



GTE6-F0411VS01

G6

MINIATURE PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
GTE6-F0411VS01	1093662

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

### Detailed technical data

#### Features

<b>Device type</b>	Photoelectric sensors
<b>Functional principle</b>	Photoelectric proximity sensor
<b>Functional principle detail</b>	Energetic
<b>Sensing range max.</b>	10 mm ... 300 mm <sup>1)</sup>
<b>Sensing range</b>	15 mm ... 250 mm
<b>Polarisation filters</b>	No
<b>Emitted beam</b>	
Light source	PinPoint LED <sup>2)</sup>
Type of light	Visible red light
Light spot size (distance)	Ø 6 mm (100 mm)
<b>Key LED figures</b>	
Wave length	650 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.

## Electrical data

<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
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>Switching mode</b>	Light/dark switching
<b>Output function</b>	Complementary switching output
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</sup>

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

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

## Mechanical data

<b>Housing</b>	Rectangular
<b>Dimensions (W x H x D)</b>	15 mm x 44 mm x 22 mm
<b>Connection</b>	Cable with M12 male connector, 4-pin <sup>1)</sup>
<b>Connection detail</b>	
Length of cable (L)	2,000 mm <sup>1)</sup>
<b>Material</b>	
Housing	Stainless steel, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
Cable	PVC
<b>Weight</b>	70 g

<sup>1)</sup> Do not bend below 0 °C.

## Ambient data

<b>Enclosure rating</b>	IP67 IP69K <sup>1)</sup>
<b>Ambient operating temperature</b>	-25 °C ... +55 °C <sup>2)</sup>

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

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

<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.

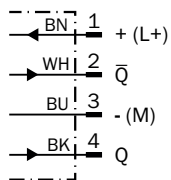
<sup>2)</sup> Temperature stability following adjustment +/-10 °C.

### Classifications

<b>eCl@ss 5.0</b>	27270903
<b>eCl@ss 5.1.4</b>	27270903
<b>eCl@ss 6.0</b>	27270903
<b>eCl@ss 6.2</b>	27270903
<b>eCl@ss 7.0</b>	27270903
<b>eCl@ss 8.0</b>	27270903
<b>eCl@ss 8.1</b>	27270903
<b>eCl@ss 9.0</b>	27270903
<b>eCl@ss 10.0</b>	27270904
<b>eCl@ss 11.0</b>	27270904
<b>eCl@ss 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

### Connection diagram

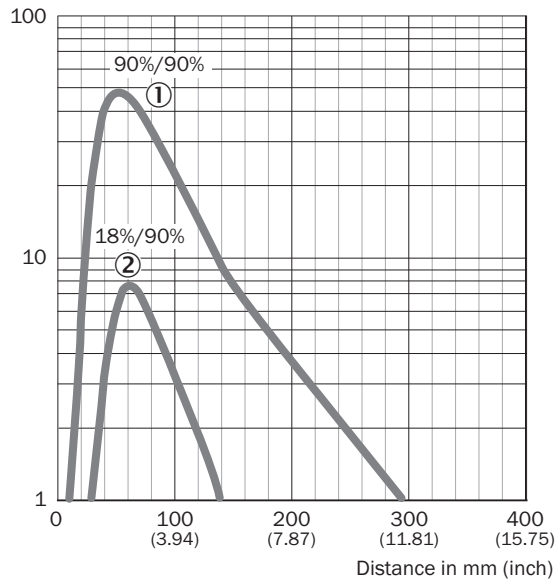
Cd-084



### Characteristic curve

GTE6 Inox, Red, Standard

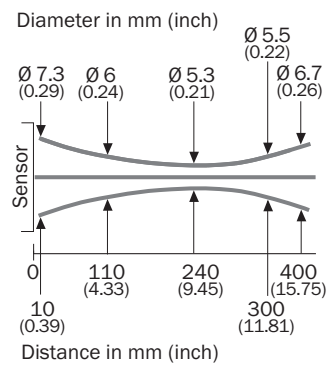
Function reserve



- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

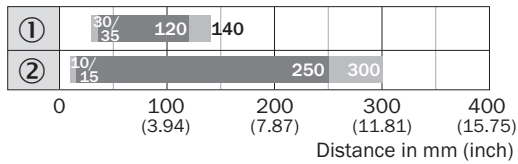
### Light spot size

GTE6 Inox, Red, Standard



### Sensing range diagram

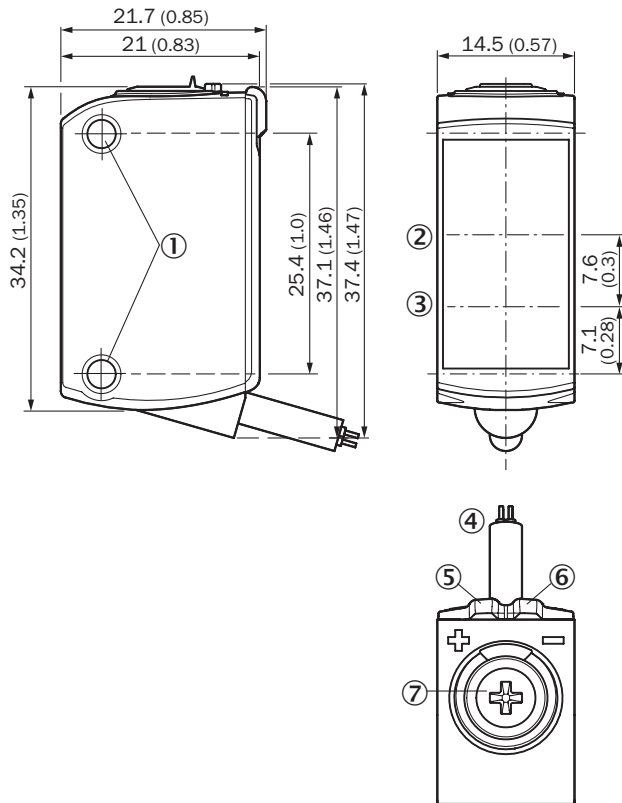
GTE6 Inox, Red, Standard



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

### Dimensional drawing (Dimensions in mm (inch))

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



- 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

## Recommended accessories

Universal bar clamp systems

Mounting brackets and plates

Mounting brackets

Plug connectors and cables

Connecting cables

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

Brief description	Type	Part no.
<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
Brief description	Type	Part no.
<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</li> </ul>	BEF-W100-A	5311520
Brief description	Type	Part no.
<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Authorizations:</b> Ecolab, UL</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Note:</b> This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid &amp; hydrogen peroxide (H2O2)</li> <li>• <b>Application:</b> Hygienic and washdown zones</li> </ul>	DOL-1204-G05MNI	6052615

## 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](http://www.sick.com)