

ONLINE DATA SHEET
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Photoelectric sensors
G6, Photoelectric proximity sensor, Background suppression

GTB6-N1212



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G6, Photoelectric proximity sensor, Background suppression

Model Name > GTB6-N1212
Part No. > 1052445





Illustration may differ

At a glance

- Precise and reliable background suppression
- PinPoint LED for a bright, precise light spot
- Durable metal threaded inserts
- SICK ASIC technology - the result of decades of experience in photoelectric sensors
- Large, user-friendly potentiometer
- Large, bright indicator LEDs
- IP 67 enclosure rating

Your benefits

- Easy alignment and precise object detection due to a highly visible PinPoint LED
- Quick and easy mounting and high durability due to threaded metal inserts
- SICK ASIC technology provides high performance, excellent reliability and crosstalk immunity
- Easy to adjust due to large, user-friendly potentiometers
- Easy to monitor due to large, bright indicator LEDs
- Easy installation with SICK accessories

Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	12 mm x 31.5 mm x 21 mm
Housing design (light emission):	Rectangular
Sensing range max.:	5 mm ... 250 mm [1]
Sensing range:	35 mm ... 140 mm
Type of light:	Visible red light
Light source:	PinPoint LED [2]
Wave length:	650 nm
Adjustment:	Mechanical spindle, 5 turns
Light spot size (distance):	Ø 6 mm (100 mm)

[1] Object with 90 % reflectance (referred to standard white, DIN 5033) [2] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	± 10 % [2]
Power consumption:	≤ 30 mA [3]

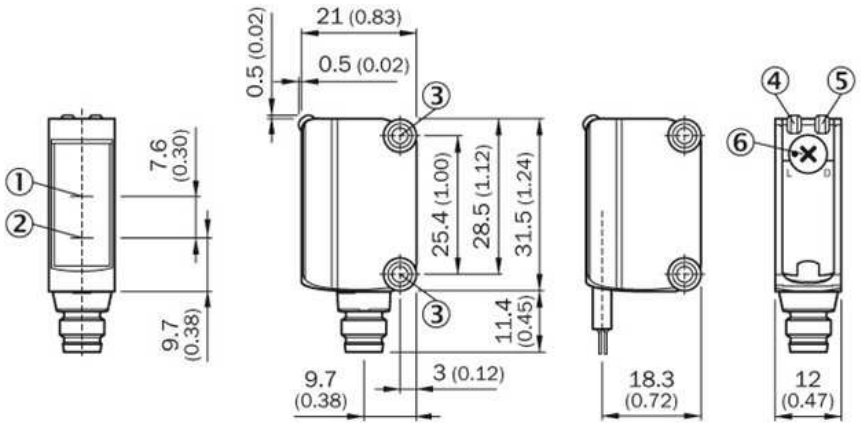
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Output type:	NPN, open collector
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current Imax.:	≤ 100 mA [4]
Response time:	< 625 µs [5]
Switching frequency:	1,000 Hz [6]
Connection type:	Cable, 3-wire, 2 m [7]
Cable material:	PVC
Conductor cross-section:	0.14 mm²
Circuit protection:::	A, B, D [8] [9] [10]
Protection class:	III
Weight:	60 g
Polarisation filter:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Stainless steel mounting bracket (1.4301/304) BEF-W100-A
Ambient operating temperature:	-25 °C ... +55 °C [11]
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Signal voltage NPN HIGH/LOW:	Approx. VS／≤ 3 V
Housing material:	ABS/PC, Plastic

[1] Limit values, operation in short-circuit protected network max. 8 A [2] May not exceed or fall short of V_S tolerances [3] Without load [4] At Vs > 24 V, I_A max = 50 mA [5] Signal transit time with resistive load [6] With light/dark ratio 1:1 [7] Do not bend below 0 °C [8] A = V_S connections reverse-polarity protected [9] B = inputs and output reverse-polarity protected [10] D = outputs overcurrent and short-circuit protected [11] Temperature stability after adjustment +/-10°C

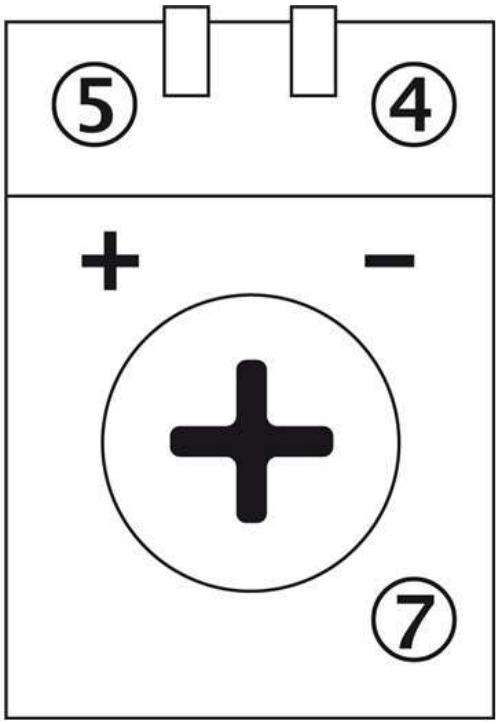
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Dimensional drawing



|1| Optical axis, receiver
|2| Optical axis, sender
|3| Mounting holes M3
|4| Status indicator LED green: power on
|5| Status indicator LED,
yellow: Status of received light beam
|6| Light/ dark rotary switch:L =
light switching, D = dark switching

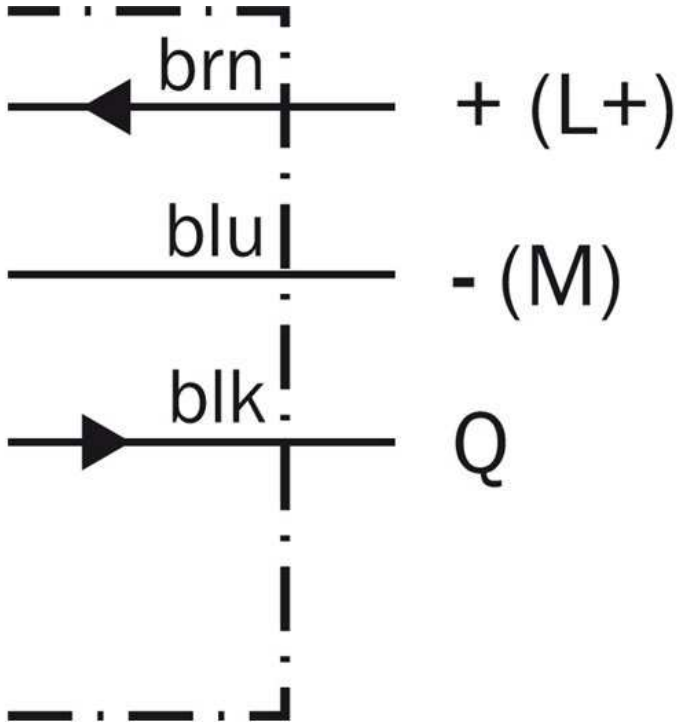
Adjustments possible



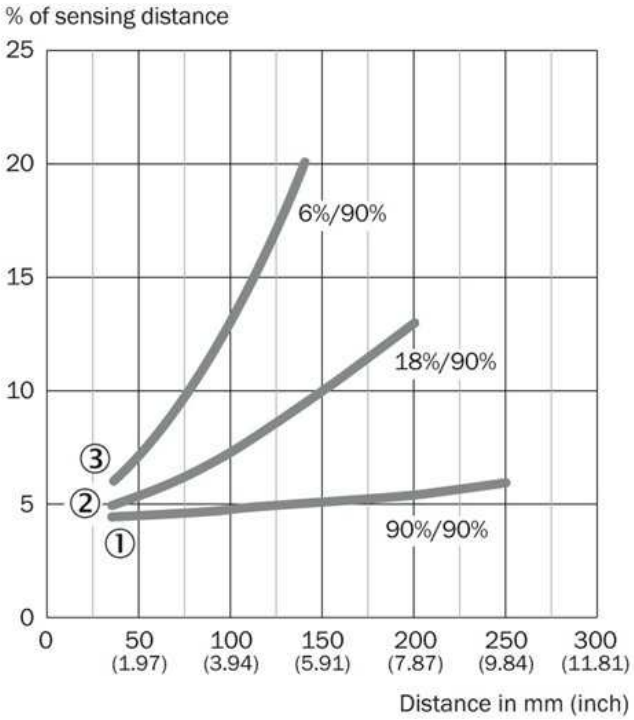
|4| Status indicator LED green: power on
|5| Status indicator LED,
yellow: Status of received light beam
|7| Sensitivity adjustment: poti

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Connection diagram



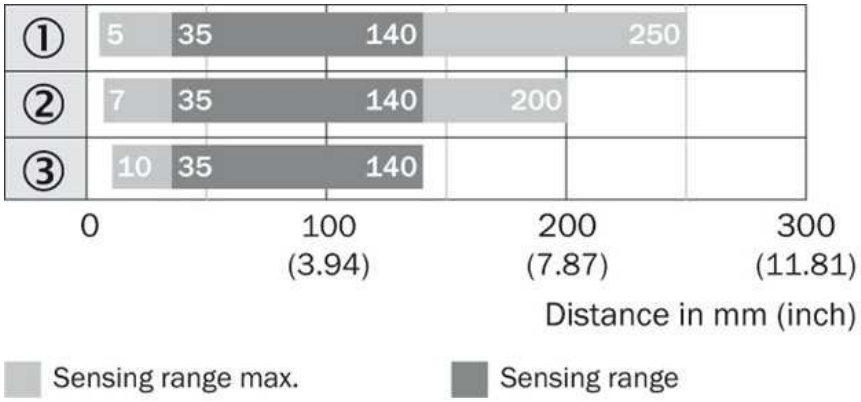
Characteristic curve



|1| Object with 90% remission
(referred to standard white DIN 5033)
|2| Sensing range on gray, 18 % remission
|3| Sensing range on black, 6 % remission

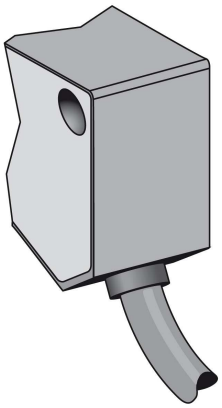
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Sensing range diagram

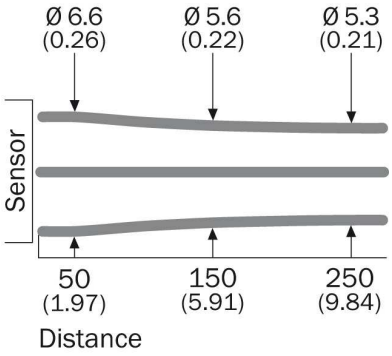


|1| Object with 90% remission
(referred to standard white DIN 5033)
|2| Sensing range on gray, 18 % remission
|3| Sensing range on black, 6 % remission

Connection type



Light spot size



All dimensions in mm (inch)

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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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