

# Photoelectric slot sensor

## GL5-J/43a/115



- Miniature design
- Optimized for the detection of small parts
- High switching frequency
- Simple and fast mounting
- Clearly visible LED functional display

Miniature photoelectric slot sensor for the detection of small parts, J design, fork width 5 mm, infrared light, PNP outputs, fixed cable



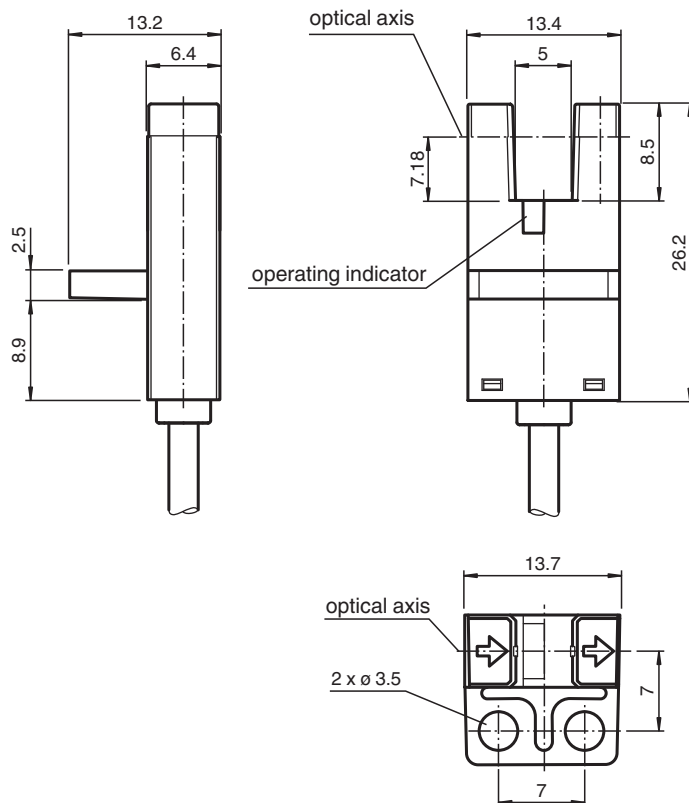
### Function

The GL5 miniature slot sensor compares a high optical performance in a small housing and is optimized to the requirements in semiconductors industry for small part detection. A wide voltage range of 5 - 24 V DC and the fastest switching frequency of 5 kHz in its class stands for the quality of this sensor. The integrated aperture allows the small part detection with a minimum object size of 0.8 x 1.8 mm. The sensor offers antivalent npn or pnp outputs. Due to a variety of different housings and an optimized housing concept offers the sensor a maximum of freedom in a crowded mounting environment.

### Application

- Detection of lead frames
- Detection of cam positions
- Detection of limit positions of moving objects
- Position detection of wafer cases

### Dimensions



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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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## Technical Data

General specifications			
Light source		IRED	
Light type		Infrared, continuous light , 940 nm	
Target size		0.8 x 1.8 mm	
Slot width		5 mm	
Slot depth		8.5 mm	
Ambient light limit		1000 Lux	
Functional safety related parameters			
MTTF <sub>d</sub>		3760 a	
Mission Time (T <sub>M</sub> )		20 a	
Diagnostic Coverage (DC)		0 %	
Indicators/operating means			
Function indicator		red LED lights up when receiving the light beam	
Electrical specifications			
Operating voltage	U <sub>B</sub>	5 ... 24 V DC , class 2	
No-load supply current	I <sub>0</sub>	max. 20 mA	
Time delay before availability	t <sub>v</sub>	< 2 ms	
Output			
Switching type		light/dark on	
Signal output		2 PNP complementary , overvoltage protected	
Switching voltage		max. 30 V DC	
Switching current		max. 50 mA , resistive load	
Voltage drop	U <sub>d</sub>	max. 0.2 V at 10 mA max. 0.6 V at 50 mA	
Switching frequency	f	max. 5 kHz	
Response time		40 μs Light beam is not interrupted 80 μs Light beam is interrupted	
Repeat accuracy	R	0.03 mm	
Compliance with standards and directives			
Directive conformity			
EMC Directive 2004/108/EC		EN 60947-5-2:2007+A1:2012	
Standard conformity			
Standards		UL 60947-5-2	
Approvals and certificates			
UL approval		cULus Recognized, Class 2 Power Source	
CCC approval		CCC approval / marking not required for products rated ≤36 V	
Ambient conditions			
Ambient temperature		-25 ... 55 °C (-13 ... 131 °F)	
Storage temperature		-30 ... 80 °C (-22 ... 176 °F)	
Pollution degree		2	
Mechanical specifications			
Housing width		13.2 mm	
Housing height		13.4 mm	
Degree of protection		IP50	
Connection		2 m cable , 4 x 0.08 mm <sup>2</sup> , PVC	
Material			
Housing		PBT	
Mass		25 g	
Tightening torque, fastening screws		0.6 Nm	
Cable length		2 m	

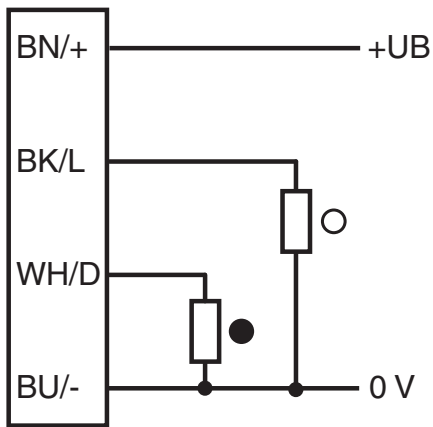
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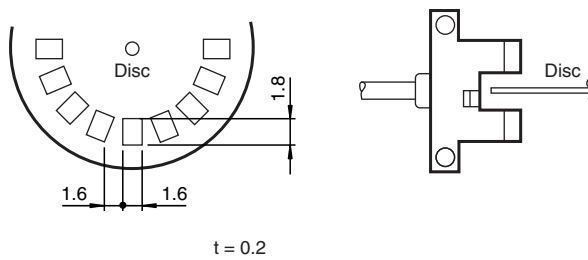
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**Connection Assignment**



○ = Light on  
● = Dark on

**Technical Features**



**Response frequency**

The response frequency is the value when the disc is rotated, see figure.

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