

GTE10-F2221 G10

PHOTOELECTRIC SENSORS





Ordering information

Туре	part no.
GTE10-F2221	1102211

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

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Dimensions (W x H x D)	20 mm x 50 mm x 39 mm
Housing design (light emission)	Rectangular
Sensing range max.	20 mm 2,000 mm ¹⁾
Sensing range	40 mm 1,400 mm ¹⁾
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 57 mm (1,500 mm)
Wave length	850 nm
Adjustment	Potentiometer, 270°

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

Mechanics/electronics

Supply voltage \mathbf{U}_{B}	10 V DC 30 V DC ¹⁾
--	-------------------------------

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

 $^{^{2)}}$ Average service life: 100,000 h at T_{U} = +25 °C.

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

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

 $^{^{5)}}$ Do not bend below 0 $^{\circ}\text{C}.$

 $^{^{6)}}$ 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).

Plant.	2)
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA
Switching output	PNP
Output function	Complementary
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, 4-wire, 2 m ⁵⁾
Cable material	Plastic, PVC
Conductor cross section	0.14 mm ²
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	90 g
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Electromagnetic compatibility (EMC)	EN 60947-5-2
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.

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	✓

 $^{^{2)}\,\}text{May}$ not fall below or exceed 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.

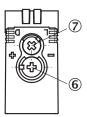
 $^{^{10)}}$ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

PHOTOELECTRIC SENSORS

Classifications

ECLASS 5.0	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

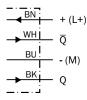
Adjustments



(6) Adjustment of sensing range

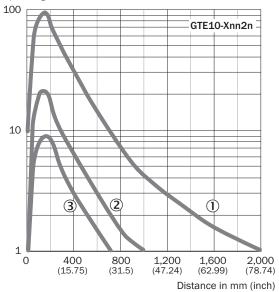
⑦ Light/dark selector

Connection diagram Cd-094



Operating reserve

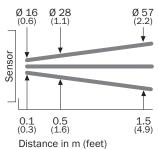




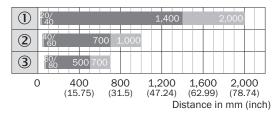
- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor
- 3 Sensing range on black, 6% remission factor

Light spot size

Diameter in mm (inch)

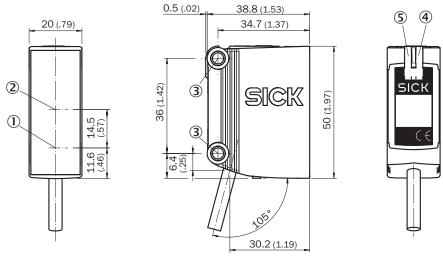


scanning range



- Sensing range
- Sensing range max.
- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor
- 3 Sensing range on black, 6% remission factor

Dimensional drawing CableGTE10, GL10, GL10G, 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.	
connectors and cables				
	 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	
Mounting sys	stems			
	 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	

SICK AT A GLANCE

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."

WORLDWIDE PRESENCE:

Contacts and other locations -www.sick.com

