



GL6-N0111S89

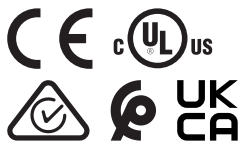
G6

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
GL6-N0111S89	1099322

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

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor	
Functional principle detail	With minimum distance to reflector (dual lens system)	
Sensing range max.	0.03 m ... 6 m ¹⁾	
Sensing range	0.07 m ... 5 m ¹⁾	
Polarisation filter	Yes	
Emitted beam	Light source	PinPoint LED ²⁾
	Type of light	Visible red light
	Light spot size (distance)	Ø 8 mm (350 mm)
Key LED figures	Wave length	650 nm
Adjustment	None	

¹⁾ Reflector PL80A.

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

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
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¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed 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.

Ripple	$\pm 10\%$ ²⁾
Current consumption	30 mA ³⁾
Protection class	III
Digital output	
Type	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Signal voltage NPN HIGH/LOW	Approx. $V_S / \leq 3\text{ V}$
Output current I_{\max}	$\leq 100\text{ mA}$ ⁴⁾
Response time	$< 625\ \mu\text{s}$ ⁵⁾
Switching frequency	1,000 Hz ⁶⁾
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

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²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

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

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Mechanics

Housing	Rectangular
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Connection	Cable with male connector, MOLEX 3-pin 3pitch 4,2 mm (9-01-4033) and contact pin AWG28 (39-00-0048), 600 +/- 10 mm (incl. 20 +/- 2 mm remote cable) ¹⁾
Connection detail	
Conductor size	0.14 mm ²
Length of cable (L)	600 mm ¹⁾
Material	
Housing	Plastic, ABS/PC
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	60 g

¹⁾ Do not bend below 0 °C.

Ambient data

Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +55 °C ¹⁾
Ambient temperature, storage	-40 °C ... +70 °C

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

UL File No.	NRKH.E348498 & NRKH7.E348498
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¹⁾ Temperature stability following adjustment +/-10 °C.

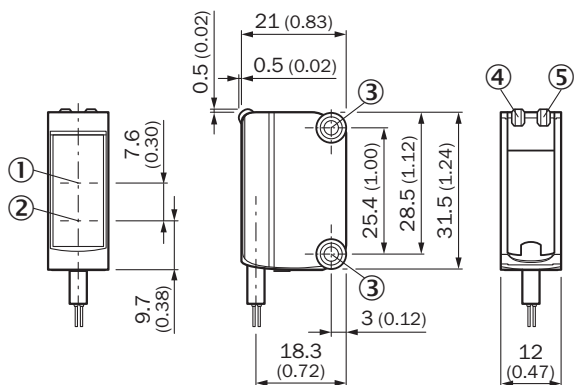
Certificates

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	✓

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

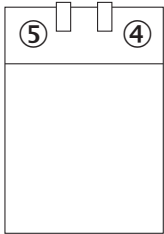
Dimensional drawing



Dimensions in mm (inch)

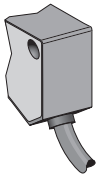
- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Adjustments No adjustment possibility

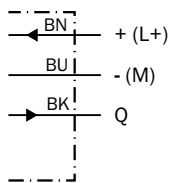


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

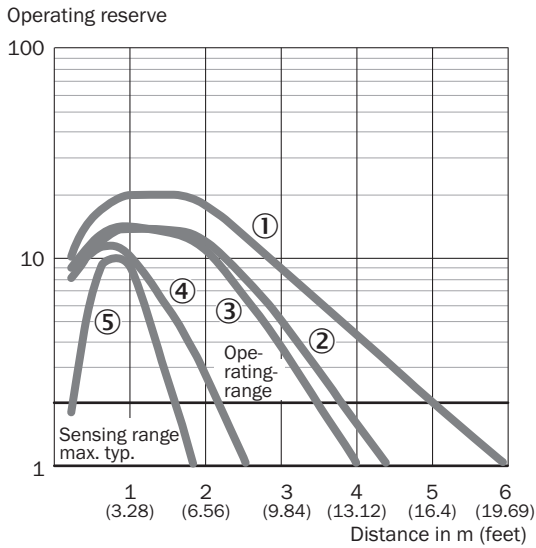
Connection type



Connection diagram Cd-043

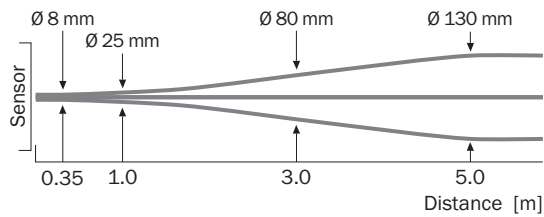


Characteristic curve GL6

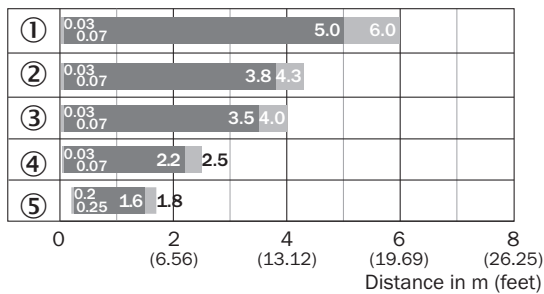


- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector PL20A
- ⑤ Reflective tape REF-IRF-56

Light spot size GL6, GL6G



Sensing range diagram GL6, GL6G








■ Sensing range ■ Sensing range max.

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- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector PL20A
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Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness Material: Steel Details: Aluminum (clamp bar), stainless steel (bracket) Items supplied: Clamp bar mounting and clamp function, mounting bracket, mounting hardware 	BEF-KHS-IS12G6	2086865
	<ul style="list-style-type: none"> Material: Stainless steel Details: Stainless steel (1.4301) Suitable for: W4S, W4S 	BEF-WN-G6	2062909
	<ul style="list-style-type: none"> Description: Mounting bracket for wall mounting Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S 	BEF-W100-A	5311520
	<ul style="list-style-type: none"> 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			
	<ul style="list-style-type: none"> Description: Rectangular, screw connection Dimensions: 51 mm 61 mm Ambient operating temperature: -30 °C ... +65 °C 	P250	5304812

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