

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

GSE10-P4212



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G10, Through-beam photoelectric sensor

Model Name > GSE10-P4212
Part No. > 1065903



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 [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:	10 V DC ... 30 V DC [1)]
Ripple:	± 5 Vpp [2)]
Power consumption, sender:	≤ 15 mA

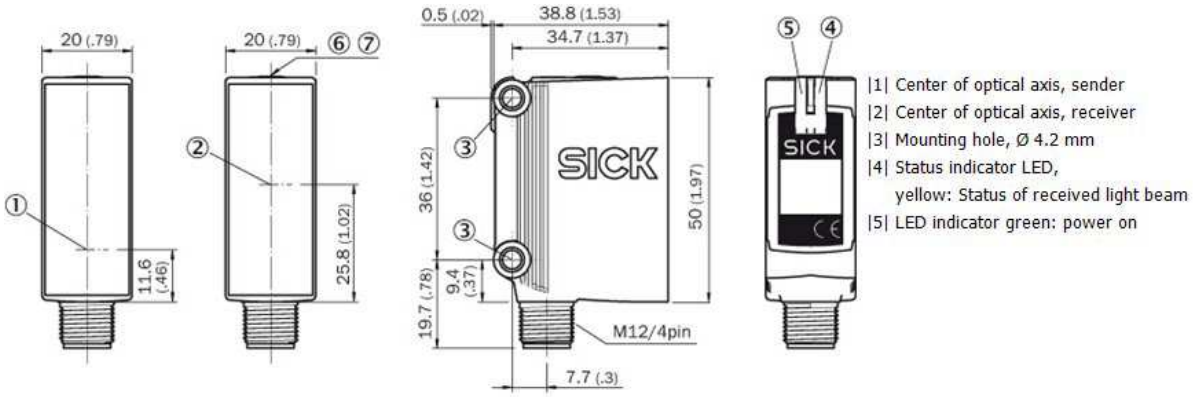
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Output type:	PNP
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current Imax.:	≤ 100 mA
Response time:	≤ 500 µs [3]
Connection type:	Connector M12, 4-pin
Circuit protection::::	A, B, C, D [4] [5] [6] [7]
Protection class:	III
Weight:	70 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 [8]
Switching frequency max.:	1,000 Hz [9]
Housing material:	PVC/PMMA, Plastic

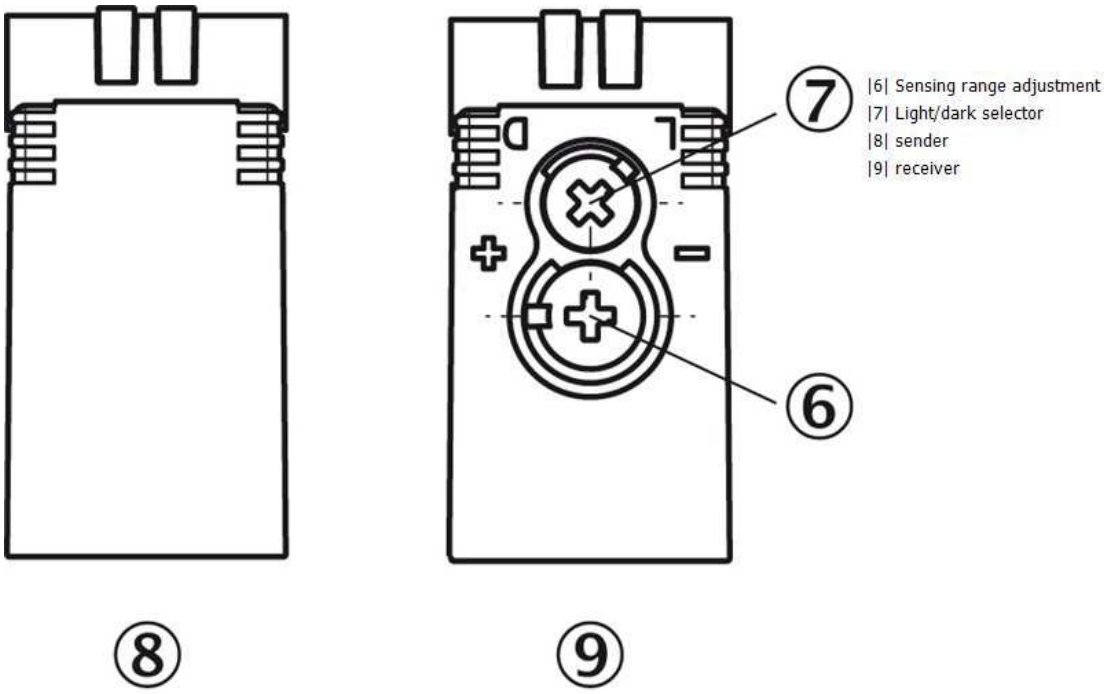
[1] Limit values when operated in short-circuit protected network: max. 8 A [2] May not exceed or fall below U_V tolerances [3] Signal transit time with resistive load [4] A = V_S connections reverse-polarity protected [5] B = inputs and output reverse-polarity protected [6] C = interference suppression [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

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Dimensional drawing

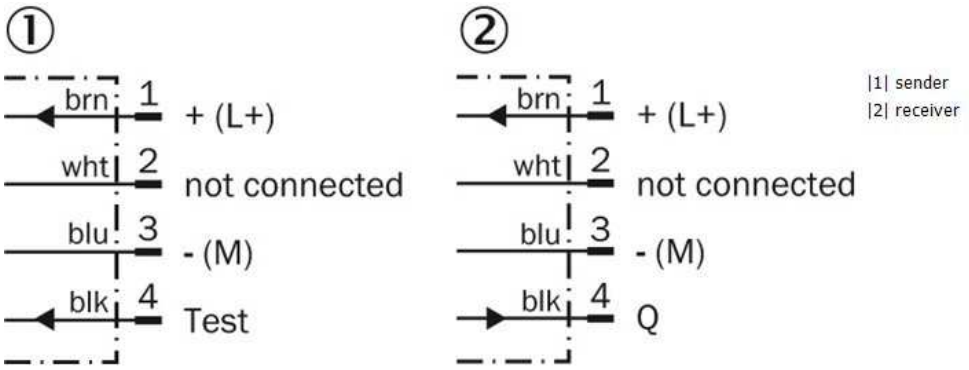


Adjustments possible



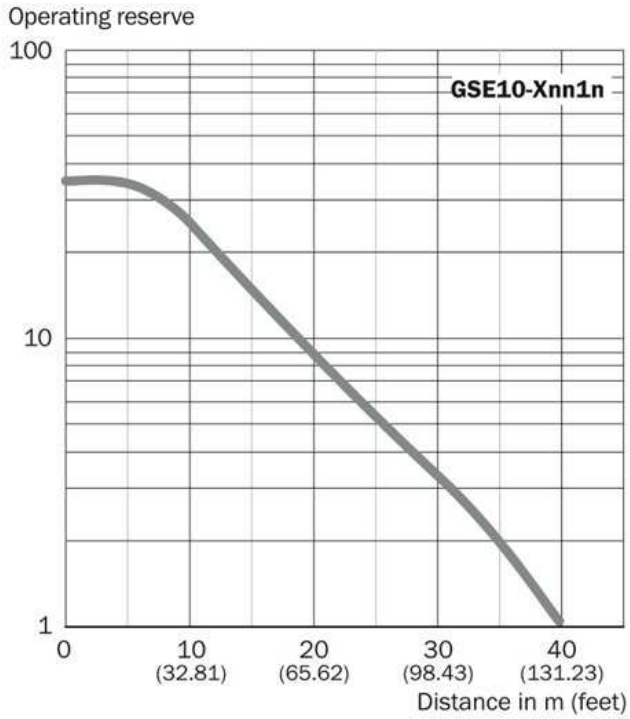
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Connection diagram



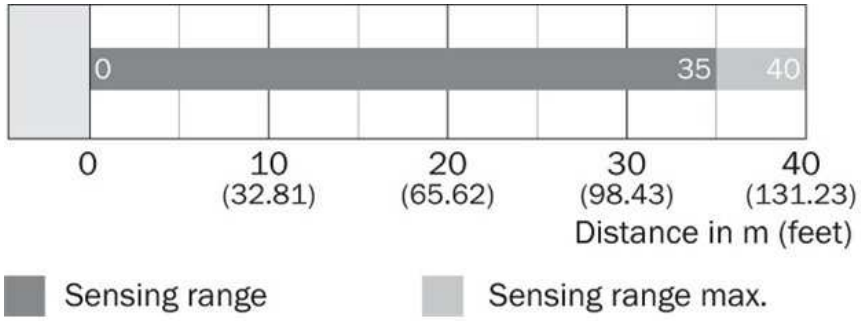
|1| sender
|2| receiver

Characteristic curve

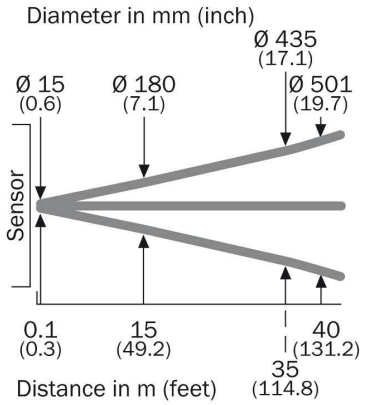


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Sensing range diagram



Light spot size



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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**

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