



Photoelectric sensors
G6, Photoelectric proximity sensor, Background
suppression

GTB6-N1211



Model Name > [GTB6-N1211](#)
Part No. > [1052441](#)



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⁾
Adjustment:	Potentiometer, 5-turn
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

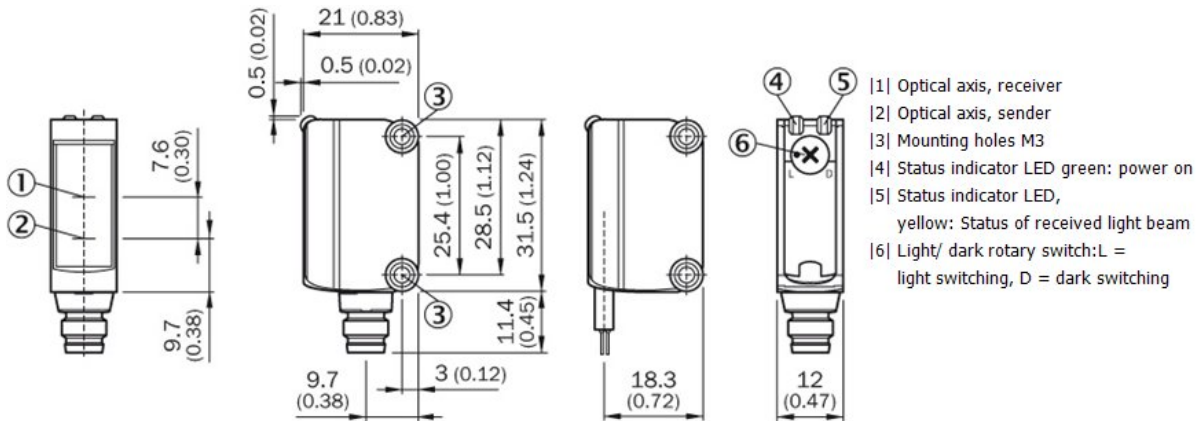
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 % ²⁾
Current consumption:	≤ 30 mA ³⁾
Switching output:	NPN, open collector

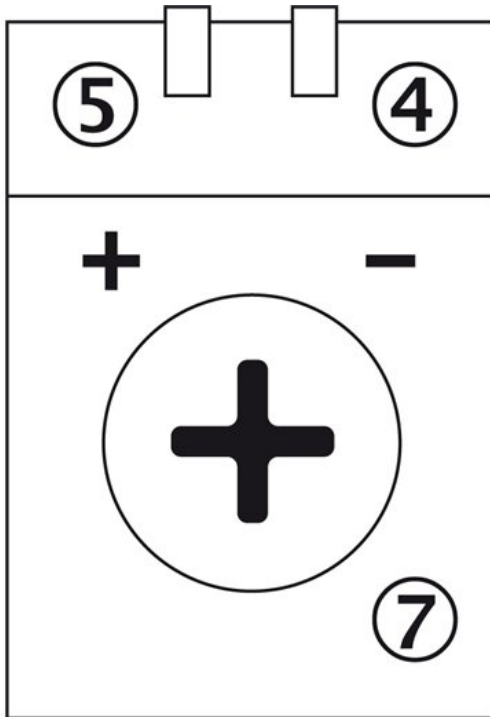
Switching mode:	Light/dark-switching
Switching mode selector:	Selectable via light/dark selector
Output current I _{max} ..:	≤ 100 mA ⁴⁾
Response time:	< 625 μs ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Connection type:	Cable, 3-wire, 2 m ⁷⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Circuit protection:::	A, B, D ^{8) 9) 10)}
Protection class:	III
Weight:	60 g
Housing material:	ABS/PC, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-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

- 1) Limit values, operation in short-circuit protected network max. 8 A²⁾ May not exceed or fall short of V_S tolerances³⁾ Without load⁴⁾ At V_S > 24 V, I_{max} = 50 mA^A
5) Signal transit time with resistive load⁶⁾ With light/dark ratio 1:1⁷⁾ Do not bend below 0 °C⁸⁾ A = V_S connections reverse-polarity protected⁹⁾ B = inputs and output reverse-polarity protected¹⁰⁾ D = outputs overcurrent and short-circuit protected¹¹⁾ Temperature stability after adjustment +/-10 °C

Dimensional drawing

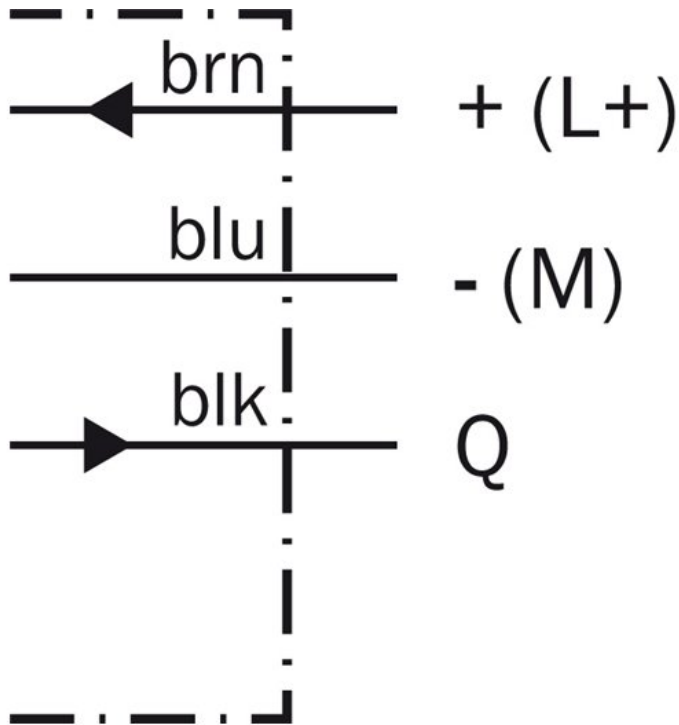


Adjustments possible

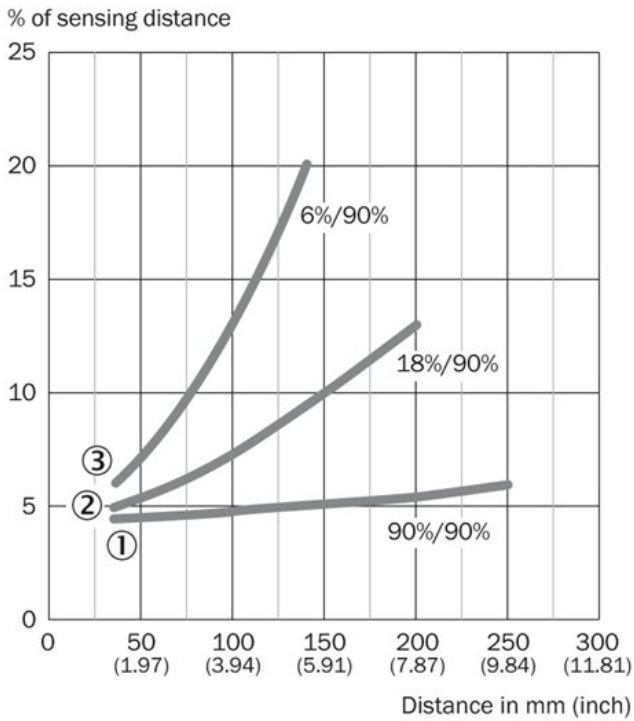


- |4| Status indicator LED green: power on
- |5| Status indicator LED,
yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

Connection diagram

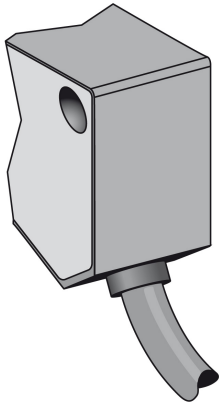


Characteristic curve

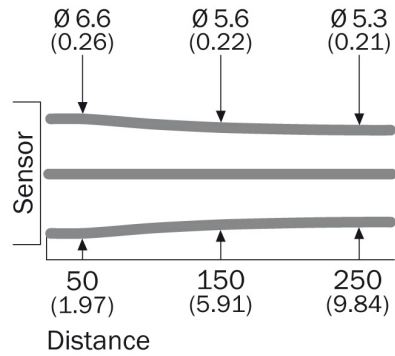


- ① Object with 90% remission
(referred to standard white DIN 5033)
- ② Sensing range on gray, 18% remission
- ③ Sensing range on black, 6% remission

Connection type

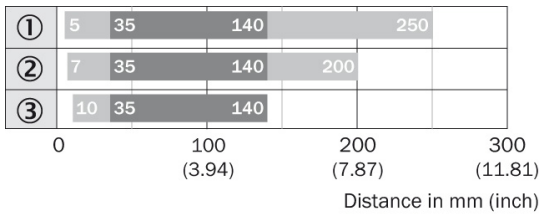


Light spot size



All dimensions in mm (inch)

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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