



## Photoelectric sensors G10, Through-beam photoelectric sensor

GSE10-P4112



**Model Name** > GSE10-P4112  
**Part No.** > 1065900



*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 <sup>1)</sup>
Wave length:	625 nm
Light spot size (distance):	Ø 180 mm (15 m)

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C

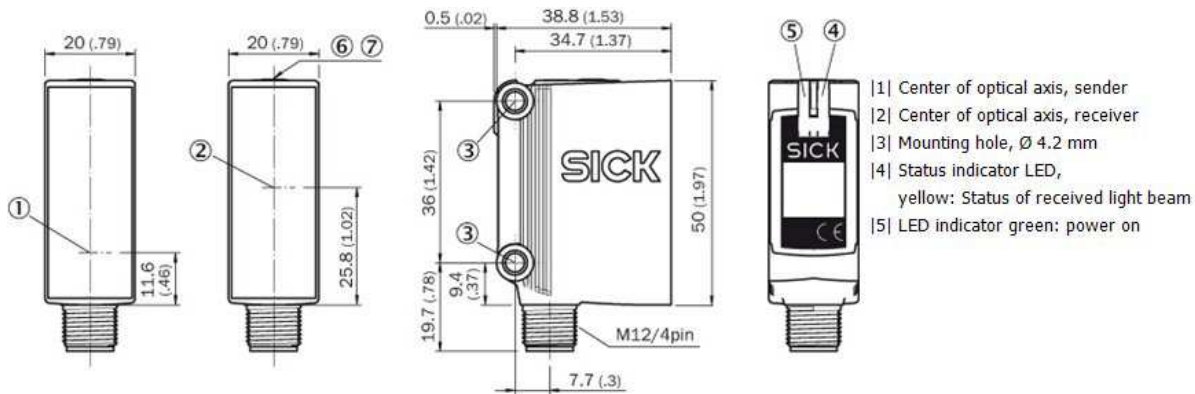
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 5 Vpp <sup>2)</sup>
Power consumption, sender:	≤ 15 mA
Output type:	PNP

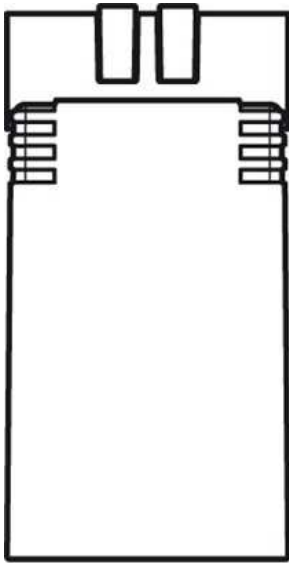
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector
Output current I <sub>max</sub> ·:	≤ 100 mA
Response time:	≤ 500 μs <sup>3)</sup>
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C, D <sup>4) 5) 6) 7)</sup>
Protection class:	III
Weight:	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 temperature operation:	-30 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E348498 & NRKH7.E348498
Further standards:	UL325 <sup>8)</sup>
Switching frequency max.:	1,000 Hz <sup>9)</sup>
Housing material:	PVC/PMMA, Plastic

1) Limit values when operated in short-circuit protected network: max. 8 A<sup>2)</sup> May not exceed or fall below U<sub>v</sub> tolerances<sup>3)</sup> Signal transit time with resistive load<sup>4)</sup> A = V<sub>S</sub> connections reverse-polarity protected<sup>5)</sup> B = inputs and output reverse-polarity protected<sup>6)</sup> C = interference suppression<sup>7)</sup> D = outputs overcurrent and short-circuit protected<sup>8)</sup> Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).<sup>9)</sup> With light/dark ratio 1:1

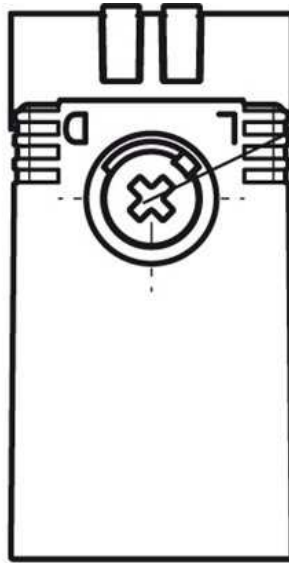
## Dimensional drawing



Adjustments possible



⑧

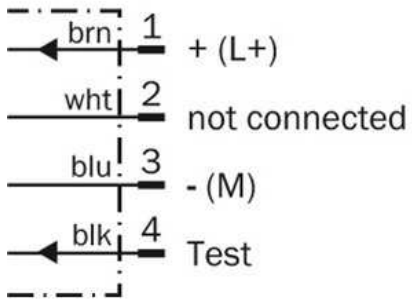


⑨

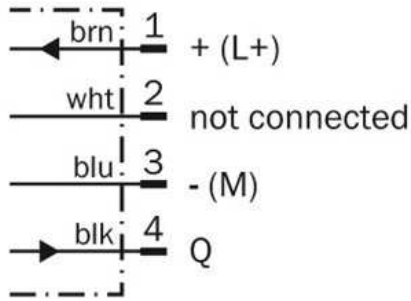
- ⑦ Light/dark selector
- ⑧ sender
- ⑨ receiver

Connection diagram

①

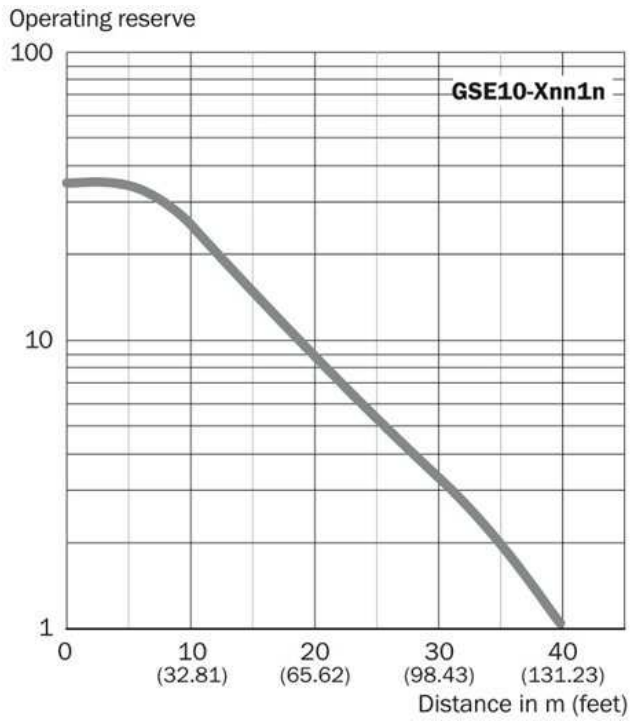


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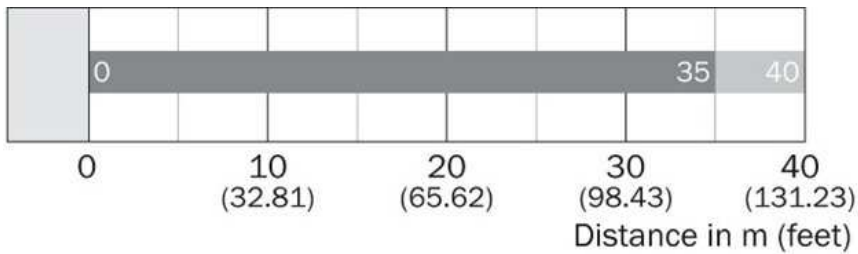


- ① sender
- ② receiver

## Characteristic curve



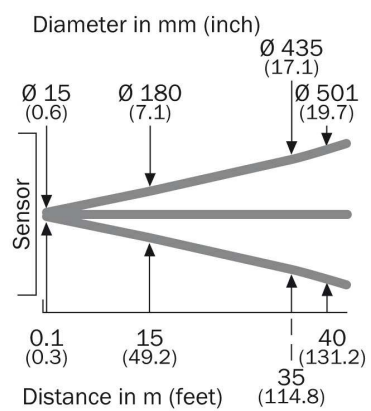
## Sensing range diagram



■ Sensing range

■ Sensing range max.

## Light spot size



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