

GL10-F7551P07

PHOTOELECTRIC SENSORS





Illustration may differ

Ordering information

Туре	part no.
GL10-F7551P07	2099257

Included in delivery: BEF-KHS-IS12A01 (1)

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

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
Dimensions (W x H x D)	20 mm x 50 mm x 39 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.15 m 12 m ¹⁾ 0.15 m 10 m ²⁾
Sensing range	0.3 m 9.5 m ¹⁾ 0.3 m 8 m ²⁾
Type of light	Visible red light
Light source	PinPoint LED ³⁾
Light spot size (distance)	Ø 58 mm (5 m)
Wave length	625 nm
Adjustment	None
Special applications	Detecting objects wrapped in film
Special features	High functional reliability on foil-wrapped objects

¹⁾ Reflector PL80A.

²⁾ Reflector P250.

 $^{^{3)}}$ Average service life: 100,000 h at TU = +25 °C.

Mechanics/electronics

Supply voltage \mathbf{U}_{B}	10 V DC 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I _{max} .	≤ 100 mA
Response time	\leq 1 ms $^{3)}$
Switching frequency	500 Hz ⁴⁾
Connection type	Cable with M12 male connector, 4-pin, 300 mm ⁵⁾
Cable material	Plastic, PVC
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	70 g
Polarizing filter	✓
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Items supplied	Mounting system BEF-KHS-IS12A01 (premounted)
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.

Safety-related parameters

MTTF _D	2,085 years
DC _{avg}	0 %

Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902

 $^{^{2)}\,\}mathrm{May}$ 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.

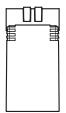
 $^{^{10)}}$ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

GL10-F7551P07 | G10

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ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Adjustments GL10, logistics, DC

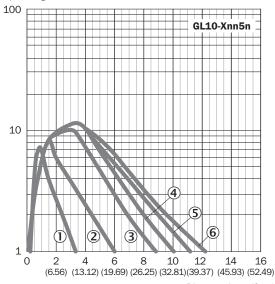


no adjustment possibility

Connection diagram Cd-084

Characteristic curve GL10, Logistik, DC, GL10G, DC



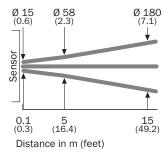


Distance in m (feet)

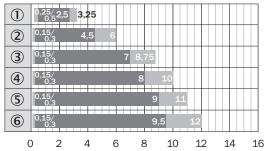
- ① Reflective tape REF-IRF-56
- ② Reflector PL20A
- 3 Reflector PL30A
- 4 Reflector P250
- ⑤ Reflector PL40A
- ® Reflector PL80A

Light spot size

Diameter in mm (inch)



Sensing range diagram GL10, Logistik, DC, GL10G, DC



 $(6.56)\ \, (13.12)\,(19.69)\,(26.25)\,(32.81)\,(39.37)\,(45.39)\,(52.49)$

Sensing range max.

Distance in m (feet)

① Reflective tape REF-IRF-56

② Reflector PL20A

Sensing range

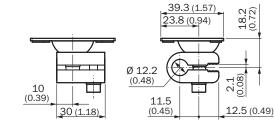
3 Reflector PL30A

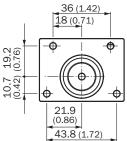
4 Reflector P250

⑤ Reflector PL40A

® Reflector PL80A

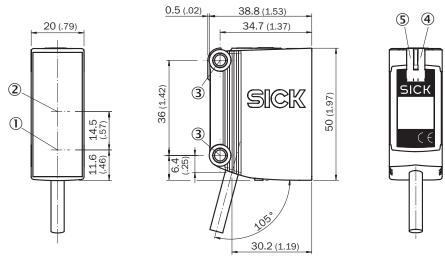
Dimensional drawing





Dimensions in mm (inch)

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.	
Mounting syst	Mounting systems			
	 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	
0 0 A 10	 Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A 	BEF-WN-REFX	2064574	

	Brief description	Туре	part no.
reflectors and optics			
	 Description: Rectangular, screw connection Dimensions: 51 mm 61 mm Ambient operating temperature: -30 °C +65 °C 	P250	5304812
connectors an	nd 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
	 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
	 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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