Data sheet



GTE6-N1431S100

G6

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
GTE6-N1431S100	1111611

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Sensing range max.	30 mm ... 900 mm
Sensing range	40 mm ... 760 mm
Emitted beam	
Light source	PinPoint LED
Type of light	Visible red light
Light spot size (distance)	Ø 5 mm (150 mm)
Key LED figures	
Wave length	650 nm
Adjustment	Mechanical spindle, 5 turns
Special features	Reverse yellow LED indicator logic, ON when object absence, OFF when object detected

Electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Current consumption	30 mA [3]

[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] When Uv > 24 V and ambient temperature > 49 °C, IA max. = 25 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.

Protection class	III
Digital output	
Type	NPN
Switching mode	Light switching
Signal voltage PNP HIGH/LOW	Approx. V_S / ≤ 3 V
Output current $I_{max.}$	≤ 100 mA [4]
Response time	< 1.25 ms [5]
Switching frequency	500 Hz [6]
Circuit protection	A [7] B [8] D [9]

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Mechanics

Housing	Rectangular
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Connection	Cable, 3-wire, 2 m [1]
Connection detail	
Conductor size	0.14 mm²
Length of cable (L)	2 m [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 ... +60 °C [1]
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	E348498

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

Certificates

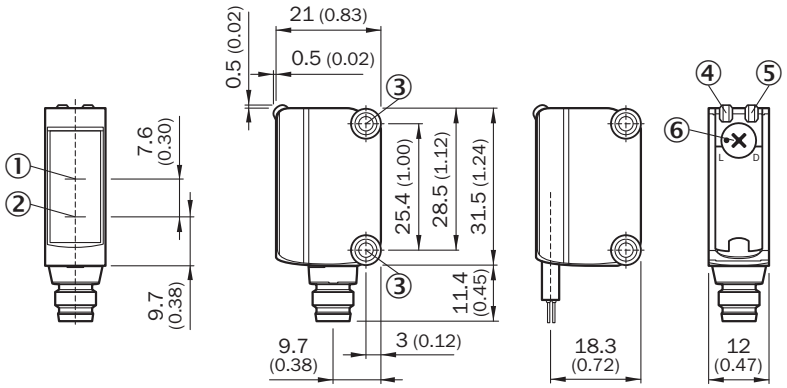
EU declaration of conformity	✓
UK declaration of conformity	✓

ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

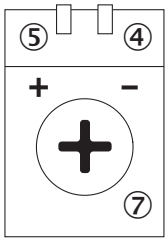
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ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Dimensional drawing



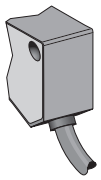
Dimensions in mm (inch)
① Optical axis, receiver
② Optical axis, sender
③ Mounting holes M3
④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Adjustments Adjustment possibility

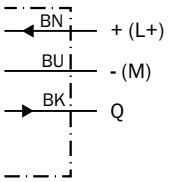


④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑦ Sensitivity control: potentiometer

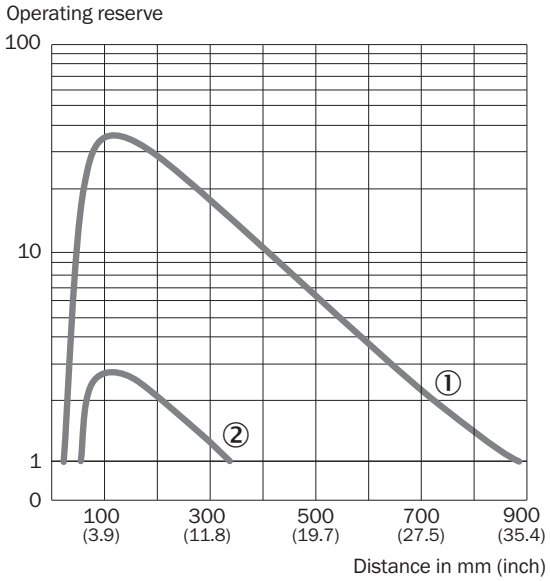
Connection type



Connection diagram Cd-043

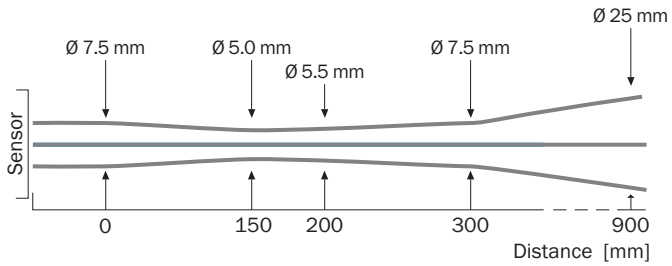


Characteristic curve

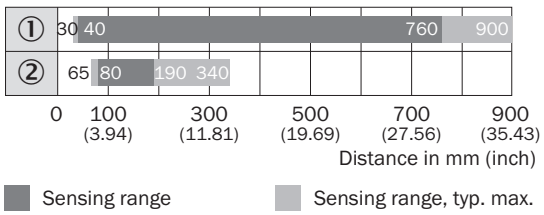


① Sensing range on white, 90% remission factor
② Sensing range on black, 6.25% remission factor

Light spot size



Sensing range diagram



① Sensing range on white, 90% remission factor
② Sensing range on black, 6.25% remission factor

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **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
	• **Material:** Stainless steel • **Details:** Stainless steel (1.4301) • **Suitable for:** W4S	BEF-WN-G6	2062909

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