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DATA SHEET

# GTE6-P4201S63

G6  
Photoelectric sensors

**SICK** Sensor Intelligence

## PHOTOELECTRIC SENSORS

## GTE6-P4201S63

## ORDERING INFORMATION

Type	part no.
GTE6-P4201S63	1083159

Further device versions and accessories at [www.sick.com/G6](http://www.sick.com/G6)



Illustration may differ

## DETAILED TECHNICAL DATA

## FEATURES

Functional principle	Photoelectric proximity sensor	
Functional principle detail	Energetic	
Sensing range max.	5 mm ... 110 mm <sup>1)</sup>	
Sensing range	20 mm ... 45 mm <sup>2)</sup>	
Emitted beam	Light source	PinPoint LED <sup>3)</sup>
	Type of light	Visible red light
	Light spot size (distance)	2 mm x 50 mm (50 mm)
Key LED figures	Wave length	650 nm
	Adjustment	Mechanical spindle, 5 turns

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

<sup>2)</sup> Optimal.

<sup>3)</sup> Average service life: 100,000 h at T<sub>u</sub> = +25 °C.

**ELECTRONICS**

Supply voltage $U_B$	10 V DC ... 30 V DC <sup>1)</sup>										
Ripple	< 5 V <sub>pp</sub> <sup>2)</sup>										
Current consumption	30 mA <sup>3)</sup>										
Protection class	III										
Digital output	<table border="0"> <tr> <td>Type</td> <td>PNP</td> </tr> <tr> <td>Switching mode</td> <td>Light/dark switching</td> </tr> <tr> <td>Output current <math>I_{max}</math></td> <td>≤ 100 mA <sup>4)</sup></td> </tr> <tr> <td>Response time</td> <td>&lt; 0.5 ms <sup>5)</sup></td> </tr> <tr> <td>Switching frequency</td> <td>1,000 Hz <sup>6)</sup></td> </tr> </table>	Type	PNP	Switching mode	Light/dark switching	Output current $I_{max}$	≤ 100 mA <sup>4)</sup>	Response time	< 0.5 ms <sup>5)</sup>	Switching frequency	1,000 Hz <sup>6)</sup>
Type	PNP										
Switching mode	Light/dark switching										
Output current $I_{max}$	≤ 100 mA <sup>4)</sup>										
Response time	< 0.5 ms <sup>5)</sup>										
Switching frequency	1,000 Hz <sup>6)</sup>										
Circuit protection	A <sup>7)</sup> B <sup>8)</sup> C <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  $U_V > 24$  V,  $I_A$  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 =  $V_{cc}$  connections reverse-polarity protected.

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

<sup>9)</sup> C = interference suppression.

**MECHANICS**

Housing	Rectangular						
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm						
Connection	Male connector M8, 4-pin <sup>1)</sup>						
Material	<table border="0"> <tr> <td>Housing</td> <td>Plastic, ABS/PC</td> </tr> <tr> <td>Front screen</td> <td>Plastic, PMMA</td> </tr> <tr> <td>Cable</td> <td>Plastic, PVC</td> </tr> </table>	Housing	Plastic, ABS/PC	Front screen	Plastic, PMMA	Cable	Plastic, PVC
Housing	Plastic, ABS/PC						
Front screen	Plastic, PMMA						
Cable	Plastic, PVC						
Weight	60 g						

<sup>1)</sup> Do not bend below 0 °C.

**AMBIENT DATA**

Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +55 °C <sup>1)</sup>
Ambient temperature, storage	-40 °C ... +70 °C

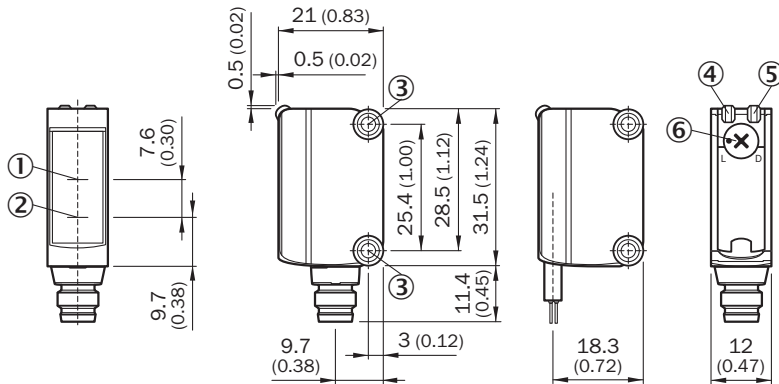
<sup>1)</sup> Temperature stability following adjustment +/-10 °C.

**CERTIFICATES**

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓

China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

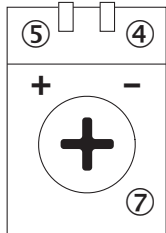
**DIMENSIONAL DRAWING**



Dimensions in mm (inch)

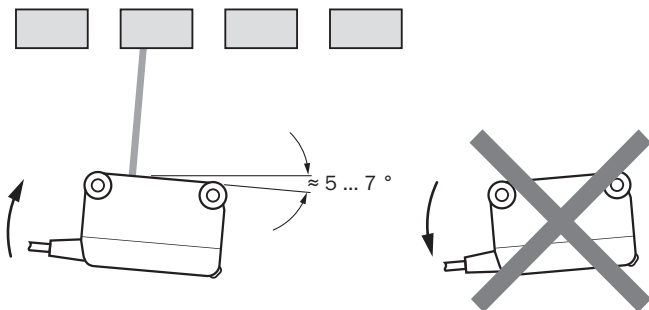
- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

**ADJUSTMENTS ADJUSTMENT POSSIBILITY**

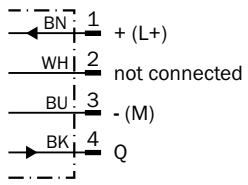


- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑦ Sensitivity control: potentiometer

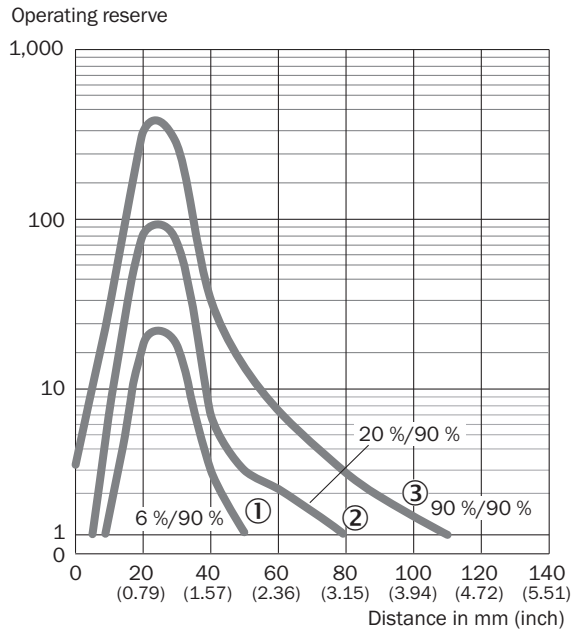
**INSTALLATION NOTE MOUNTING**



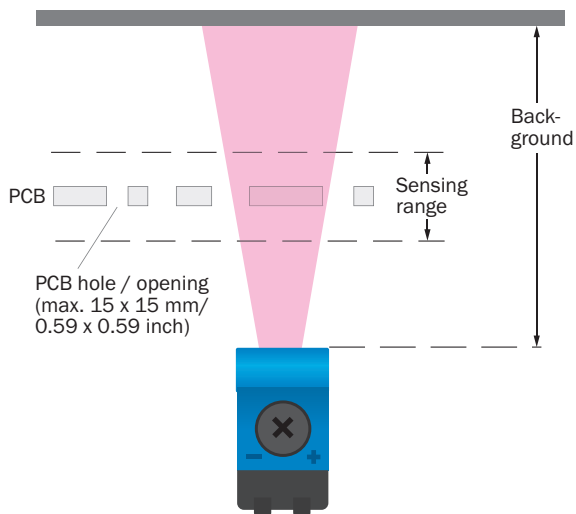
**CONNECTION DIAGRAM CD-066**



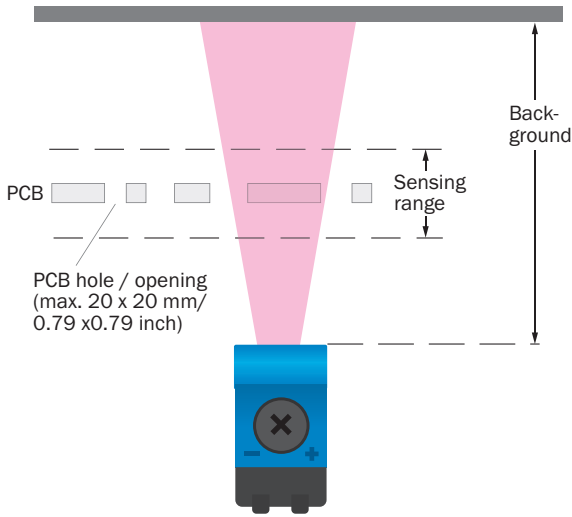
**CHARACTERISTIC CURVE**



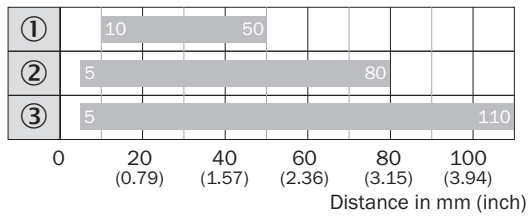
**LIGHT SPOT SIZE**



**LIGHT SPOT SIZE**



**SENSING RANGE DIAGRAM**



■ Sensing range, typ. max.

- ① Sensing range range on black, 6 % remission
- ② Sensing range on gray, 20 % remission
- ③ Sensing range on white, 90 % remission

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/1083159](http://www.sick.com/1083159)



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SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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