GL2S-N0311S02

G2S

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

GL2S-N0311S02 | G2S

MINIATURE PHOTOELECTRIC SENSORS

Ordering information

Type	Part no.
GL2S-N0311S02	1075791

Other models and accessories ➜ www.sick.com/G2S

Illustration may differ

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
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	Terminal connector

[1] Reflector PL40A.

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	≤ 5 V_{pp} [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] 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.

Current consumption	20 mA [3)]
Switching output	NPN
Switching mode	Light/dark switching
Output current I$_{max.}$	< 50 mA
Response time	< 0.6 ms [4)]
Switching frequency	800 Hz [5)]
Connection type	Cable with special connector 3M, 4-wire, 0.45 m [6)]
Cable material	PVC
Circuit protection	A [7)] C [8)] D [9)]
Weight	14 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	−25 °C … +50 °C
Ambient storage temperature	−40 °C … +75 °C
UL File No.	NRKH.E181493

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[3)] Without load.

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[5)] With light/dark ratio 1:1.

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[7)] A = V$_S$ connections reverse-polarity protected.

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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-464

BN	1	+ (L+)
WH	4	$\overline{Q}$
BU	3	- (M)
BK	2	Q
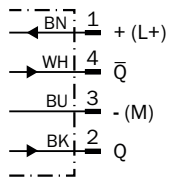
Characteristic curve

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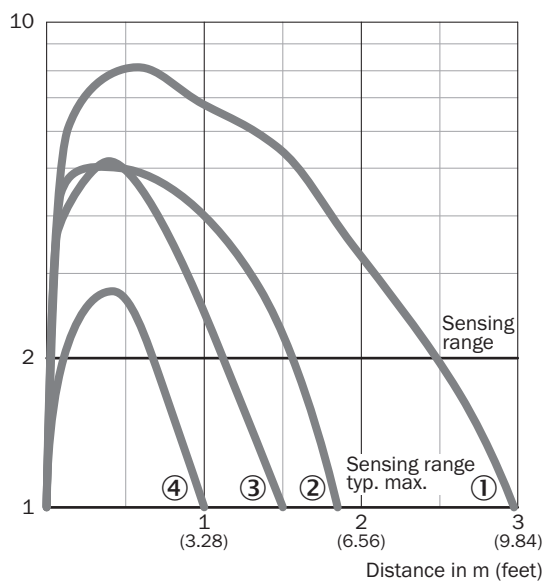
Sensing range

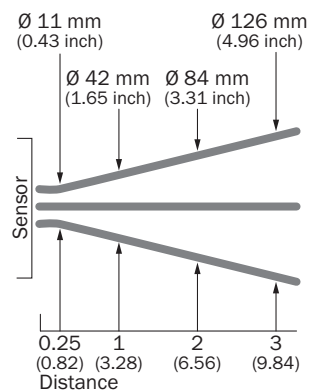Sensing range typ. max.

④   ③   ②   ①

Distance in m (feet)

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

Light spot size

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Ø 11 mm (0.43 inch)
Ø 126 mm (4.96 inch)
Ø 42 mm (1.65 inch)
Ø 84 mm (3.31 inch)

Sensor

Distance

Sensing range diagram

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①	0.03/0.05			2.5	3.0
②	0.02/0.05		1.5	1.8	
③	0.02/0.03	1.1	1.5		
④	0.03/0.1	0.7 / 1.0			

0   1.0 (3.28)   2.0 (6.56)   3.0 (9.84)

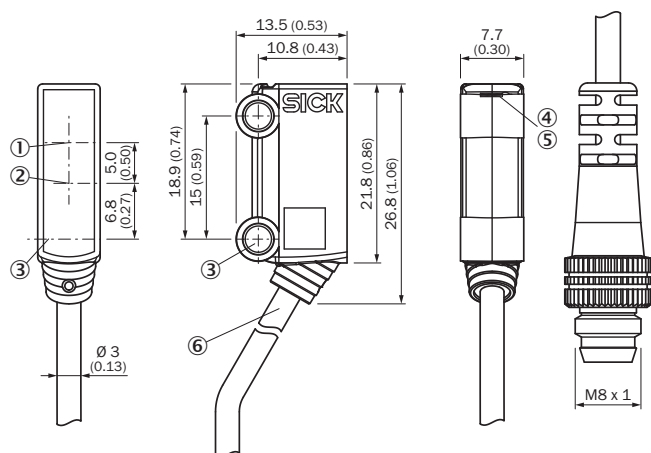Distance in m (feet)
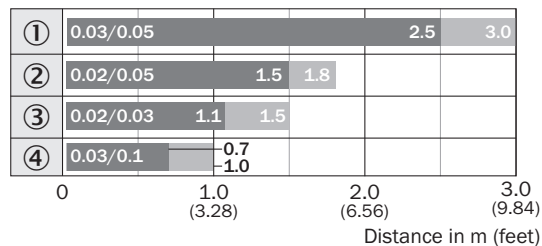
■ Sensing range   ■ Sensing range typ. max.

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④ Reflective tape IREF6000 (REF-IRF-56)

Dimensional drawing (Dimensions in mm (inch))

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13.5 (0.53)
10.8 (0.43)
7.7 (0.30)
18.9 (0.74)
15 (0.59)
5.0 (0.50)
6.8 (0.27)
21.8 (0.86)
26.8 (1.06)
Ø 3 (0.13)
M8 x 1

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
⑥ Connection

Recommended accessories

Other models and accessories ➔ www.sick.com/G2S

	Brief description	Type	Part no.
Reflectors			
	Fine triple reflector, screw connection, suitable for laser sensors, 20 mm x 32 mm, PM-MA/ABS, Screw-on, 2 hole mounting	PL10F	5311210

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**

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