



GL6-P4112

G6

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
GL6-P4112	1051777

Included in delivery: P250 (1)

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

Illustration may differ



Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Housing design (light emission)	Rectangular
Sensing range max.	≤ 6 m ¹⁾
Sensing range	≤ 5 m ¹⁾
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 8 mm (350 mm)
Wave length	650 nm
Adjustment	None

¹⁾ Reflector PL80A.

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	± 10 % ²⁾

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 V, I_A max. = 50 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.

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

Power consumption	30 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Signal voltage PNP HIGH/LOW	V _S - (≤ 3 V) / approx. 0 V
Output current I_{max.}	≤ 100 mA ⁴⁾
Response time	< 625 μs ⁵⁾
Switching frequency	1,000 Hz ⁶⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾
Protection class	III
Weight	20 g
Polarisation filter	✓
Housing material	Plastic, ABS/PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Stainless steel mounting bracket (1.4301/304) BEF-W100-A, Reflector P250
Ambient operating temperature	-25 °C ... +55 °C ¹⁰⁾
Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

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Classifications

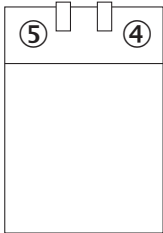
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ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717

UNSPSC 16.0901

39121528

Adjustments possible

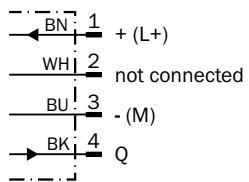
No adjustment possibility



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

Connection diagram

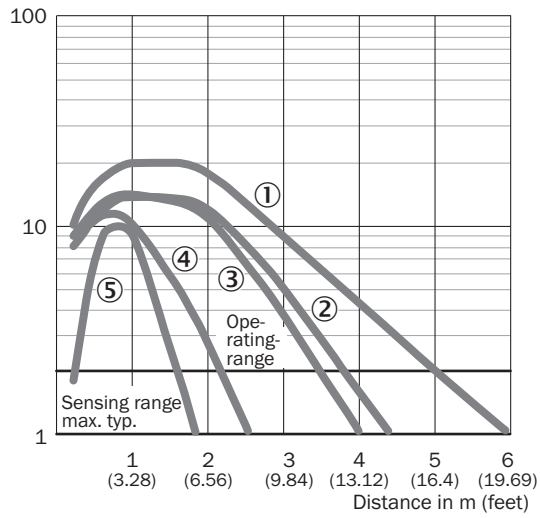
Cd-066



Characteristic curve

GL6

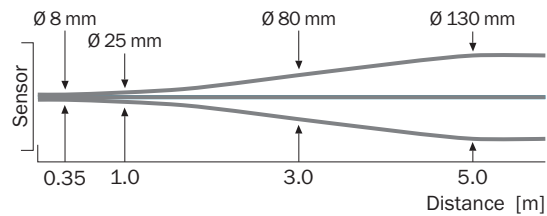
Operating reserve



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

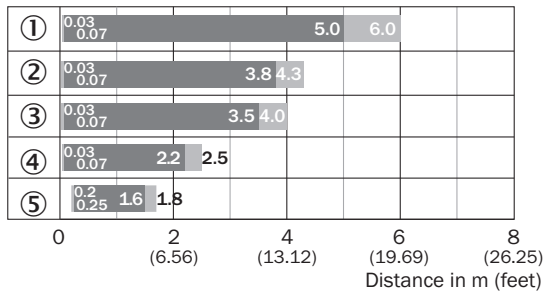
Light spot size

GL6, GL6G



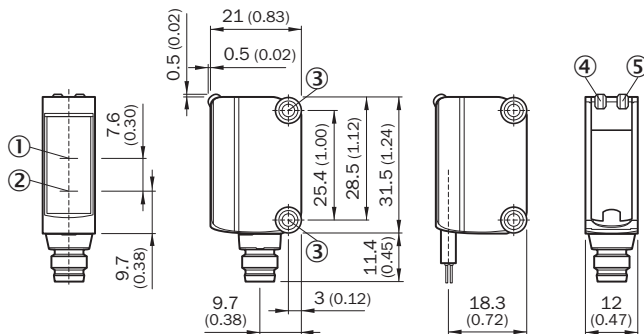
Sensing range diagram

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


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.
Universal bar clamp systems			
	Clamp bar to fix G6 sensors on rods of 10 mm, clamp-on design up to 4 mm wall thickness, aluminum (clamp bar), stainless steel (bracket), clamp bar mounting and clamp function, mounting bracket, mounting hardware	BEF-KHS-ISG6	2075080

	Brief description	Type	Part no.
Device protection (mechanical)			
	Stainless steel 1.4301 (SVS 304), 3 mm thick protective sleeve for G6, stainless steel 1.4301, mounting hardware included	BEF-SG-G6-01	2069044
Mounting brackets and plates			
		BEF-WN-G6	2062909
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF8U14-020VA3XLEAX	2095888
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: female connector, M8, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG8U14-020VA3XLEAX	2095962
	Head A: female connector, M8, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG8U14-050VA3XLEAX	2095963
	Head A: female connector, M8, 4-pin, straight Head B: - Cable: unshielded	DOS-0804-G	6009974
	Head A: female connector, M8, 4-pin, angled Head B: - Cable: unshielded	DOS-0804-W	6009975
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323
Masks			
	Slit mask, vertical slots, slot width: 1.0 mm, 2 pieces, black, Aluminum, Slit mask (2 pieces)	BEF-SLIT MASK-G6	2075254
Reflectors			
	Rectangular, screw connection, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812
	Rectangular, screw connection, 56 mm x 28 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL30A	1002314
	Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865
	Fine triple reflector, screw connection, suitable for laser sensors, 18 mm x 18 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL10F	5311210
	Self-adhesive	REF-IRF-56	5314244

	Brief description	Type	Part no.
	Round, plugable for metal plates, PMMA/ABS, Plug-in for sheets	PL22-3	1004488

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