



# GTB6-P0041S103

G6

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

Type	part no.
GTB6-P0041S103	1118025

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>	Background suppression
<b>Sensing range max.</b>	≥ 50 mm
<b>Sensing range</b>	50 mm ... 300 mm <sup>1)</sup>
<b>Emitted beam</b>	
Light source	LED <sup>2)</sup>
Type of light	Infrared light
Light spot size (distance)	Ø 9 mm (100 mm)
<b>Key LED figures</b>	
Wave length	850 nm
<b>Adjustment</b>	None
<b>Special features</b>	Sensing range preset to 300 mm based on objects to be sensed with 90 % reflectivity

<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 U<sub>B</sub></b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	± 10 % <sup>2)</sup>
<b>Current consumption</b>	30 mA <sup>3)</sup>
<b>Protection class</b>	III

<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<sub>V</sub> tolerances.

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

<sup>4)</sup> At U<sub>V</sub> > 24 V, I<sub>A</sub> max. = 50 mA.

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

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

<sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

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

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

<b>Digital output</b>	Type	PNP
	Switching mode	Light switching
	Signal voltage PNP HIGH/LOW	$V_S - (\leq 3 \text{ V}) / \text{approx. } 0 \text{ V}$
	Output current $I_{\text{max}}$	$\leq 100 \text{ mA}^4)$
	Response time	$< 1 \text{ ms}^5)$
	Switching frequency	$500 \text{ Hz}^6)$
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</sup>	

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

<b>Housing</b>	Rectangular	
<b>Dimensions (W x H x D)</b>	12 mm x 31.5 mm x 21 mm	
<b>Connection</b>	Cable with M12 male connector, 4-pin, 300 mm <sup>1)</sup>	
<b>Connection detail</b>	Conductor size	0.14 mm <sup>2</sup>
	Length of cable (L)	300 mm <sup>1)</sup>
<b>Material</b>	Housing	Plastic, ABS/PC
	Front screen	Plastic, PMMA
	Cable	Plastic, PUR
<b>Weight</b>	20 g	

1) Do not bend below 0 °C.

## Ambient data

<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-25 °C ... +55 °C <sup>1)</sup>
<b>Ambient temperature, storage</b>	-40 °C ... +70 °C
<b>UL File No.</b>	NRKH.E348498 & NRKH7.E348498

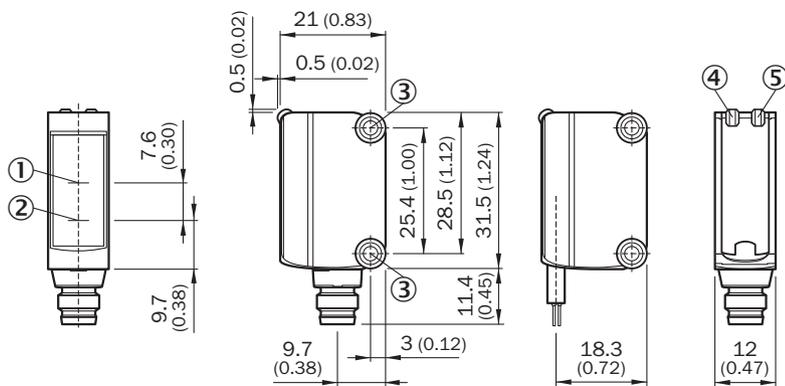
1) Temperature stability following adjustment +/-10 °C.

## Classifications

<b>ECLASS 5.0</b>	27270904
<b>ECLASS 5.1.4</b>	27270904
<b>ECLASS 6.0</b>	27270904

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

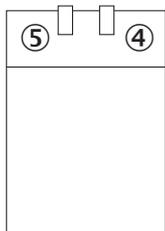
**Dimensional drawing**



Dimensions in mm (inch)

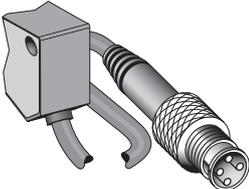
- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

**Adjustments No adjustment possibility**

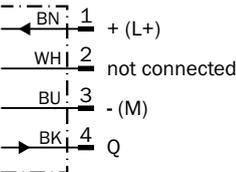


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

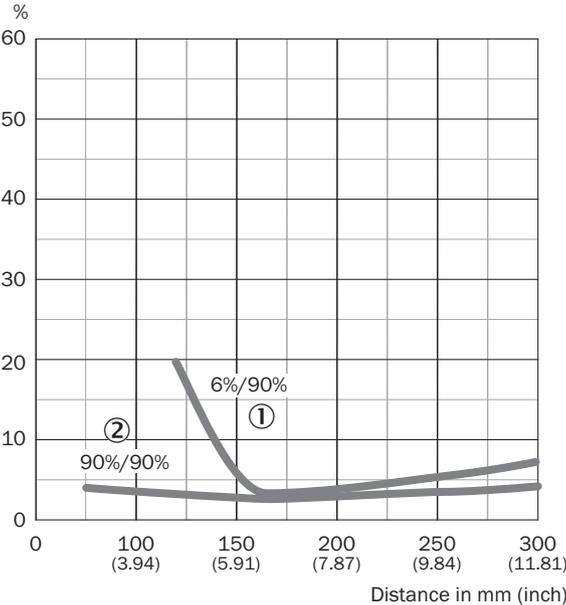
Connection type



Connection diagram Cd-066

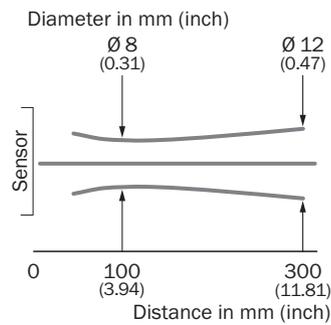


Characteristic curve

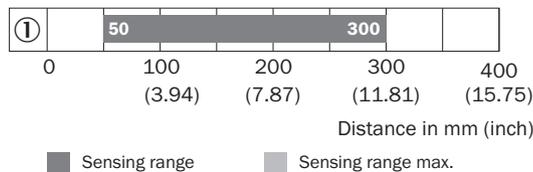


- ① Sensing range on black, 6% remission factor
- ② Sensing range on white, 90% remission factor

### Light spot size



### Sensing range diagram



① 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.
<b>Mounting systems</b>			
	<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>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> 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

## 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)