



GTE6-N3231

G6

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
GTE6-N3231	1068920

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

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Current consumption	30 mA ³⁾
Protection class	III

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.

Digital output	Type	NPN
	Switching mode	Light/dark switching
	Switching mode selector	Selectable via light/dark selector
	Signal voltage PNP HIGH/LOW	Approx. $V_S / \leq 3 \text{ V}$
	Output current $I_{\max.}$	$\leq 100 \text{ mA}$ ⁴⁾
	Response time	$< 1.25 \text{ ms}$ ⁵⁾
	Switching frequency	500 Hz ⁶⁾
Circuit protection		A ⁷⁾ B ⁸⁾ D ⁹⁾

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

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.

Mechanics

Housing	Rectangular
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Connection	Connector M8, 3-pin
Material	
	Housing Plastic, ABS/PC
	Front screen Plastic, PMMA
Weight	20 g

Ambient data

Enclosure rating	IP67
Ambient operating temperature	$-25 \text{ }^{\circ}\text{C} \dots +55 \text{ }^{\circ}\text{C}$ ¹⁾
Ambient temperature, storage	$-40 \text{ }^{\circ}\text{C} \dots +70 \text{ }^{\circ}\text{C}$
UL File No.	E348498

¹⁾ Temperature stability following adjustment $\pm 10 \text{ }^{\circ}\text{C}$.

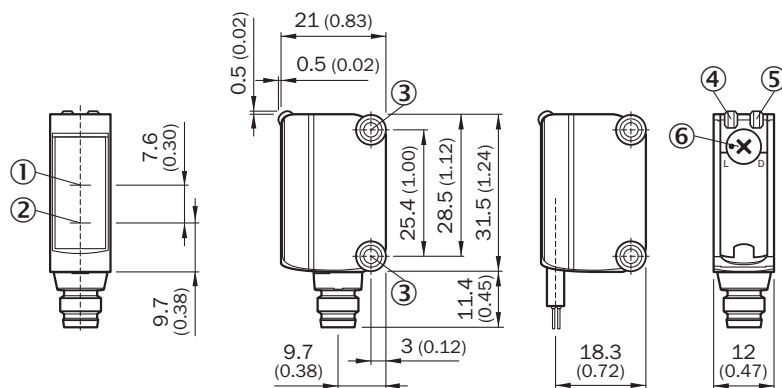
Certificates

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	27270903
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

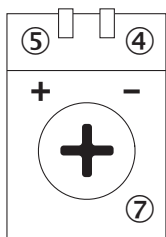
Dimensional drawing



Dimensions in mm (inch)

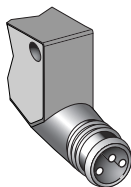
- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Adjustments Adjustment possibility

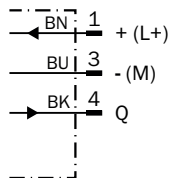


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑦ Sensitivity control: potentiometer

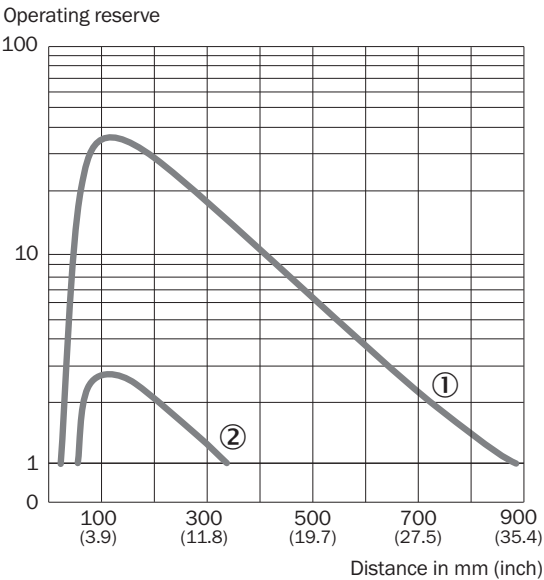
Connection type



Connection diagram Cd-045

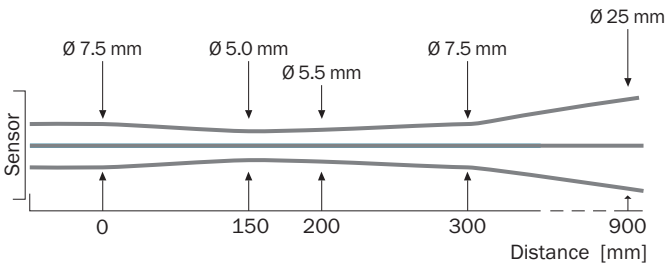


Characteristic curve

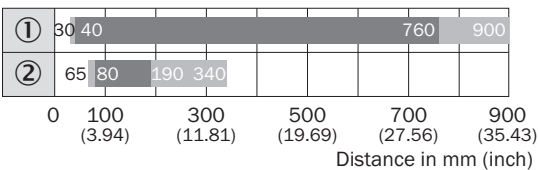


- ① Sensing range on white, 90% remission factor
- ② Sensing range on black, 6.25% remission factor

Light spot size



Sensing range diagram



- Sensing range
- Sensing range, typ. max.
- 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 • Material: Stainless steel • Details: Stainless steel (1.4301) • Suitable for: W4S	BEF-KHS-IS12G6	2086865
		BEF-WN-G6	2062909
connectors and cables			
	• 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
	• 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

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