



Photoelectric sensors  
G2S, Photoelectric proximity sensor, Background  
suppression

GTB2S-P5311



**Model Name** > **GTB2S-P5311**  
**Part No.** > **1062872**



Illustration may differ

**At a glance**

- Reliable detection of black and white objects at distances up to 15 mm
- Background blanking from 18 mm
- Laser-type light spot 2 mm in diameter at a distance of 8 mm

**Your benefits**

- Faster machine cycles due to the brilliant, small light spots that allow accurate switching points and small gaps between objects
- Universal use, since the sensors detect objects independent of their remission, object contours and backgrounds
- High throughput and less downtime due to the sensor's ability to suppress active and passive interference in industrial environments.
- The 45-degree tilted cable entry offers maximum installation flexibility with additional soft rubber bearings to absorb vibrations and tensile loads
- The powerful PinPoint LED permits reliable detection of jet-black and poorly reflective objects



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	7.7 mm x 21.8 mm x 13.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	1 mm ... 18 mm <sup>1)</sup>
Sensing range:	4 mm ... 15 mm <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	640 nm
Light spot size (distance):	Ø 2 mm (8 mm)
Background suppression typ. from:	20 mm

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033) <sup>2)</sup> Object with 6 % remission <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

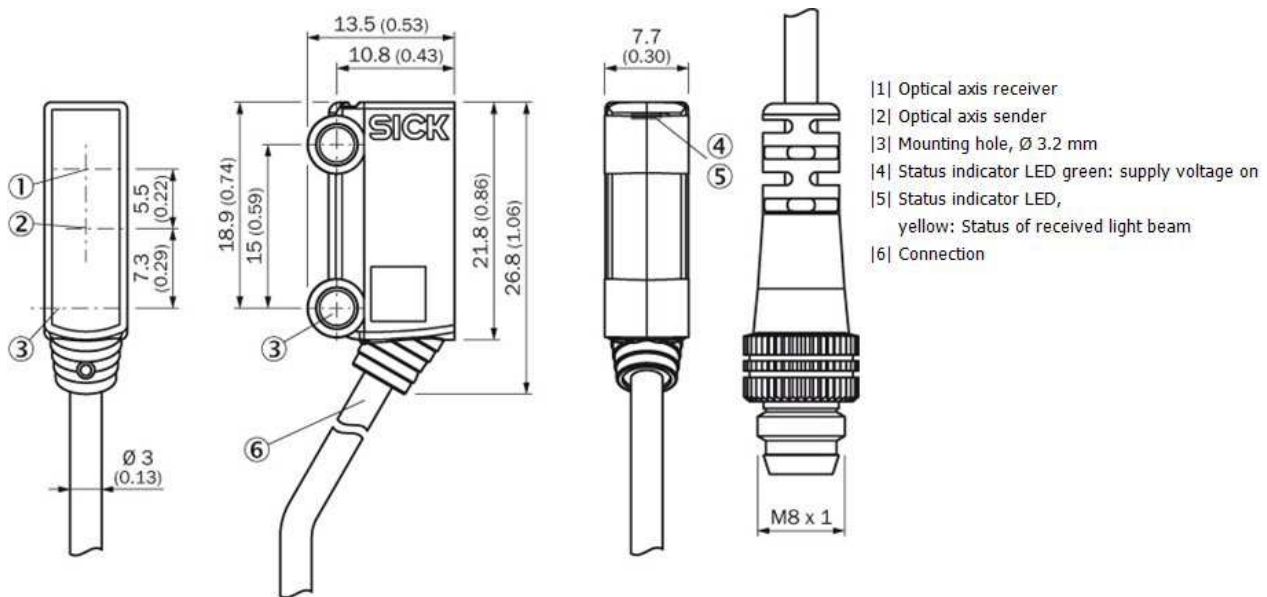
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	≤ 5 Vpp <sup>2)</sup>
Power consumption:	≤ 20 mA <sup>3)</sup>
Output type:	PNP
Switching mode:	Light switching
Output current I <sub>max.</sub> :	< 50 mA

Response time:	< 0.6 ms <sup>4)</sup>
Switching frequency:	800 Hz <sup>5)</sup>
Connection type:	Cable with connector M8, 3-pin, 200 mm <sup>6)</sup>
Cable diameter:	Ø 3 mm
Circuit protection:::	A, C, D <sup>7)</sup> 8) 9)
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-25 °C ... +50 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493
Housing material:	ABS, Plastic

1) Limit values, operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of  $V_S$  tolerances 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) Do not bend below 0 °C 7) A =  $V_S$  connections reverse-polarity protected 8) C = interference suppression 9) D = outputs overcurrent and short-circuit protected

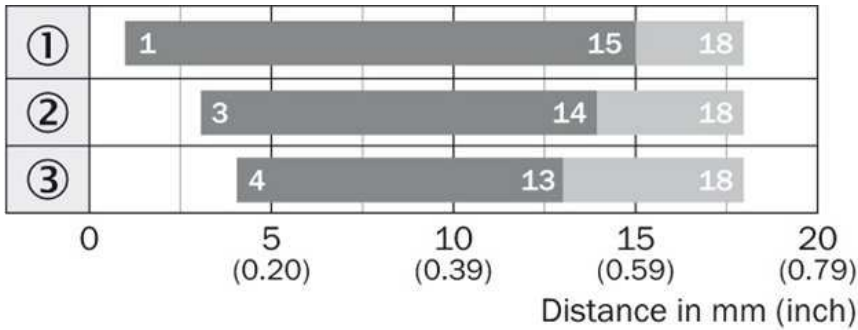
### Dimensional drawing



Connection diagram



Sensing range diagram



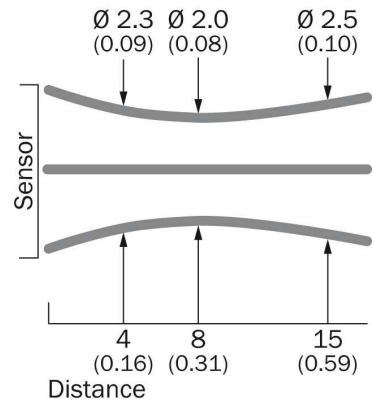
- |1| Sensing range on white, 90 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on black, 6 % remission

■ Sensing range      ■ Sensing range typ. max.

### Connection type



### Light spot size



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