

GSE10-P4222 G10

PHOTOELECTRIC SENSORS



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Ordering information

Туре	part no.
GSE10-P4222	1065907

Included in delivery: BEF-G10DC01 (1)

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 40 m
Sensing range	0 m 35 m
Type of light	Infrared light
Light source	LED ¹⁾
Light spot size (distance)	Ø 433 mm (15 m)
Wave length	850 nm
Adjustment	Potentiometer, 270°

 $^{^{1)}}$ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Power consumption, sender	≤ 15 mA
Power consumption, receiver	≤ 20 mA
Switching output	PNP
Switching mode	Light/dark switching

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

 $^{^{2)}\,\}mathrm{May}$ not fall below or exceed U_V tolerances.

 $^{^{}m 3)}$ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

 $^{^{5)}}$ A = V_S connections reverse-polarity protected.

 $^{^{6)}}$ B = inputs and output reverse-polarity protected.

 $^{^{7)}}$ C = interference suppression.

 $^{^{8)}}$ D = outputs overcurrent and short-circuit protected.

⁹⁾ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

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	Male connector M12, 4-pin
Circuit protection	A ⁵⁾ B ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	III
Weight	70 g
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Items supplied	Mounting bracket BEF-G10DC01 (2x)
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 ⁹⁾

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

Safety-related parameters

MTTF _D	863 years
DC _{avg}	0 %

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

ECLASS 5.0	27270901
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 $^{^{2)}\,\}mbox{May}$ not fall below or exceed $\mbox{U}_{\mbox{\scriptsize V}}$ tolerances.

 $^{^{}m 3)}$ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

 $^{^{5)}}$ A = V_S connections reverse-polarity protected.

 $^{^{6)}}$ B = inputs and output reverse-polarity protected.

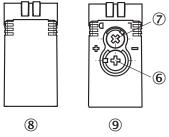
⁷⁾ C = interference suppression.

 $^{^{8)}}$ D = outputs overcurrent and short-circuit protected.

 $^{^{9)}}$ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments



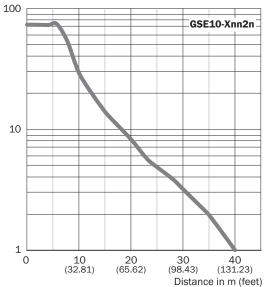
- 6 Adjustment of sensing range
- ⑦ Light/dark selector
- ® sender
- 9 receiver

Connection diagram Cd-073

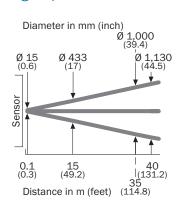
- 2 receiver

Operating reserve

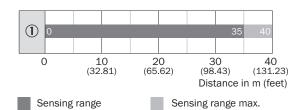




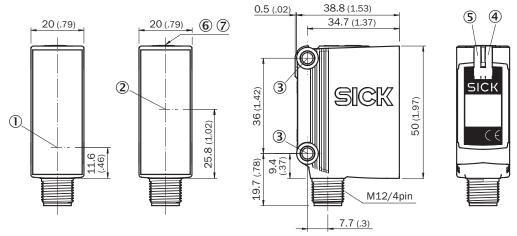
Light spot size



scanning range



Dimensional drawing GSE10, DC, connector



Dimensions in mm (inch)

- 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	Туре	part no.
Mounting syst	rems		
	 Description: Q-Lock, bar clamp system for G10 and reflector P250 Material: Zinc diecast, steel Details: Die-cast zinc, steel, zinc coated Suitable for: G10 and reflector P250 	BEF-KHSQ12R01	2071260
	 Description: Mounting bracket with articulated arm Material: Steel Details: Steel, zinc coated Items supplied: Mounting hardware included Suitable for: W16, W26, W11, W12, W23, W27, Dx50, W280, G10 	BEF-WN-MULTI2	2093945

	Brief description	Туре	part no.	
connectors ar	connectors and cables			
	 Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-050VB3XLEAX	2096235	
1	 Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932	
1	 Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-050UB3XLEAX	2095608	

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For us, that is "Sensor Intelligence."

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