



# GTE6-F2421V

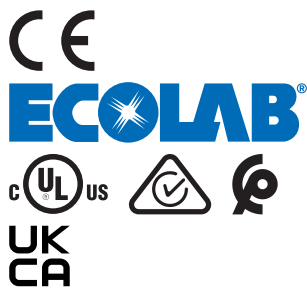
G6

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

| Type        | part no. |
|-------------|----------|
| GTE6-F2421V | 1084098  |

Other models and accessories → [www.sick.com/G6](http://www.sick.com/G6)

Detailed technical data

Features

|                                    |                            |                                |
|------------------------------------|----------------------------|--------------------------------|
| <b>Functional principle</b>        |                            | Photoelectric proximity sensor |
| <b>Functional principle detail</b> |                            | Energetic                      |
| <b>Sensing range max.</b>          |                            | 30 mm ... 900 mm <sup>1)</sup> |
| <b>Sensing range</b>               |                            | 45 mm ... 700 mm               |
| <b>Emitted beam</b>                |                            |                                |
|                                    | Light source               | LED <sup>2)</sup>              |
|                                    | Type of light              | Infrared light                 |
|                                    | Light spot size (distance) | Ø 8 mm (100 mm)                |
| <b>Key LED figures</b>             |                            |                                |
|                                    | Wave length                | 850 nm                         |
| <b>Adjustment</b>                  |                            | Mechanical spindle, 5 turns    |
| <b>Special applications</b>        |                            | Hygienic and washdown zones    |

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

## Electronics

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>Supply voltage <math>U_B</math></b> | 10 V DC ... 30 V DC <sup>1)</sup>                      |
| <b>Ripple</b>                          | $\pm 10\%$ <sup>2)</sup>                               |
| <b>Current consumption</b>             | 30 mA <sup>3)</sup>                                    |
| <b>Protection class</b>                | III                                                    |
| <b>Digital output</b>                  |                                                        |
| Type                                   | PNP                                                    |
| Switching mode                         | Light/dark switching                                   |
| Signal voltage PNP HIGH/LOW            | $V_S - (\leq 3\text{ V}) / \text{approx. } 0\text{ V}$ |
| Output current $I_{\text{max}}$        | $\leq 100\text{ mA}$ <sup>4)</sup>                     |
| Response time                          | $< 1.25\text{ ms}$ <sup>5)</sup>                       |
| Switching frequency                    | 500 Hz <sup>6)</sup>                                   |
| <b>Output function</b>                 | Complementary switching output                         |
| <b>Circuit protection</b>              | A <sup>7)</sup><br>B <sup>8)</sup><br>D <sup>9)</sup>  |

<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A.

<sup>2)</sup> May not fall below or exceed  $U_V$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> At  $U_V > 24\text{ V}$ ,  $I_A \text{ max.} = 50\text{ mA}$ .

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> With light/dark ratio 1:1.

<sup>7)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>8)</sup> B = inputs and output reverse-polarity protected.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

## Mechanics

|                               |                                           |
|-------------------------------|-------------------------------------------|
| <b>Housing</b>                | Rectangular                               |
| <b>Dimensions (W x H x D)</b> | 15 mm x 44 mm x 22 mm                     |
| <b>Connection</b>             | Cable, 4-wire, 2 m <sup>1)</sup>          |
| <b>Connection detail</b>      |                                           |
| Conductor size                | 0.14 mm <sup>2</sup>                      |
| Length of cable (L)           | 2 m <sup>1)</sup>                         |
| <b>Material</b>               |                                           |
| Housing                       | Metal, Stainless steel V4A (1.4404, 316L) |
| Front screen                  | Plastic, PMMA                             |
| Cable                         | Plastic, PVC                              |
| <b>Weight</b>                 | 70 g                                      |

<sup>1)</sup> Do not bend below 0 °C.

## Ambient data

|                         |                             |
|-------------------------|-----------------------------|
| <b>Enclosure rating</b> | IP67<br>IP69K <sup>1)</sup> |
|-------------------------|-----------------------------|

<sup>1)</sup> According to ISO 20653:2013-03.

<sup>2)</sup> Temperature stability following adjustment  $\pm 10\text{ °C}$ .

|                                      |                                 |
|--------------------------------------|---------------------------------|
| <b>Ambient operating temperature</b> | -25 °C ... +55 °C <sup>2)</sup> |
| <b>Ambient temperature, storage</b>  | -30 °C ... +75 °C               |
| <b>UL File No.</b>                   | NRKH.E348498 & NRKH7.E348498    |

<sup>1)</sup> According to ISO 20653:2013-03.

<sup>2)</sup> Temperature stability following adjustment +/-10 °C.

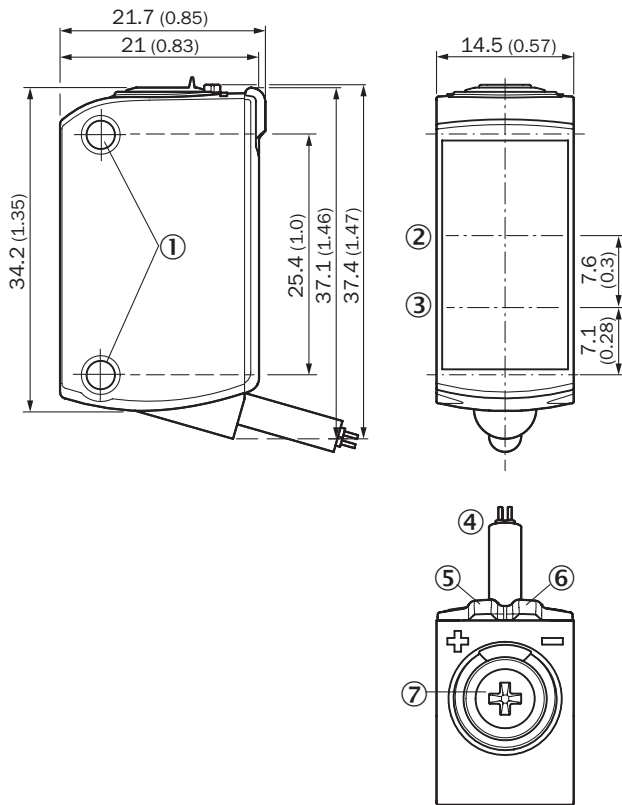
## Certificates

|                                                          |   |
|----------------------------------------------------------|---|
| <b>EU declaration of conformity</b>                      | ✓ |
| <b>UK declaration of conformity</b>                      | ✓ |
| <b>ACMA declaration of conformity</b>                    | ✓ |
| <b>Moroccan declaration of conformity</b>                | ✓ |
| <b>China RoHS</b>                                        | ✓ |
| <b>ECOLAB certificate</b>                                | ✓ |
| <b>cULus certificate</b>                                 | ✓ |
| <b>Photobiological safety (DIN EN 62471) certificate</b> | ✓ |

## Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270903 |
| <b>ECLASS 5.1.4</b>   | 27270903 |
| <b>ECLASS 6.0</b>     | 27270903 |
| <b>ECLASS 6.2</b>     | 27270903 |
| <b>ECLASS 7.0</b>     | 27270903 |
| <b>ECLASS 8.0</b>     | 27270903 |
| <b>ECLASS 8.1</b>     | 27270903 |
| <b>ECLASS 9.0</b>     | 27270903 |
| <b>ECLASS 10.0</b>    | 27270904 |
| <b>ECLASS 11.0</b>    | 27270904 |
| <b>ECLASS 12.0</b>    | 27270903 |
| <b>ETIM 5.0</b>       | EC001821 |
| <b>ETIM 6.0</b>       | EC001821 |
| <b>ETIM 7.0</b>       | EC002719 |
| <b>ETIM 8.0</b>       | EC002719 |
| <b>UNSPSC 16.0901</b> | 39121528 |

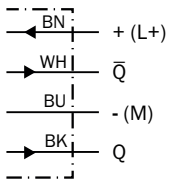
## Dimensional drawing GTB6, GTE6, GL6, GSE6 Inox, cable (with male connector)



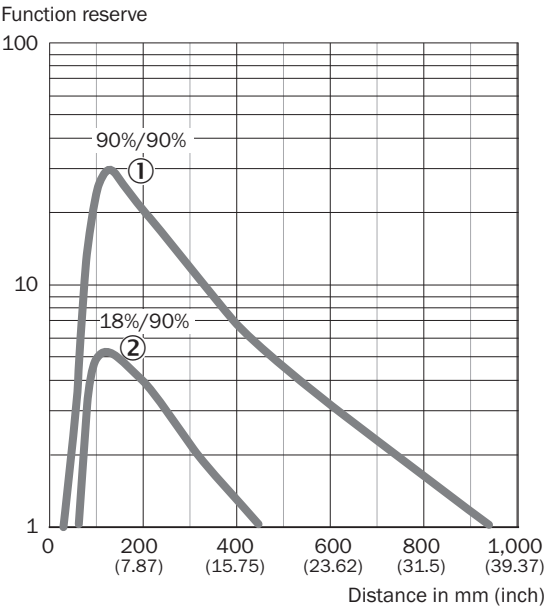
Dimensions in mm (inch)

- ① M3 mounting hole
- ② Optical axis, receiver
- ③ Optical axis, sender
- ④ Connection
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ LED indicator green: Supply voltage active
- ⑦ Potentiometer

## Connection diagram Cd-094

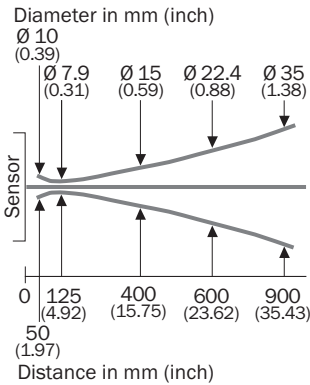


Characteristic curve GTE6 Inox, IR, Standard

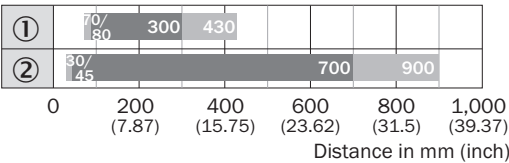


- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor

Light spot size GTE6 Inox, IR, Standard



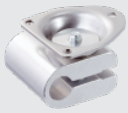
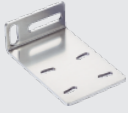
Sensing range diagram GTE6 Inox, IR, Standard



- Sensing range
- Sensing range max.
- ① Sensing range on gray, 18% remission factor
- ② Sensing range on white, 90% remission factor

## Recommended accessories

Other models and accessories → [www.sick.com/G6](http://www.sick.com/G6)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                     | Type           | part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                                                                                                       |                |          |
|    | <ul style="list-style-type: none"> <li><b>Description:</b> Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Aluminum (clamp bar), stainless steel (bracket)</li> <li><b>Items supplied:</b> Clamp bar mounting and clamp function, mounting bracket, mounting hardware</li> </ul>     | BEF-KHS-IS12G6 | 2086865  |
|    | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for wall mounting</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel</li> <li><b>Items supplied:</b> Mounting hardware included</li> <li><b>Suitable for:</b> W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S</li> </ul> | BEF-W100-A     | 5311520  |
|    | <ul style="list-style-type: none"> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel (1.4301)</li> <li><b>Suitable for:</b> W4S, W4S</li> </ul>                                                                                                                                                                                                           | BEF-WN-G6      | 2062909  |
|   | <ul style="list-style-type: none"> <li><b>Description:</b> Plate N11N for universal clamp bracket</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)</li> <li><b>Items supplied:</b> Universal clamp (5322627), mounting hardware</li> <li><b>Usable for:</b> DeltaPac, Glare, WTD20E</li> </ul>       | BEF-KHS-N11N   | 2071081  |
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                                                                                       |                |          |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M8, 4-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> 0.14 mm² ... 0.5 mm²</li> </ul>                                                                                          | STE-0804-G     | 6037323  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li> </ul>                                                                                                   | STE-1204-G     | 6009932  |

## 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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