



Photoelectric sensors
G6, Through-beam photoelectric sensor

GSE6-N4212



Model Name > [GSE6-N4212](#)
Part No. > [1061397](#)



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
- adjustable receiver sensitivity via 270° turn potentiometer (depending on type)
- 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 and excellent reliability
- 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:	Through-beam photoelectric sensor
Dimensions (W x H x D):	12 mm x 31.5 mm x 21 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 15 m
Sensing range:	0 m ... 10 m
Type of light:	Visible red light
Light source:	PinPoint LED ¹⁾
Wave length:	650 nm
Adjustment:	Potentiometer, 270 °
Light spot size (distance):	Ø 375 mm (12 m)

¹⁾ Average service life of 100,000 h at T_A = +25 °C

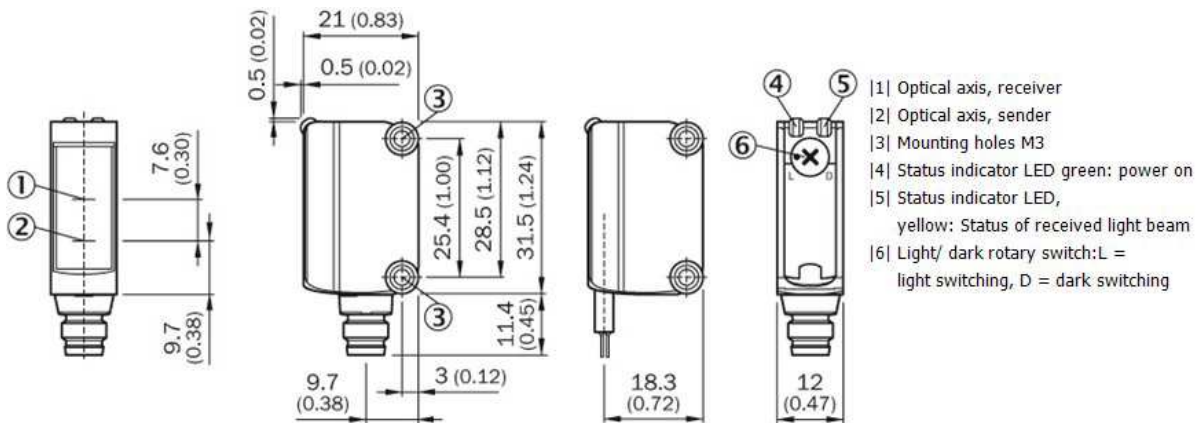
Mechanics/electronics

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

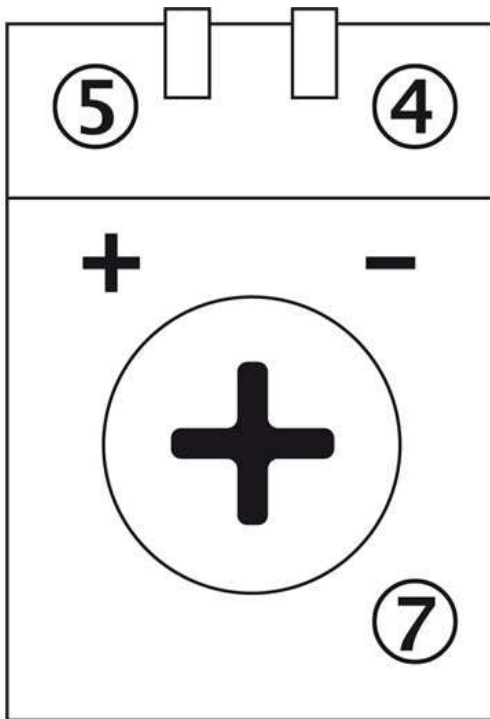
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current I _{max} ..:	≤ 100 mA ⁴⁾
Response time:	< 500 μs ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Connection type:	Connector M8, 4-pin
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Circuit protection:::	A, B, D ^{7) 8) 9)}
Protection class:	III
Weight:	170 g
Polarisation filter:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Stainless steel mounting bracket (1.4301/304) BEF-W100-A
Ambient temperature operation:	-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
Housing material:	ABS/PC, Plastic

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



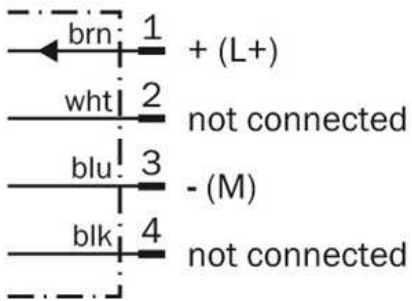
Adjustments possible



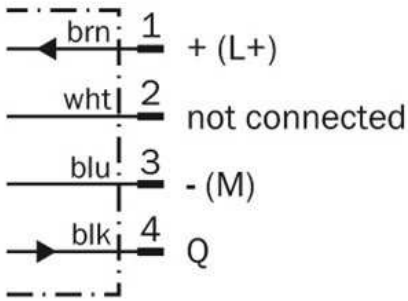
- |4| Status indicator LED green: power on
- |5| Status indicator LED,
yellow: Status of received light beam
- |7| Sensitivity adjustment: poti

Connection diagram

①

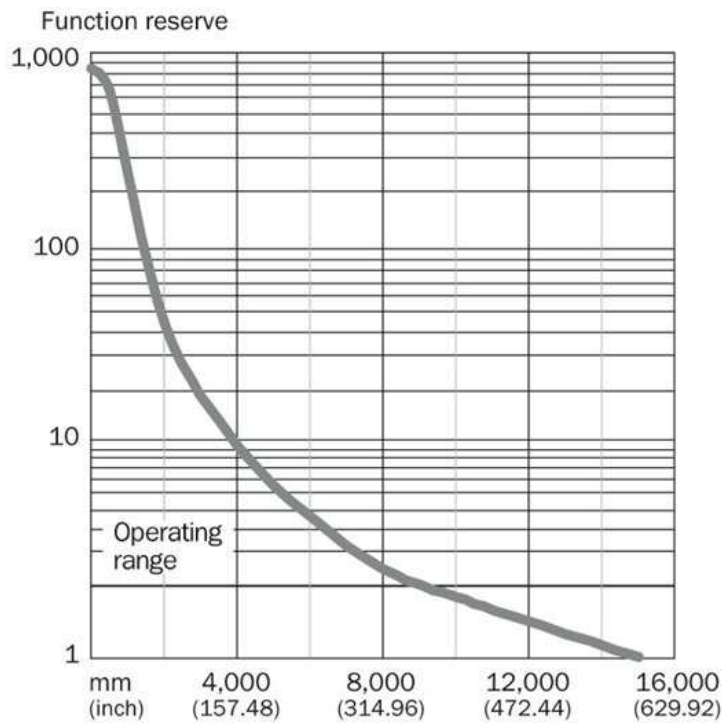


②

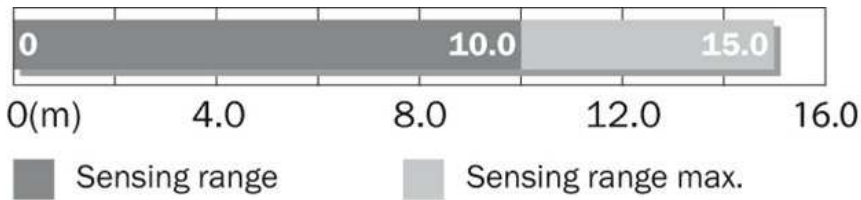


- |1| sender
- |2| receiver

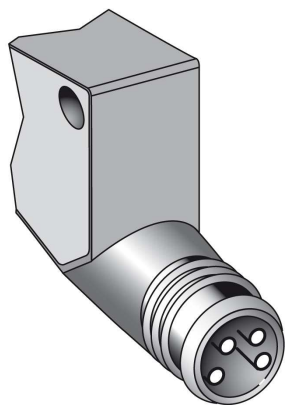
Characteristic curve



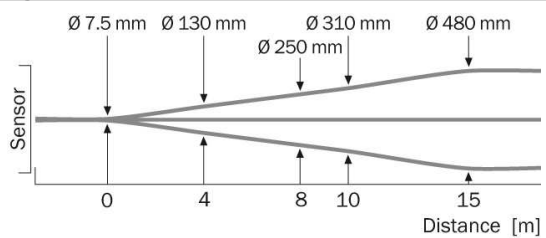
Sensing range diagram



Connection type



Light spot size



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