



Photoelectric sensors  
G6, Photoelectric proximity sensor, Background  
suppression

GTB6-N4212



**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 <sup>1)</sup>
Sensing range:	35 mm ... 140 mm
Type of light:	Visible red light
Light source:	PinPoint LED <sup>2)</sup>
Wave length:	650 nm
Adjustment:	Potentiometer, 5-turn
Light spot size (distance):	Ø 6 mm (100 mm)

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

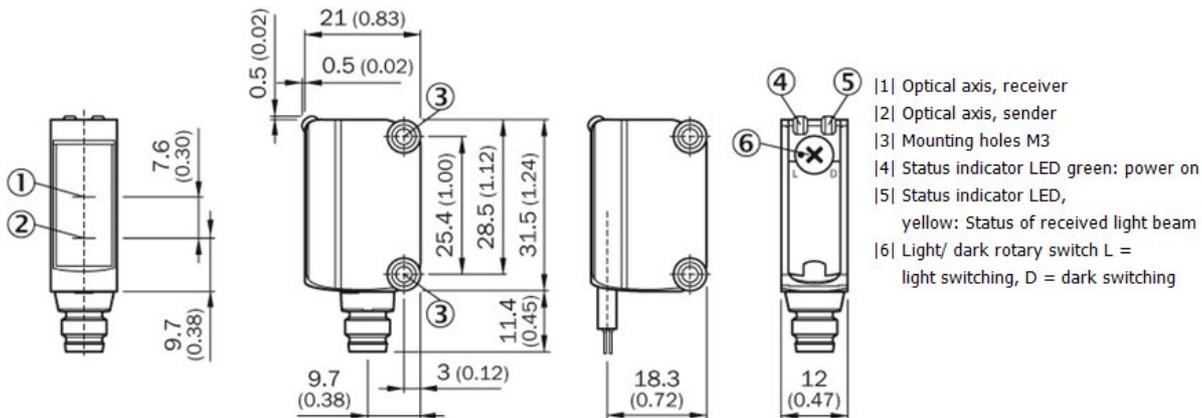
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 10 % <sup>2)</sup>
Power consumption:	≤ 30 mA <sup>3)</sup>

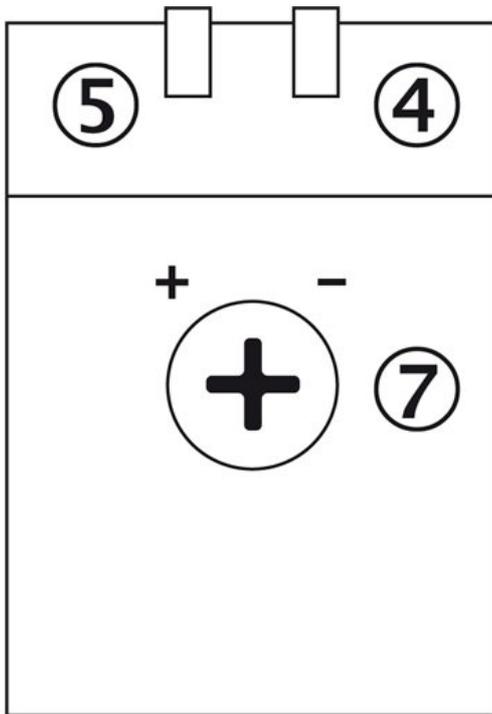
Output type:	NPN, open collector
Switching mode:	Light/dark-switching
Switching mode selector:	Selectable via light/dark selector
Signal voltage NPN HIGH/LOW:	Approx. $V_S / \leq 3 \text{ V}$
Output current $I_{max.}$ :	$\leq 100 \text{ mA}$ <sup>4)</sup>
Response time:	$< 625 \mu\text{s}$ <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, D <sup>7) 8) 9)</sup>
Protection class:	III
Weight:	20 g
Polarisation filter:	-
AS-Interface-Chip:	-
Housing material:	ABS/PC, Plastic
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
Ambient storage temperature:	-40 °C ... 70 °C

1) Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> At  $V_S > 24 \text{ V}$ ,  $I_A \text{ max} = 50 \text{ mA}$   
<sup>5)</sup> Signal transit time with resistive load <sup>6)</sup> With light/dark ratio 1:1 <sup>7)</sup>  $A = V_S$  connections reverse-polarity protected <sup>8)</sup> B = inputs and output reverse-polarity protected  
<sup>9)</sup> D = outputs overcurrent and short-circuit protected

### Dimensional drawing

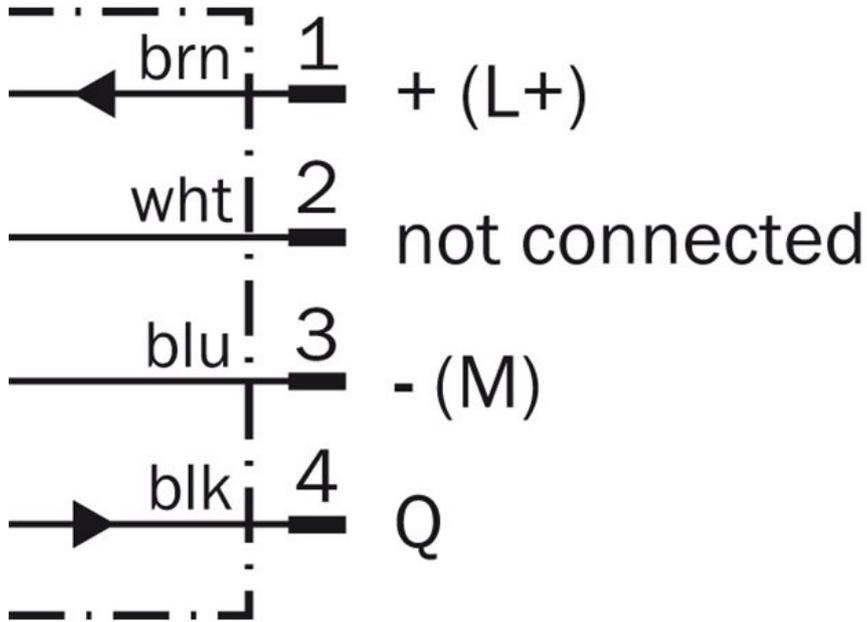


## Adjustments possible

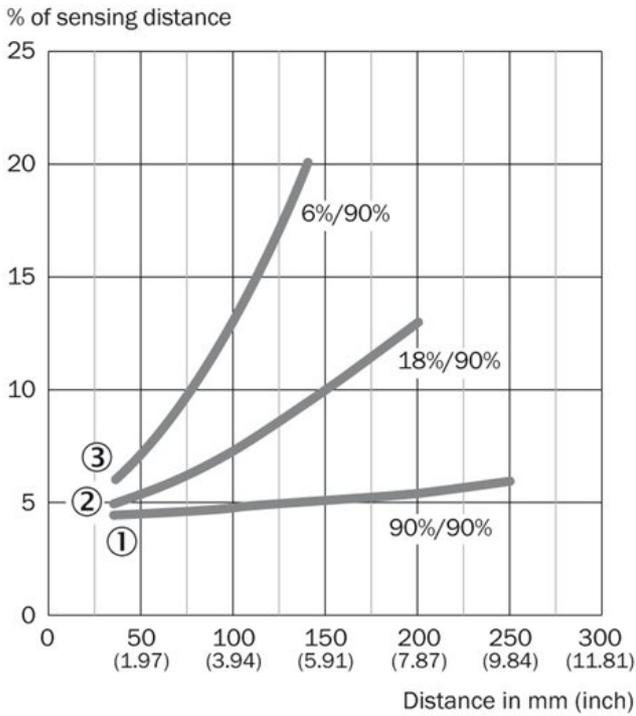


- |4| Status indicator LED green: power on
- |5| Status indicator LED,  
yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

## Connection diagram

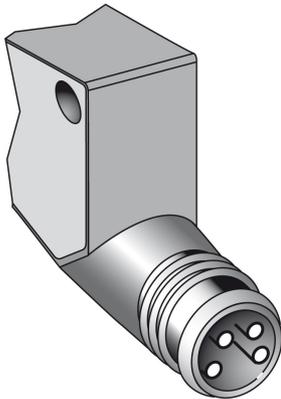


## Characteristic curve

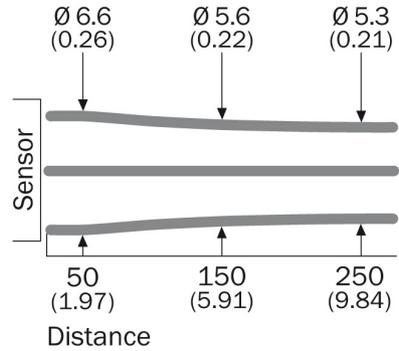


- [1] Sensing range on white, 90 % remission
- [2] Sensing range on grey, 18 % remission
- [3] Sensing range on black, 6 % remission

## Connection type

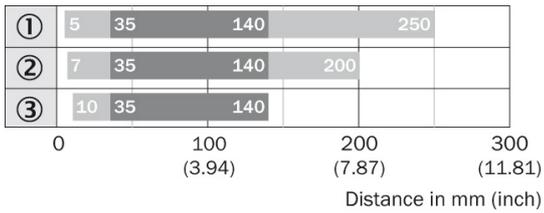


## Light spot size



All dimensions in mm (inch)

## Sensing range diagram



■ Typ. max. sensing distance    ■ Operating range

- ① Sensing distance on white, 90 % remission
- ② Sensing distance on grey, 18 % remission
- ③ Sensing distance on black, 6 % remission

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