Data sheet



GL10-F7551P07

G10

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	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 T_U = +25 °C.

Mechanics/electronics

Supply voltage 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	≤ 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
Polarisation 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.
[2] 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).

Safety-related parameters

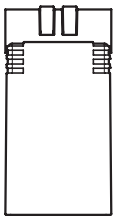
$MTTF_D$	2,085 years
DC_{avg}	0 %

Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902

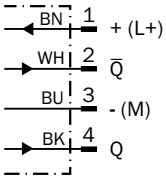
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Adjustments GL10, logistics, DC

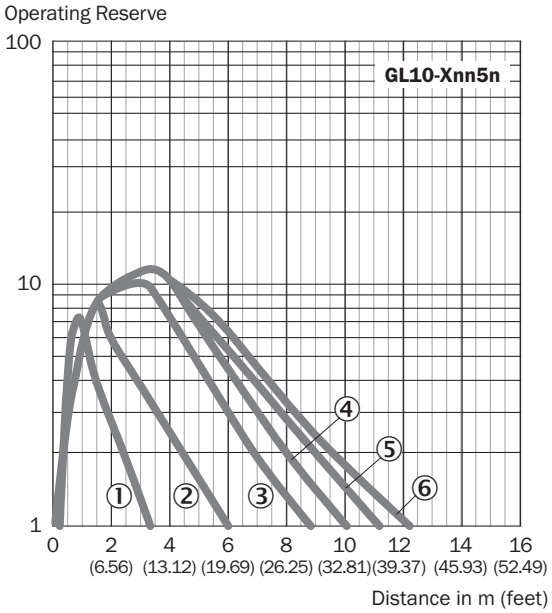


no adjustment possibility

Connection diagram Cd-084

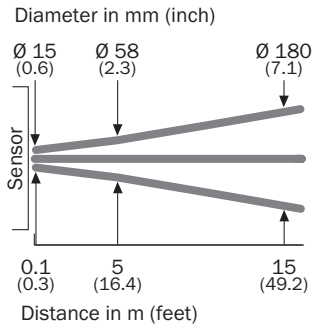


Characteristic curve GL10, Logistik, DC, GL10G, DC

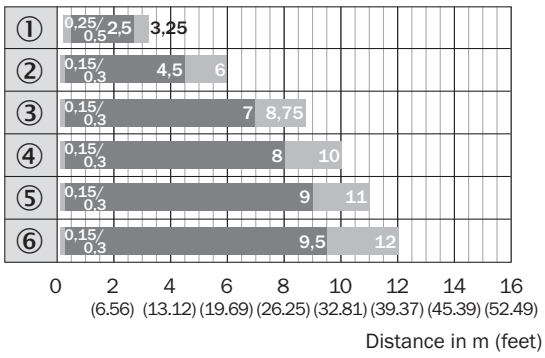


① Reflective tape REF-IRF-56
② Reflector PL20A
③ Reflector PL30A
④ Reflector P250
⑤ Reflector PL40A
⑥ Reflector PL80A

Light spot size



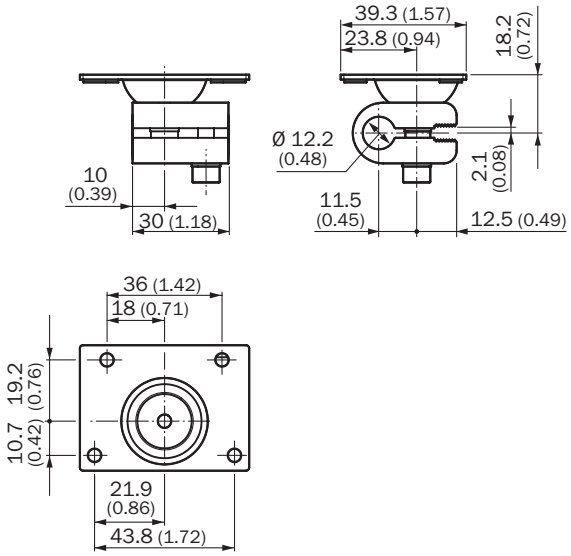
Sensing range diagram GL10, Logistik, DC, GL10G, DC



Sensing range Sensing range max.

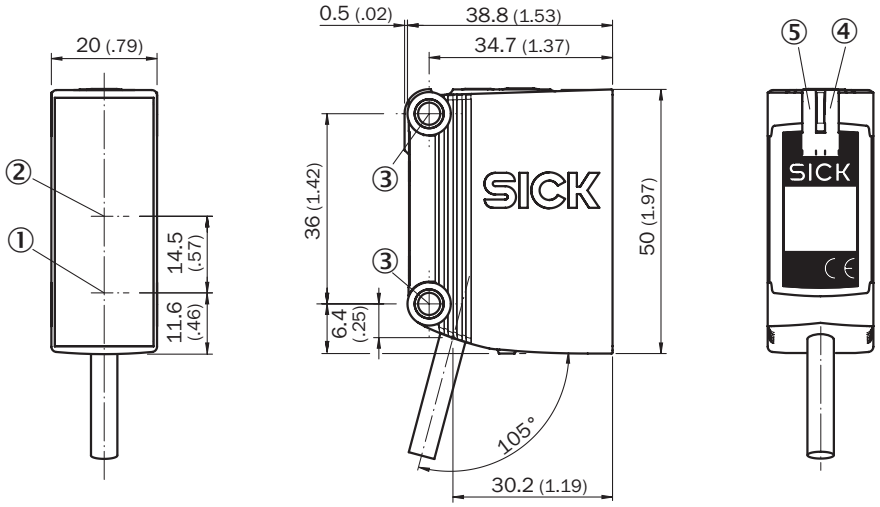
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Dimensional drawing



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	Type	part no.
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:** 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
reflectors and optics			
	• **Description:** Rectangular, screw connection • **Dimensions:** 51 mm 61 mm • **Ambient operating temperature:** –30 °C ... +65 °C	P250	5304812

	Brief description	Type	part no.
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
	• **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

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