

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

GTB6-N4212



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Model Name > GTB6-N4212
Part No. > 1052443





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

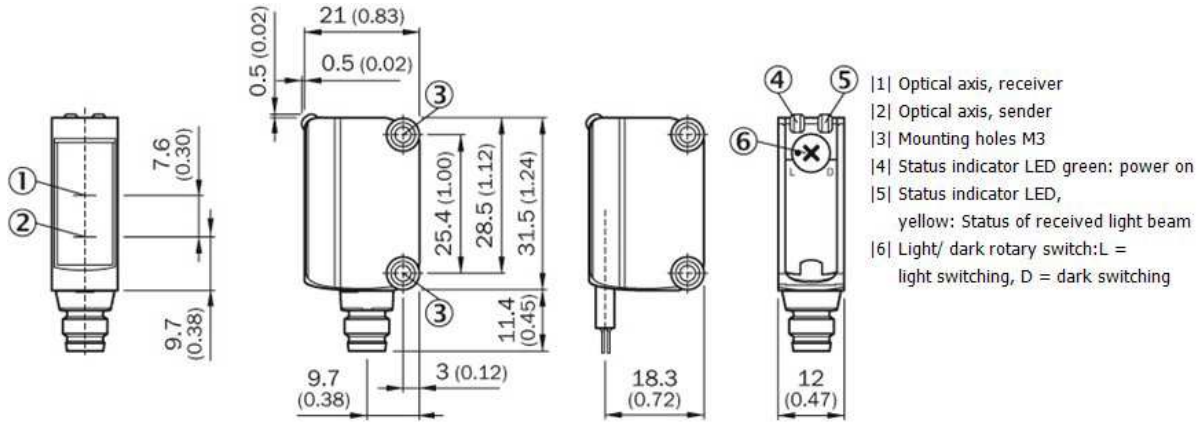
Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	± 10 % [2]
Power consumption:	≤ 30 mA [3]

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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:	Connector M8, 4-pin
Circuit protection:::	A, B, D [7] [8] [9]
Protection class:	III
Weight:	20 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 [10]
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

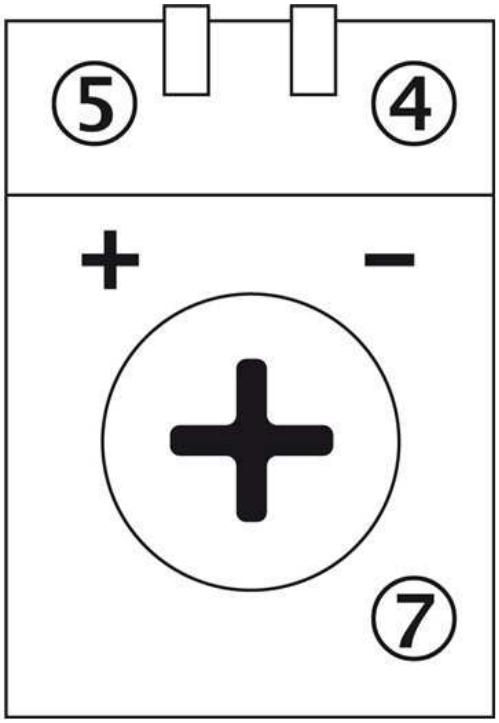
[1] Limit values, operation in short-circuit protected network max. 8 A [2] May not exceed or fall short of V_S tolerances [3] Without load [4] At Vs > 24 V, I_A max = 50 mA
[5] Signal transit time with resistive load [6] With light/dark ratio 1:1 [7] A = V_S connections reverse-polarity protected [8]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

Dimensional drawing



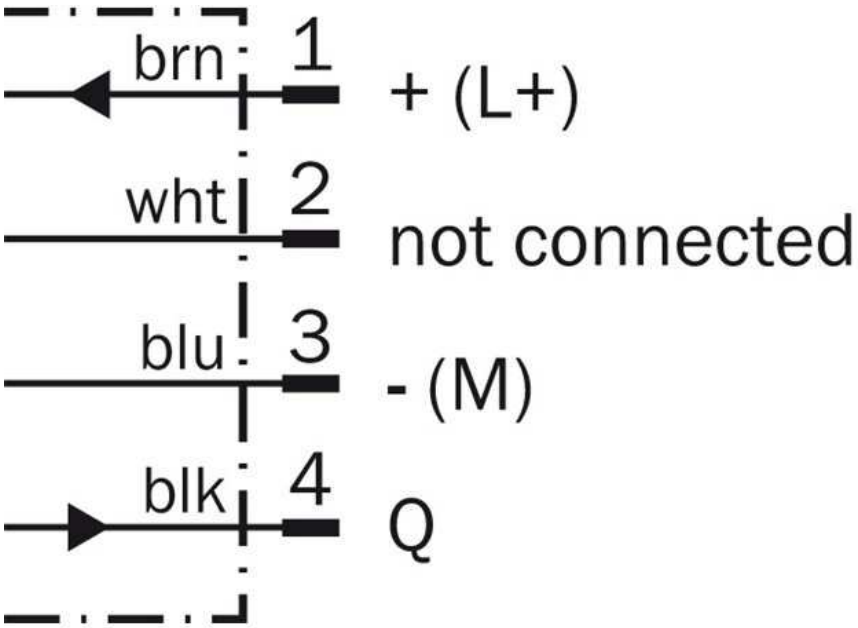
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Adjustments possible



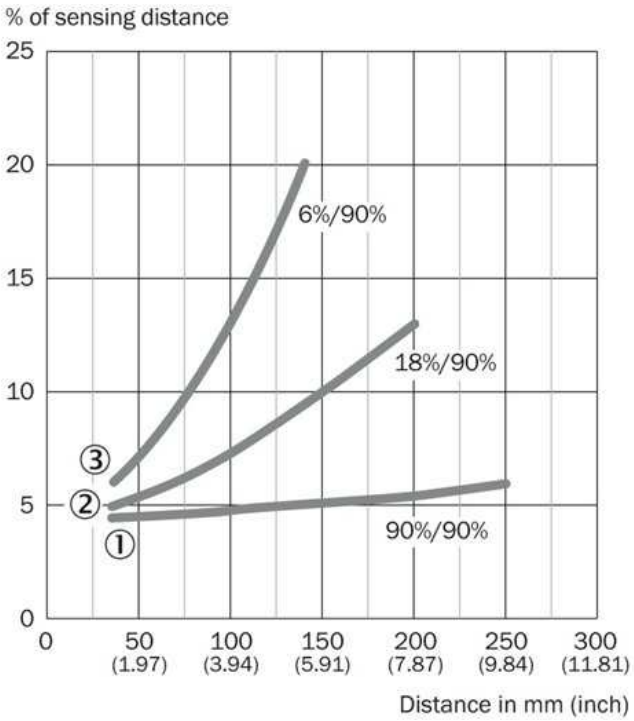
|4| Status indicator LED green: power on
|5| Status indicator LED,
yellow: Status of received light beam
|7| Sensitivity adjustment: poti

Connection diagram



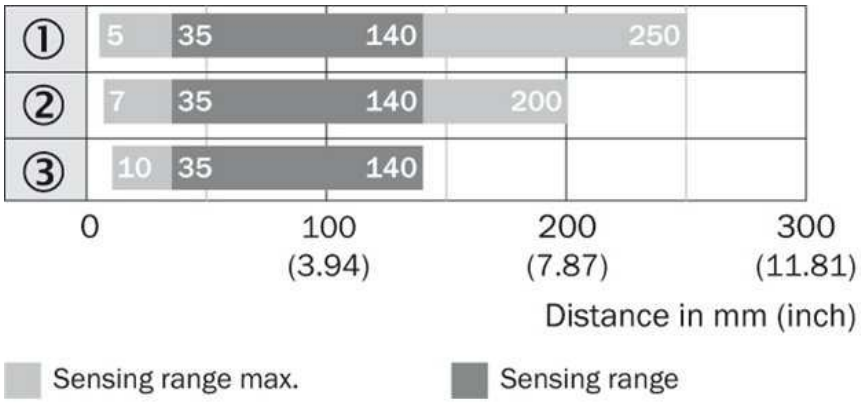
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Characteristic curve



|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

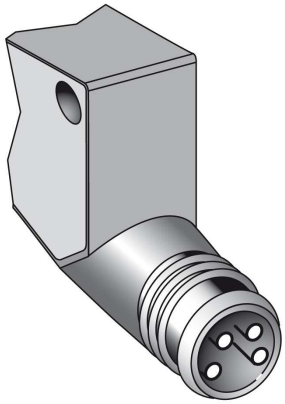
Sensing range diagram



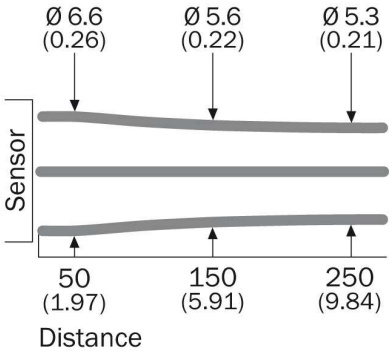
|1| Object with 90% remission (referred to standard white DIN 5033)
|2| Sensing range on gray, 18 % remission
|3| Sensing range on black, 6 % remission

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Connection type



Light spot size



All dimensions in mm (inch)

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