



Photoelectric sensors
G6, Photoelectric proximity sensor, energetic

GTE6-P4212



Model Name > GTE6-P4212
Part No. > 1051781



Illustration may differ

At a glance

- 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, energetic
Dimensions (W x H x D):	12 mm x 31.5 mm x 21 mm
Housing design (light emission):	Rectangular
Sensing range max.:	≤ 300 mm ¹⁾
Sensing range:	≤ 250 mm
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Adjustment:	Potentiometer, 5-turn
Light spot size (distance):	Ø 7 mm (90 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

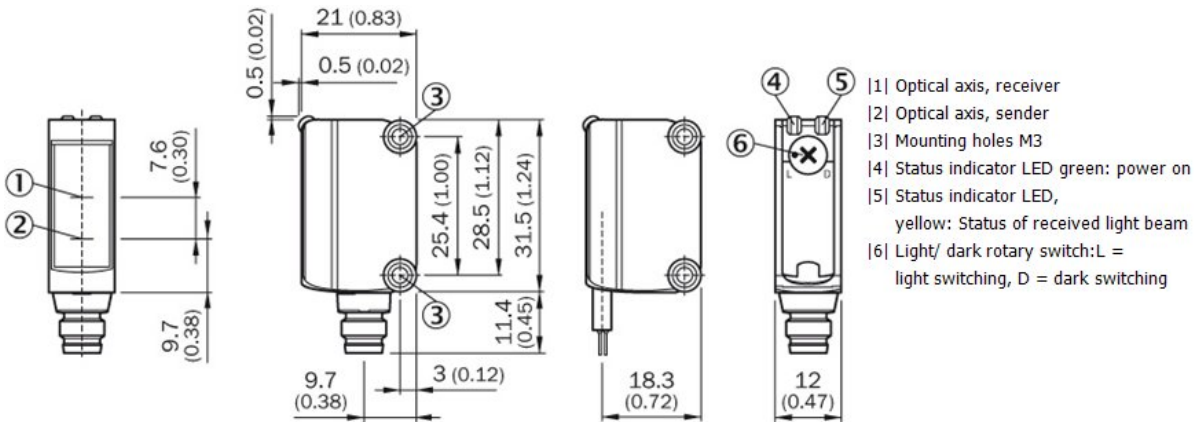
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 % ²⁾
Current consumption:	≤ 30 mA ³⁾
Output type:	PNP
Switching mode:	Light/dark-switching

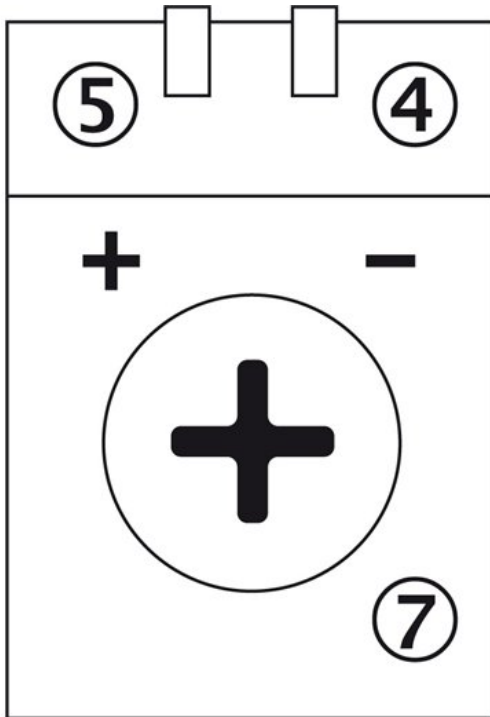
Switching mode selector:	Selectable via light/dark selector
Output current I _{max} :::	≤ 100 mA ⁴⁾
Response time:	< 1,250 ms ⁵⁾
Switching frequency:	500 Hz ⁶⁾
Connection type:	Connector M8, 4-pin
Circuit protection:::	A, B, D ^{7) 8) 9)}
Protection class:	III
Weight:	20 g
Housing material:	ABS/PC, Plastic
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 ¹⁰⁾
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Signal voltage PNP HIGH/LOW:	VS - (≤3 V)/approx. 0 V
Signal voltage NPN HIGH/LOW:	Approx. VS/≤ 3 V

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 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

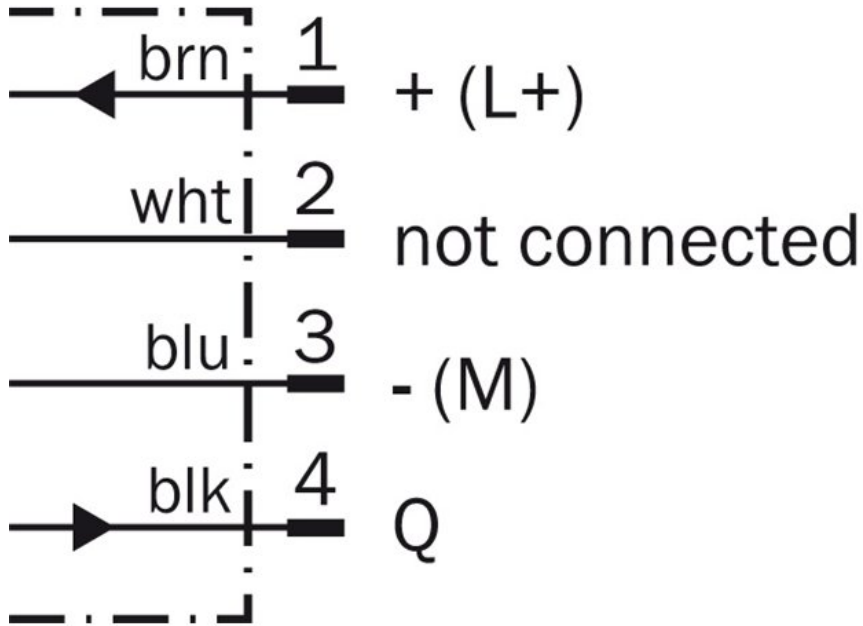


Adjustments possible

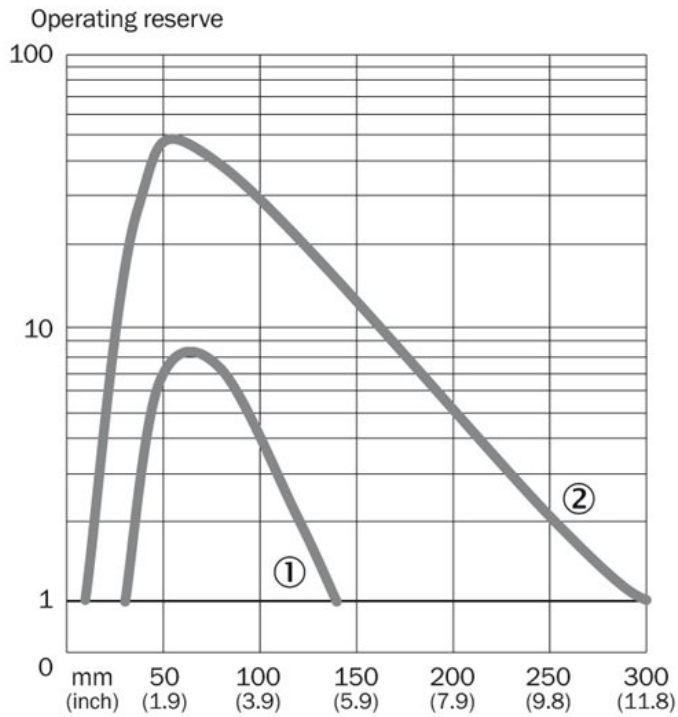


- |4| Status indicator LED green: power on
- |5| Status indicator LED,
yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

Connection diagram

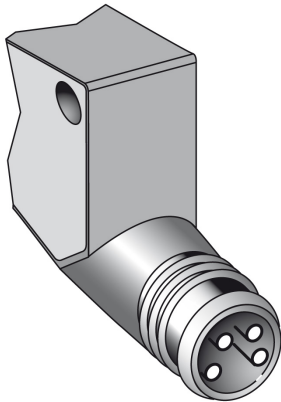


Characteristic curve

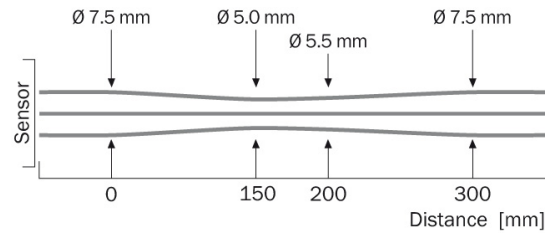


- |1| Sensing range on gray, 18 % remission
- |2| Sensing range on white, 90 % remission

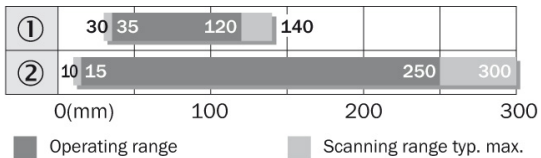
Connection type



Light spot size



Sensing range diagram



- ① Scanning distance on black, 18 % remission
- ② Scanning distance on white, 90 % remission

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