

GL2S-P0311S20 G2

PHOTOELECTRIC SENSORS



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Ordering information

Туре	part no.
GL2S-P0311S20	1130498

Other models and accessories → www.sick.com/G2

Illustration may differ



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)	7.7 mm x 21.8 mm x 13.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.02 m 3 m ¹⁾
Sensing range	0.03 m 2.5 m ¹⁾
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 11 mm (250 mm)
Wave length	640 nm
Adjustment	None
Special features	Cable with M8 male connector, 3-pin, snap lock

¹⁾ Reflector PL40A.

Mechanics/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.

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

 $^{^{2)}\,\}mathrm{May}$ not fall below or exceed U_V tolerances.

³⁾ Without load.

 $^{^{4)}}$ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ Do not bend below 0 °C.

 $^{^{7)}}$ A = V_S connections reverse-polarity protected.

 $^{^{8)}}$ C = interference suppression.

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

Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA ³⁾
Switching output	PNP
Switching mode	Light switching
Output current I _{max.}	≤ 50 mA
Response time	< 0.6 ms ⁴⁾
Switching frequency	800 Hz ⁵⁾
Connection type	Cable with M8 male connector, 3-pin, snap lock, 200 mm ⁶⁾
Cable material	Plastic, PVC
Cable diameter	Ø 3 mm
Circuit protection	A ⁷⁾ C ⁸⁾ D ⁹⁾
Weight	16.2 g
Polarisation filter	√
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-25 °C +50 °C
Ambient temperature, storage	-40 °C +75 °C
UL File No.	NRKH.E181493

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

Safety-related parameters

MTTF _D	3,487 years
DC _{avg}	0 %

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	✓

 $^{^{\}rm 2)}$ May not fall below or exceed U $_{\rm V}$ tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ C = interference suppression.

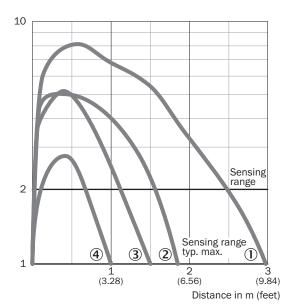
⁹⁾ D = outputs overcurrent and short-circuit protected.

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

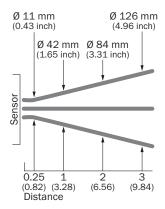
Connection diagram Cd-045

Characteristic curve GL2S

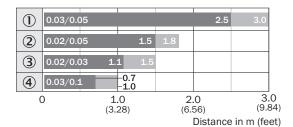


- ① Reflector PL40A
- ② Reflector PL20A
- 3 PL10F reflector
- 4 Reflective tape IREF6000 (REF-IRF-56)

Light spot size GL2S



Sensing range diagram GL2S

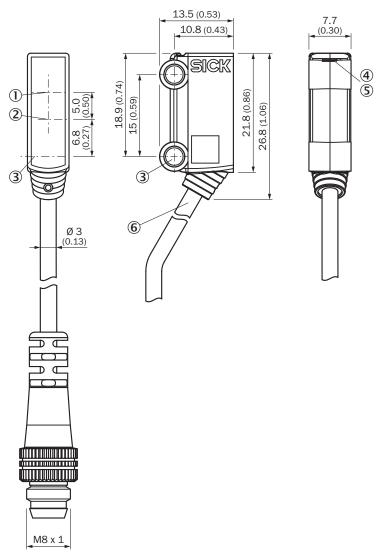


Sensing range

Sensing range typ. max.

- ① Reflector PL40A
- ② Reflector PL20A
- 3 PL10F reflector
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Dimensional drawing GL2S



Dimensions in mm (inch)

- ① optical axis, receiver
- ② optical axis, sender
- 3 Mounting hole, Ø 3.2 mm
- 4 LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- © Connection

Recommended accessories

Other models and accessories → www.sick.com/G2

	Brief description	Туре	part no.
Mounting systems			
	 Description: Mounting bracket for floor mounting Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: W2S-2 	BEF-W2S-A	4034748
	 Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E 	BEF-KHS-N11N	2071081
reflectors and	dioptics		
0	 Description: Fine triple reflector, screw connection, suitable for laser sensors Dimensions: 20 mm 32 mm Ambient operating temperature: -30 °C +65 °C 	PL10F	5311210
connectors a	nd cables		
No.	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-050VA1XLEAX	2095884
No.	 Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-050UA1XLEAX	2094788
	 Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² 0.5 mm² 	STE-0803-G	6037322

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."

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