



Photoelectric sensors G6, Photoelectric proximity sensor, Background suppression

GTB6-P4212



Model Name > [GTB6-P4212](#)
Part No. > [1052442](#)



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:	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

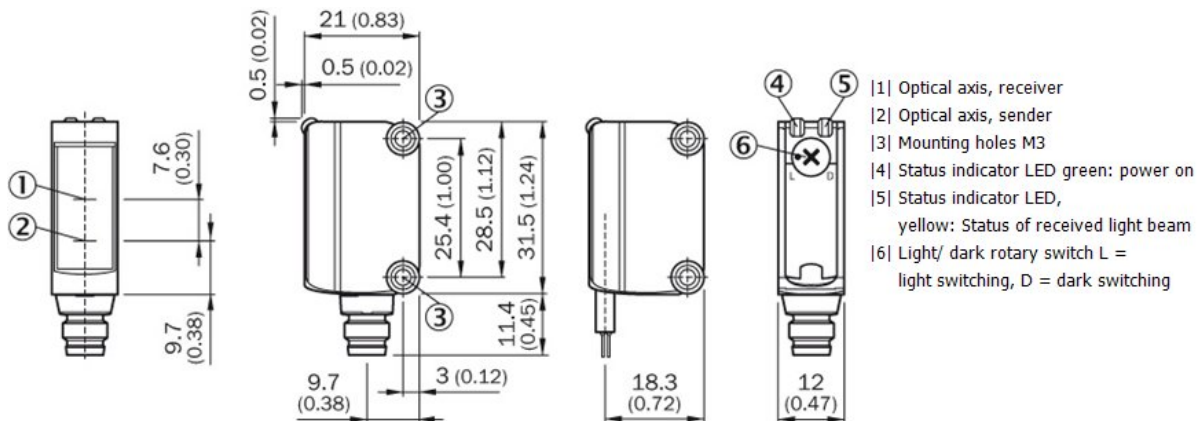
Mechanics/electronics

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

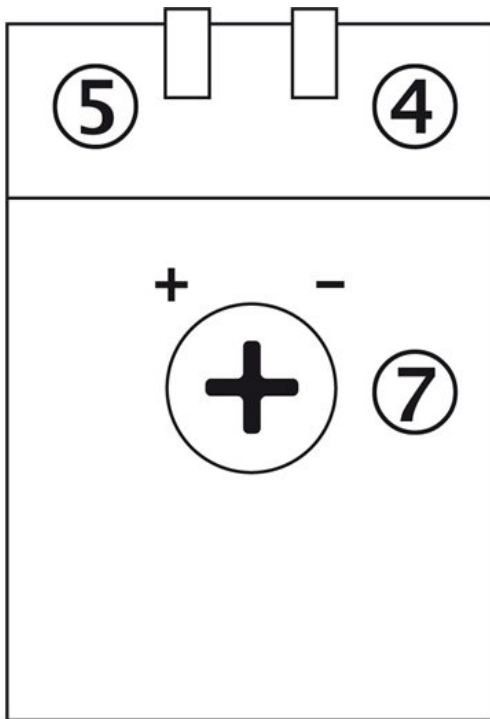
Output type:	PNP
Switching mode:	Light/dark-switching
Switching mode selector:	Selectable via light/dark selector
Signal voltage PNP HIGH/LOW:	VS - (≤ 3 V)/approx. 0 V
Signal voltage NPN HIGH/LOW:	Approx. VS/ ≤ 3 V
Output current I _{max} :	≤ 100 mA ⁴⁾
Response time:	< 625 μ s ⁵⁾
Switching frequency:	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:	-
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 2) May not exceed or fall short of V_S tolerances 3) Without load 4) At $V_S > 24$ V, $I_{A \text{ max}} = 50$ 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

Dimensional drawing

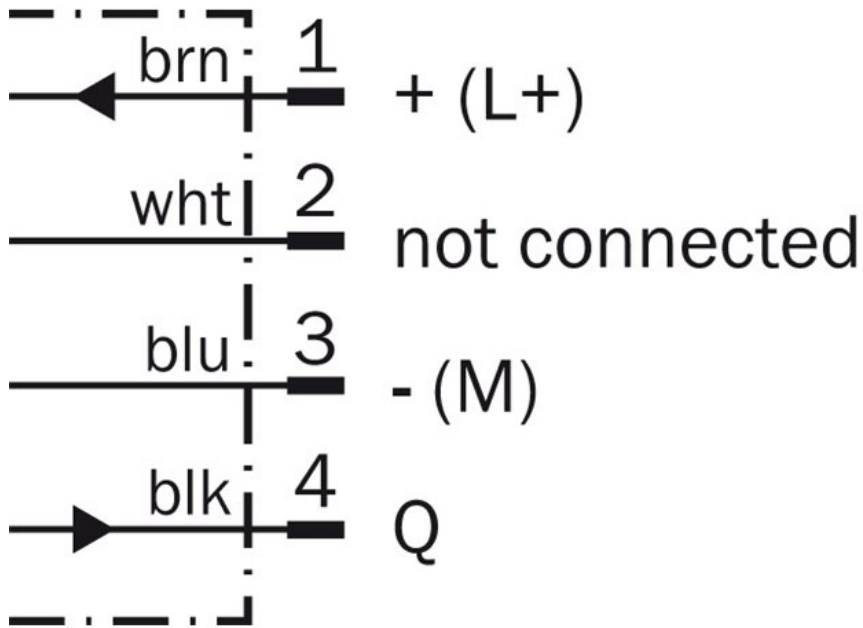


Adjustments possible

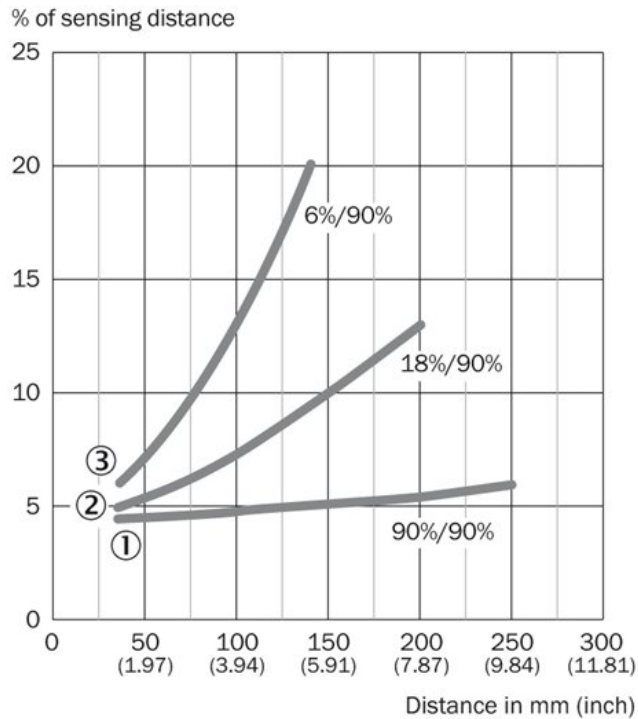


- |4| Status indicator LED green: power on
- |5| Status indicator LED,
yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

Connection diagram

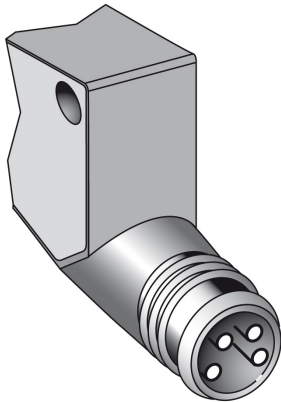


Characteristic curve

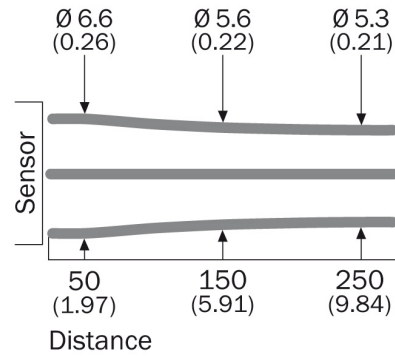


- [1] Sensing range on white, 90 % remission
- [2] Sensing range on grey, 18 % remission
- [3] Sensing range on black, 6 % remission

Connection type

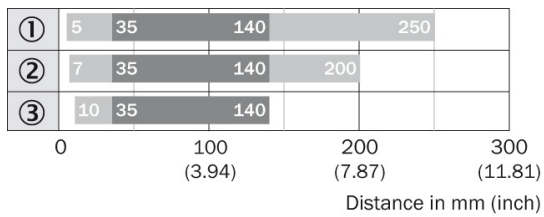


Light spot size



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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