



GSE10-N1231S01

G10

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
GSE10-N1231S01	1095561

Other models and accessories → www.sick.com/G10

Illustration may differ



Detailed technical data

Features

Functional 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 ... 80 m
Sensing range	0 m ... 55 m
Type of light	Visible red light
Light source	PinPoint LED ¹⁾
Light spot size (distance)	Ø 180 mm (15 m)
Wave length	625 nm
Adjustment	Potentiometer, 270°

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Power consumption, sender	≤ 15 mA

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Do not bend below 0 °C.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

¹⁰⁾ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

Power consumption, receiver	≤ 20 mA
Switching output	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Output current I_{max.}	≤ 100 mA
Response time	≤ 500 μs ³⁾
Switching frequency	1,000 Hz ⁴⁾
Connection type	Cable, 3-wire, 2 m ⁵⁾
Cable material	PVC
Conductor cross section	0.14 mm ²
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	180 g
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Electromagnetic compatibility (EMC)	EN 60947-5-2
Test input	Sender OFF at "Test" 0 V
Ambient operating temperature	-30 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498
More standards	UL325 ¹⁰⁾

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not exceed or fall below U_v tolerances.

3) Signal transit time with resistive load.

4) With light/dark ratio 1:1.

5) Do not bend below 0 °C.

6) A = V_S connections reverse-polarity protected.

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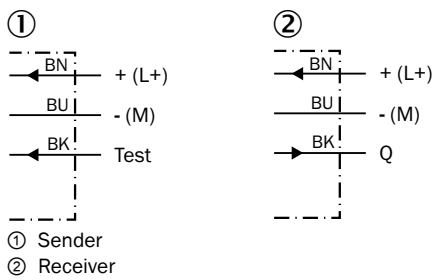
Classifications

eCl@ss 5.0	27270901
eCl@ss 5.1.4	27270901
eCl@ss 6.0	27270901
eCl@ss 6.2	27270901
eCl@ss 7.0	27270901
eCl@ss 8.0	27270901
eCl@ss 8.1	27270901
eCl@ss 9.0	27270901

eCl@ss 10.0	27270901
eCl@ss 11.0	27270901
eCl@ss 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

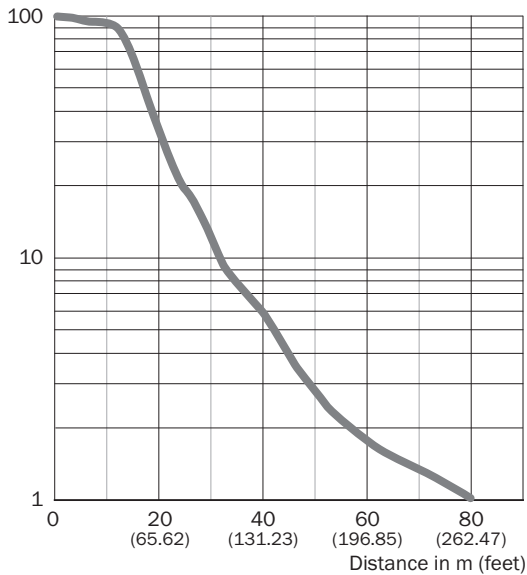
Connection diagram

Cd-061



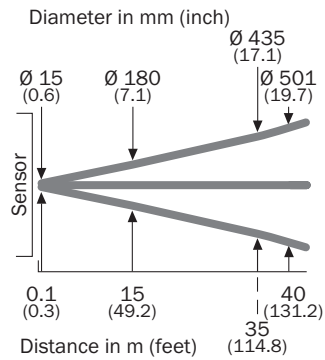
Characteristic curve

Operating reserve

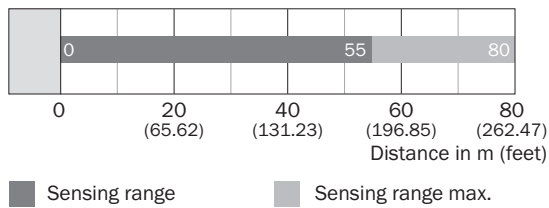


Light spot size

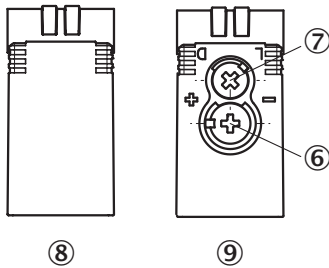
GSE10, red light



Sensing range diagram



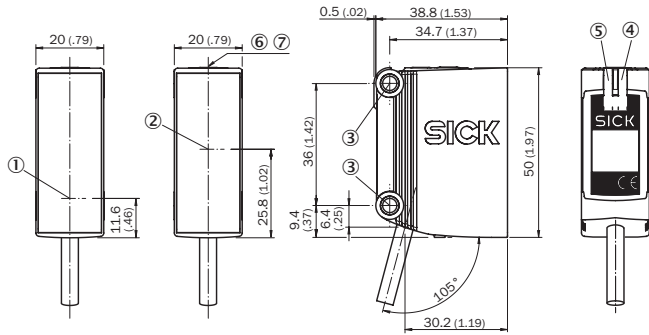
Adjustments



- ⑥ Adjustment of sensing range
- ⑦ Light/dark selector
- ⑧ Sender
- ⑨ Receiver

Dimensional drawing (Dimensions in mm (inch))



GSE10, DC, cable



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting hole, Ø 4.2 mm
- ④ LED indicator yellow: Status of received light beam
- ⑤ LED indicator green: power on

Recommended accessories

Other models and accessories → www.sick.com/G10

	Brief description	Type	Part no.
Universal bar clamp systems			
	Q-Lock, bar clamp system for G10 and reflector P250, Die-cast zinc, steel, zinc coated	BEF-KHSQ12R01	2071260
Plug connectors and cables			
	Head A: male connector, M8, 3-pin, straight Cable: unshielded	STE-0803-G	6037322

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SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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