



Photoelectric sensors  
G6, Photoelectric proximity sensor, Background  
suppression

GTB6-N1212



**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 <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:	Mechanical spindle, 5 turns
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

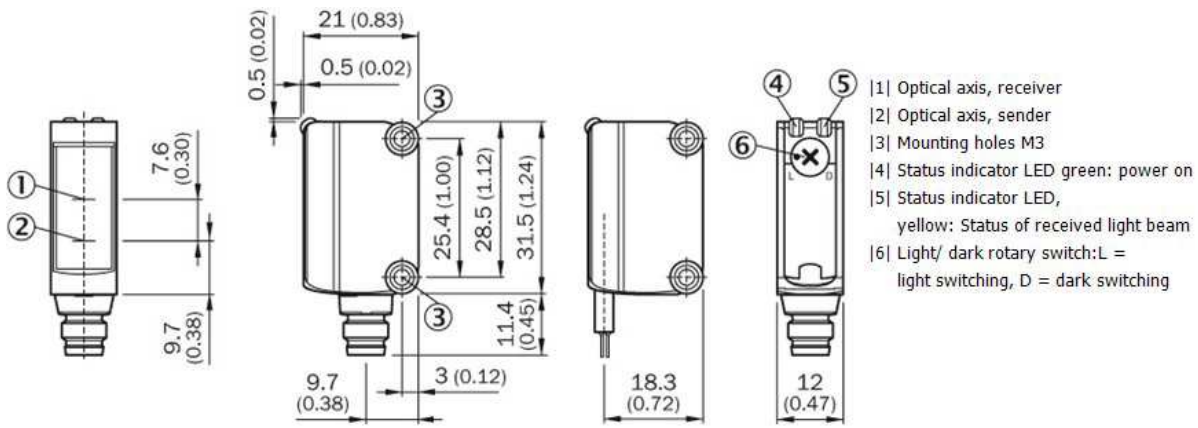
**Mechanics/electronics**

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

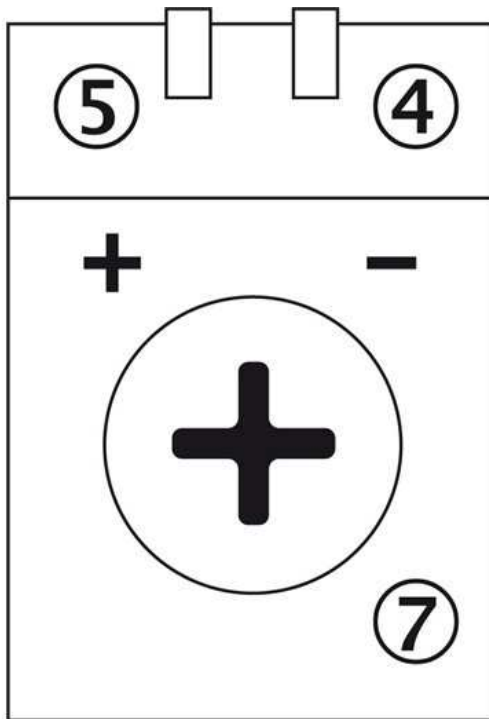
Output type:	NPN, open collector
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current I <sub>max</sub> :	≤ 100 mA <sup>4)</sup>
Response time:	< 625 μs <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Connection type:	Cable, 3-wire, 2 m <sup>7)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Circuit protection:::	A, B, D <sup>8) 9) 10)</sup>
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 <sup>11)</sup>
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Signal voltage NPN HIGH/LOW:	Approx. V <sub>S</sub> /≤ 3 V
Housing material:	ABS/PC, Plastic

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

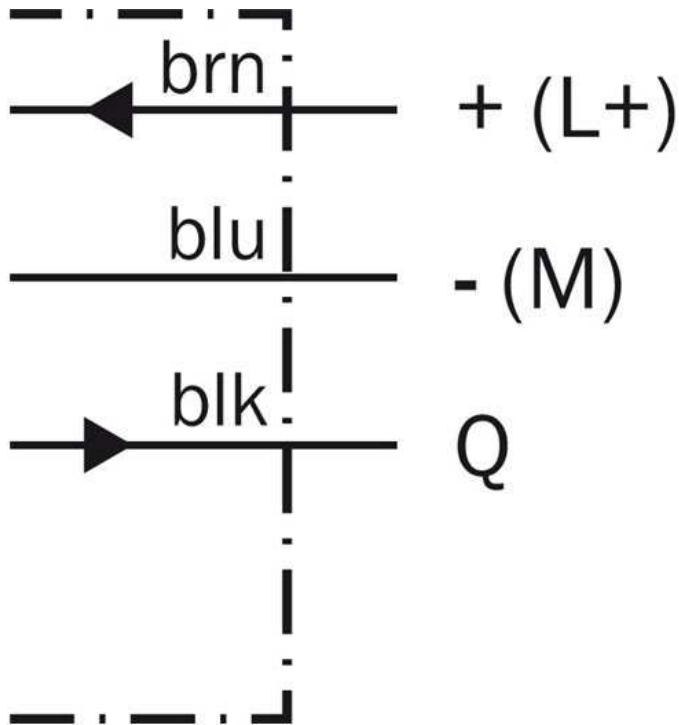
## Dimensional drawing



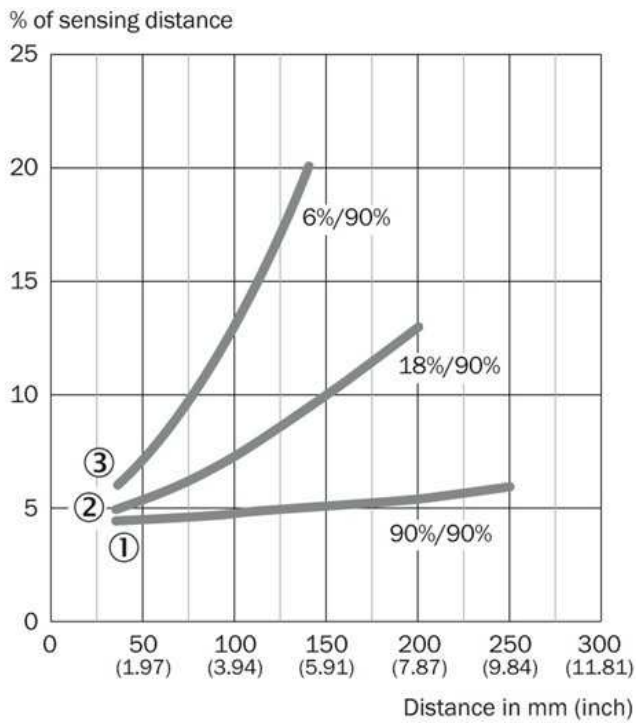
## Adjustments possible



Connection diagram

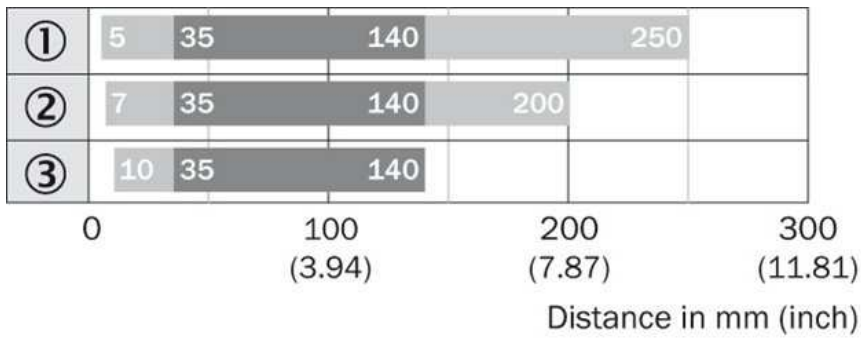


Characteristic curve



- [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

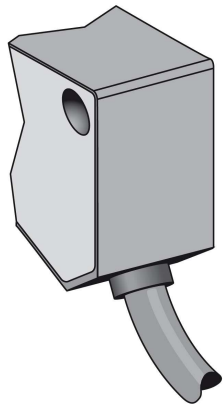
### Sensing range diagram



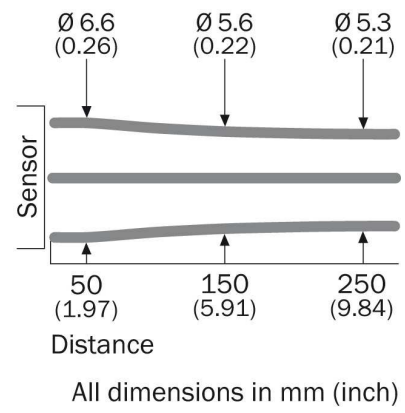
- |1| Object with 90% remission  
 (referred to standard white DIN 5033)
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on black, 6 % remission

■ Sensing range max.                      ■ Sensing range

### Connection type



### Light spot size



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