



GL6-F7511

G6

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
GL6-F7511	1061399

Other models and accessories → www.sick.com/G6

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Dual lens
Sensing range max.	≤ 6 m ¹⁾
Sensing range	≤ 5 m ¹⁾
Polarisation filters	Yes
Light source	PinPoint LED ²⁾
Type of light	Visible red light
Key LED figures	
	Wave length 650 nm
Light spot size (distance)	Ø 8 mm (350 mm)
Adjustment	None

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_U = +25 °C.

Safety-related parameters

MTTF_D	2,967 years
DC_{avg}	0%

Electrical data

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Power consumption	30 mA ³⁾
Protection class	III
Switching outputs	
Switching output	PNP
Signal voltage PNP HIGH/LOW	$V_S - (\leq 3\text{ V}) / \text{approx. } 0\text{ V}$
Output current I_{max}	$\leq 100\text{ mA}$ ⁴⁾
Response time	$< 625\ \mu\text{s}$ ⁵⁾
Switching frequency	1,000 Hz ⁶⁾
Switching mode	Light/dark switching
Output function	Complementary
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

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

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ At $U_V > 24\text{ V}$, $I_A \text{ max.} = 50\text{ mA}$.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

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

Mechanical data

Housing	Rectangular
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Connection	Male connector M12, 4-pin ¹⁾
Connection detail	
Conductor size	0.14 mm ²
Length of cable	300 mm
Material	
Housing	Plastic, ABS/PC
Front screen	Plastic, PMMA
Cable	PVC
Weight	60 g

¹⁾ Do not bend below 0 °C.

Ambient data

Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +55 °C ¹⁾

¹⁾ Temperature stability following adjustment +/-10 °C.

Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

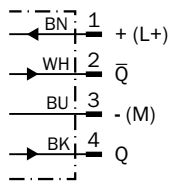
¹⁾ Temperature stability following adjustment +/-10 °C.

Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ECl@ss 10.0	27270902
ECl@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

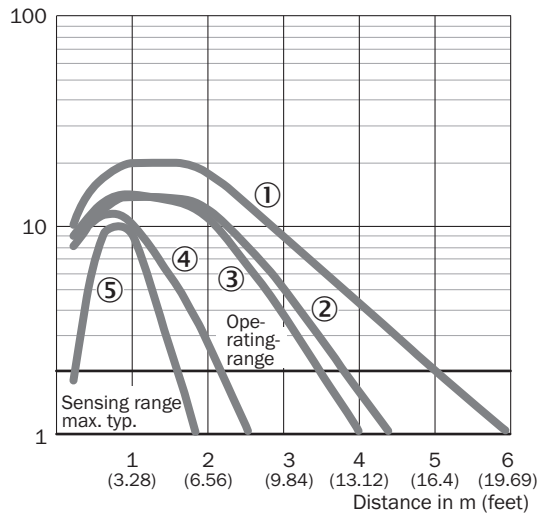
Cd-084



Characteristic curve

GL6

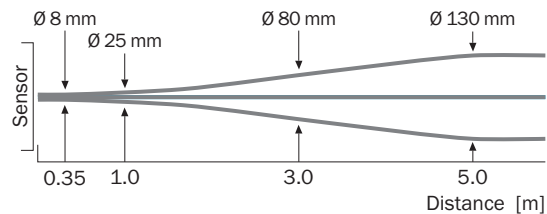
Operating reserve



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

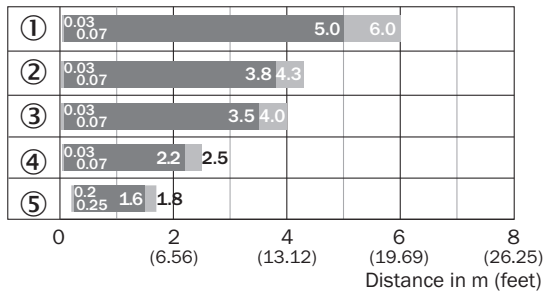
Light spot size

GL6, GL6G



Sensing range diagram

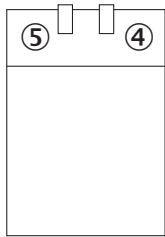
GL6, GL6G



- Sensing range ■ Sensing range max.
- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector PL20A
- ⑤ Reflective tape REF-IRF-56

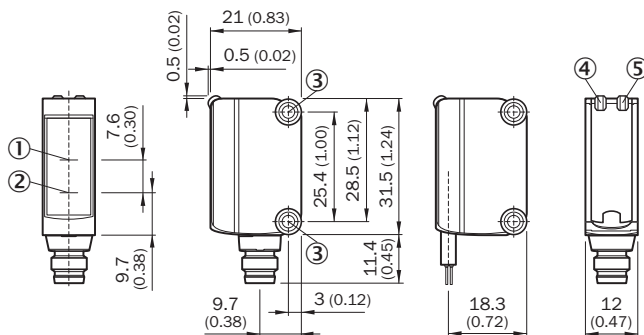
Adjustments

No adjustment possibility



- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam






Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Recommended accessories

Other models and accessories → www.sick.com/G6

	Brief description	Type	Part no.
Mounting brackets and plates			
	Stainless steel (1.4301)	BEF-WN-G6	2062909
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Reflectors			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	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