



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 U_v > 24 V and ambient temperature > 49 °C, I_A 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. $V_S / \leq 3 \text{ V}$ |
| 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⁾ When $U_V > 24 \text{ V}$ and ambient temperature $> 49 \text{ }^\circ\text{C}$, $I_A \text{ max.} = 25 \text{ mA}$.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

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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 mm ² |
| 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

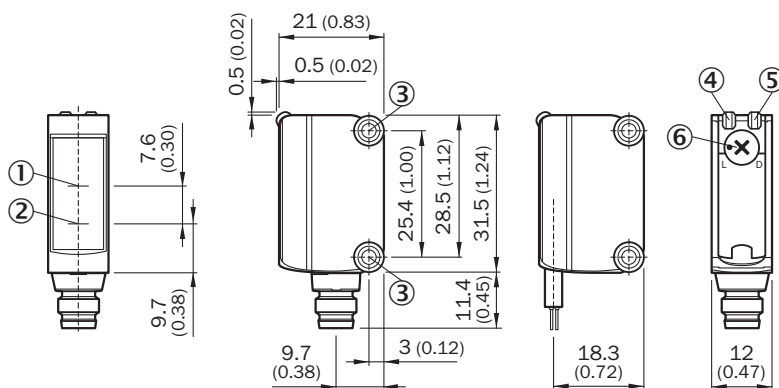
| | |
|-------------------------------------|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |

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

Classifications

| | |
|-----------------------|----------|
| 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)

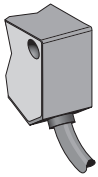
- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Adjustments Adjustment possibility

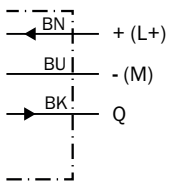


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑦ Sensitivity control: potentiometer

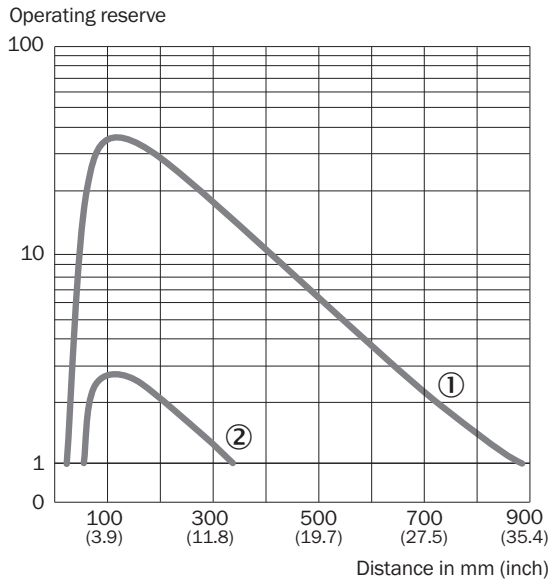
Connection type



Connection diagram Cd-043

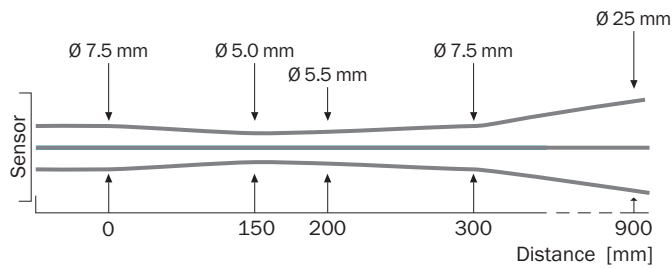


Characteristic curve

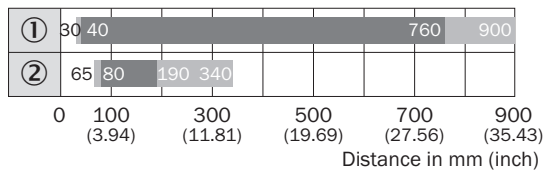


- ① Sensing range on white, 90% remission factor
- ② Sensing range on black, 6.25% remission factor

Light spot size






Sensing range diagram



- 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 | | | |
|  | <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 |

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:

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