



Photoelectric sensors
G10, Through-beam photoelectric sensor

GSE10-P4212



Type > [GSE10-P4212](#)
Part No. > [1065903](#)



Illustration may differ

At a glance

- Long sensing ranges: up to 40 m
- PinPoint LED with bright and precise light spot
- With or without sensitivity adjustment
- 10 V DC ... 30 V DC or 24 V AC/DC ... 240 V AC/DC power supply with PNP/NPN or relay output
- Small housing design
- Rugged sensor housing with metal-reinforced holes for assembly
- Weatherproof housing: ideal for outdoor applications

Your benefits

- Long sensing ranges for maximum operating reserves
- Universal DC or AC/DC power supply for even greater application flexibility
- Highly reliable and durable despite optical interference or mechanical loads
- Wide range of accessories simplifies sensor integration: aids for assembly and connectors
- Long service life even when used in outdoor applications thanks to rugged weatherproof housing



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	20 mm x 50 mm x 39 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 40 m
Sensing range:	0 m ... 35 m
Type of light:	Visible red light
Light source:	PinPoint LED ¹⁾
Wave length:	625 nm
Adjustment:	Potentiometer, 270°
Light spot size (distance):	Ø 180 mm (15 m)

¹⁾ Average service life: 100,000 h at T_U = +25 °C

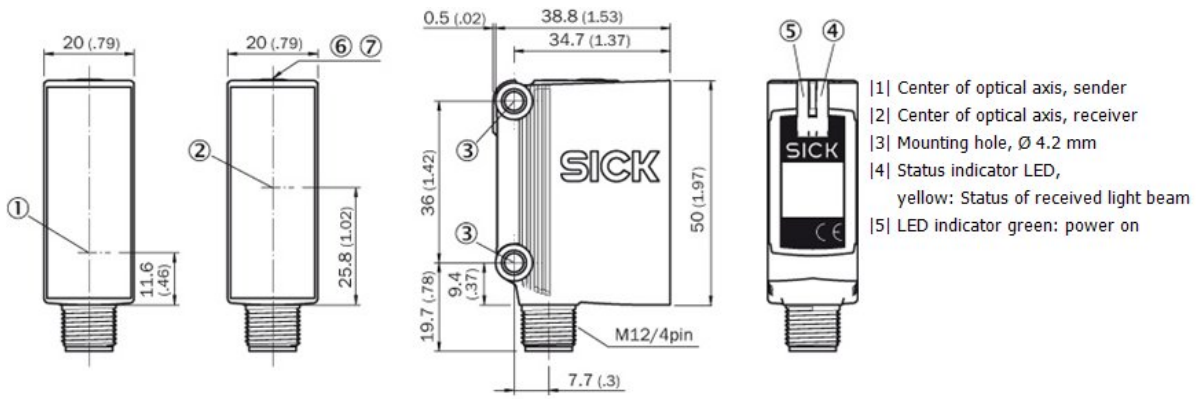
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 5 Vpp ²⁾
Power consumption, sender:	≤ 15 mA

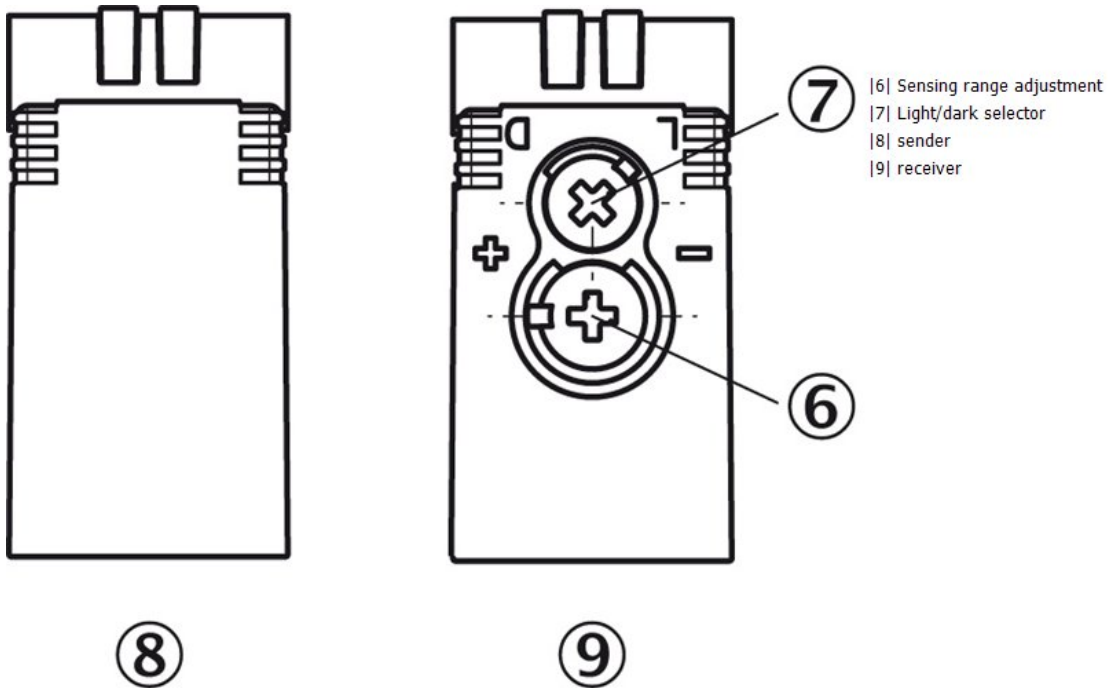
Output type:	PNP
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current I _{max.} :	≤ 100 mA
Response time:	≤ 500 μs ³⁾
Connection type:	M12, 4-pin male connector
Circuit protection:::	A, B, C, D ^{4) 5) 6) 7)}
Protection class:	III
Weight:	70 g
Polarisation filter:	-
Special device:	-
Enclosure rating:	IP 67
Items supplied:	Mounting bracket BEF-G10DC01 (2x)
EMC:	EN 60947-5-2
Test input:	-
Ambient operating temperature:	-30 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Further standards:	UL325 ⁸⁾
Switching frequency max.:	1,000 Hz ⁹⁾
Housing material:	PVC/PMMA, Plastic

1) Limit values when operated in short-circuit protected network: max. 8 A²⁾ May not exceed or fall below U_v tolerances³⁾ Signal transit time with resistive load⁴⁾ A = V_S connections reverse-polarity protected⁵⁾ B = inputs and output reverse-polarity protected⁶⁾ C = interference suppression⁷⁾ D = outputs overcurrent and short-circuit protected⁸⁾ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).⁹⁾ With light/dark ratio 1:1

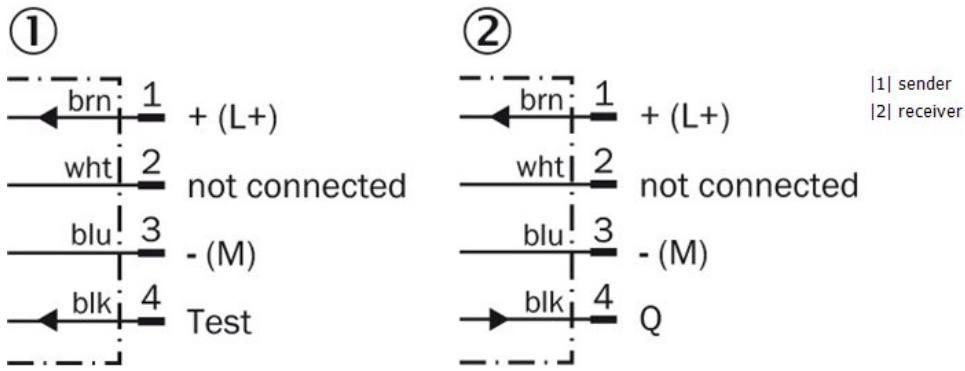
Dimensional drawing



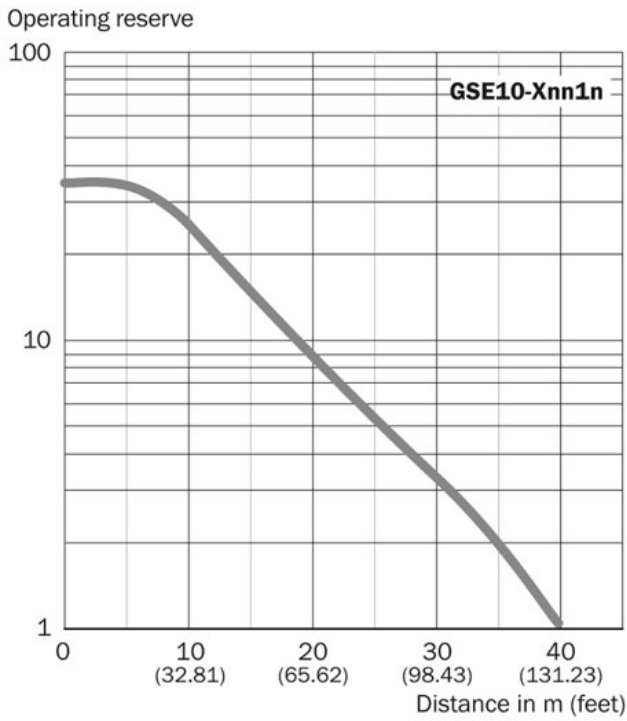
Adjustments possible



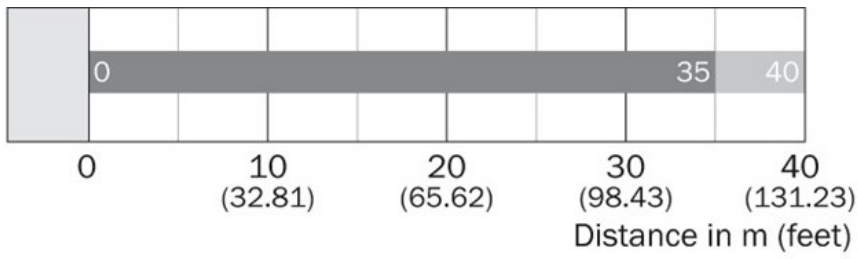
Connection diagram



Characteristic curve

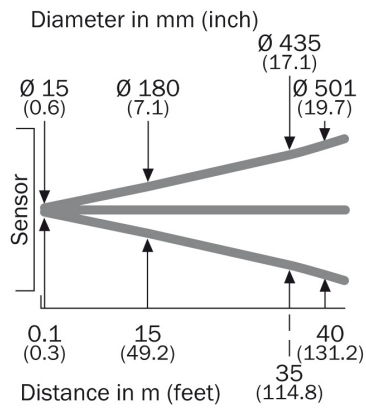


Sensing range diagram



■ Sensing range ■ Sensing range max.

Light spot size



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