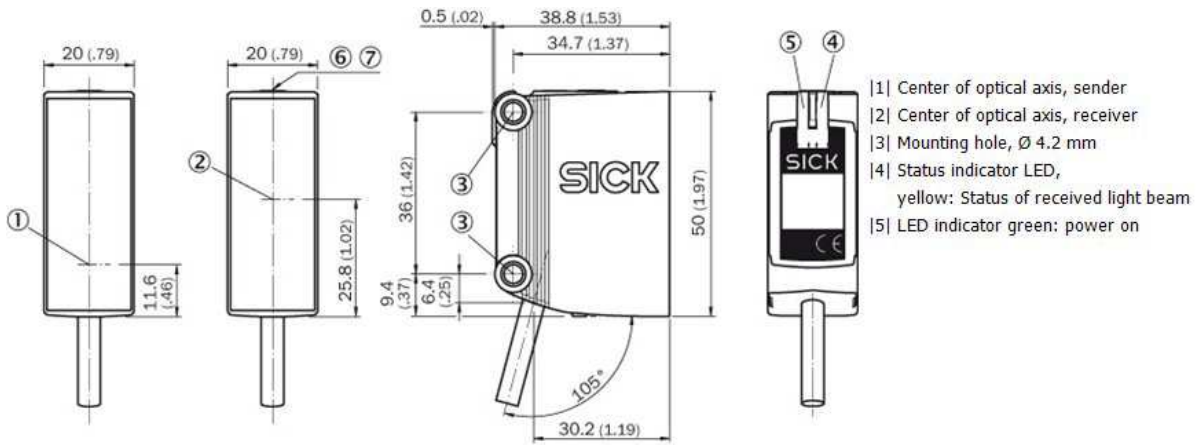
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 5 Vpp <sup>2)</sup>
Power consumption, sender:	≤ 15 mA

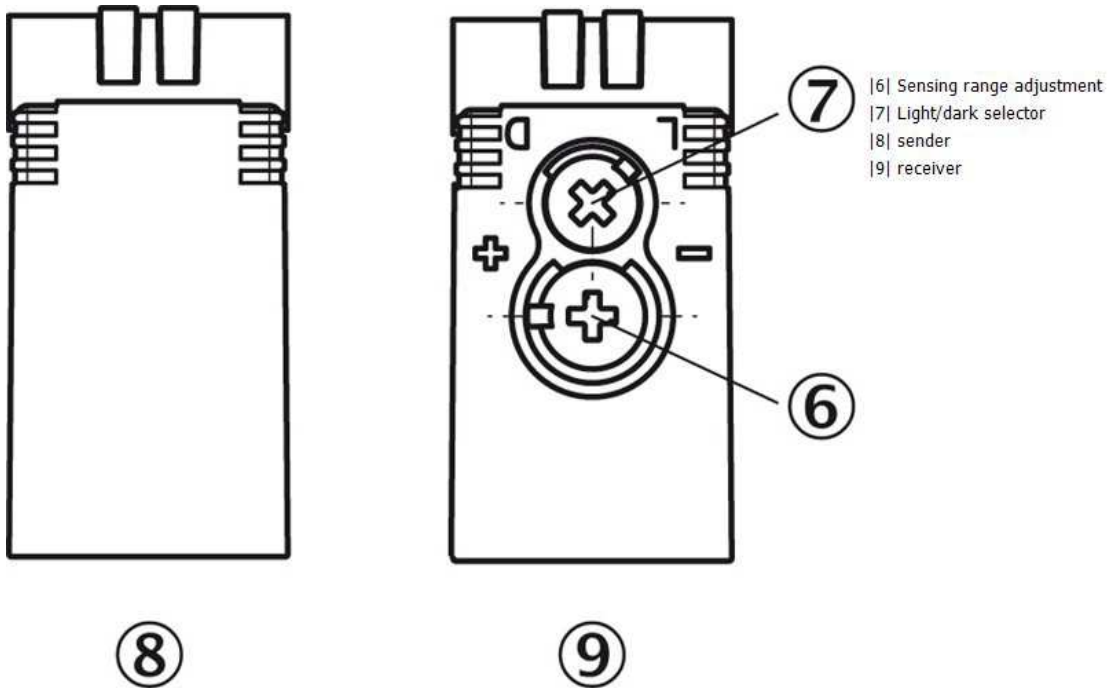
Output type:	NPN, open collector
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current I <sub>max</sub> .:	≤ 100 mA
Response time:	≤ 500 μs <sup>3)</sup>
Connection type:	Cable, 3-wire, 2 m <sup>4)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Circuit protection:::::	A, B, C, D <sup>5) 6) 7) 8)</sup>
Protection class:	III
Weight:	180 g
Polarisation filter:	-
Special device:	-
Enclosure rating:	IP 67
Items supplied:	Mounting bracket BEF-G10DC01 (2x)
EMC:	EN 60947-5-2
Test input:	-
Ambient temperature operation:	-30 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Further standards:	UL325 <sup>9)</sup>
Switching frequency max.:	1,000 Hz <sup>10)</sup>
Housing material:	PVC/PMMA, Plastic

<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A <sup>2)</sup> May not exceed or fall below U<sub>v</sub> tolerances <sup>3)</sup> Signal transit time with resistive load <sup>4)</sup> Do not bend below 0 °C <sup>5)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>6)</sup> B = inputs and output reverse-polarity protected <sup>7)</sup> C = interference suppression <sup>8)</sup> D = outputs overcurrent and short-circuit protected <sup>9)</sup> Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960). <sup>10)</sup> With light/dark ratio 1:1

## Dimensional drawing

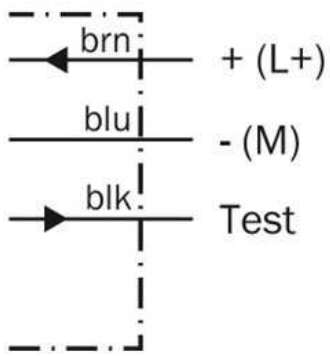


## Adjustments possible

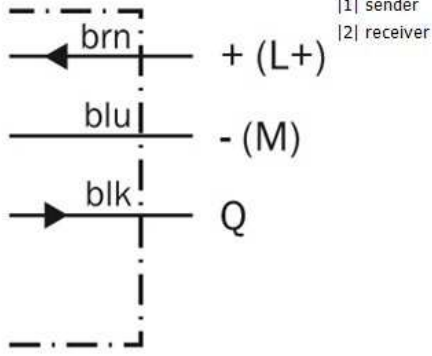


Connection diagram

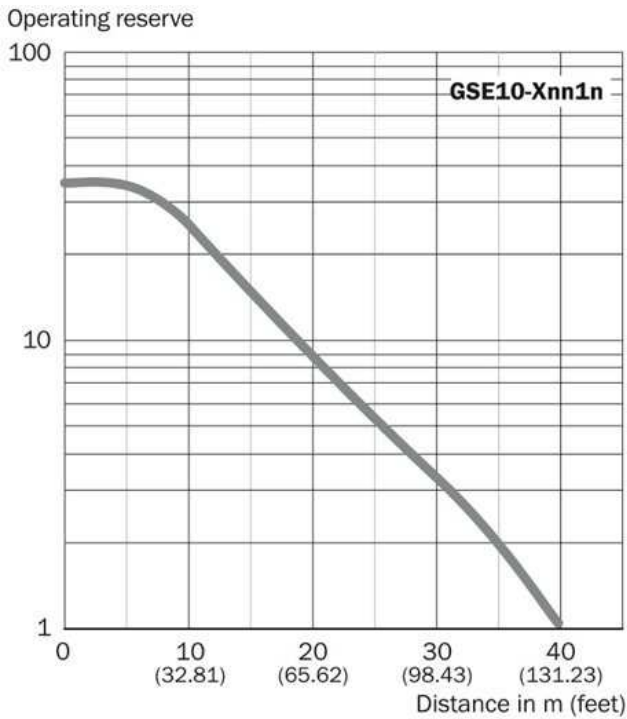
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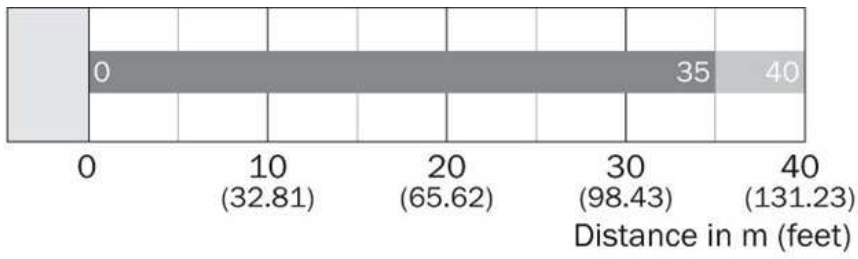
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Characteristic curve

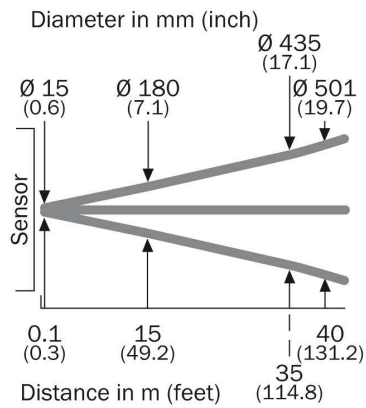


### Sensing range diagram



■ Sensing range      ■ Sensing range max.

### Light spot size



**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)