

Photoelectric slot sensor

GL5-J/25/45a/115e



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

Miniature slot sensor for small part detection, J design, 5 mm slot width, infrared light, NPN output, light on, 150 mm fixed cable with JST plug, 3-pin



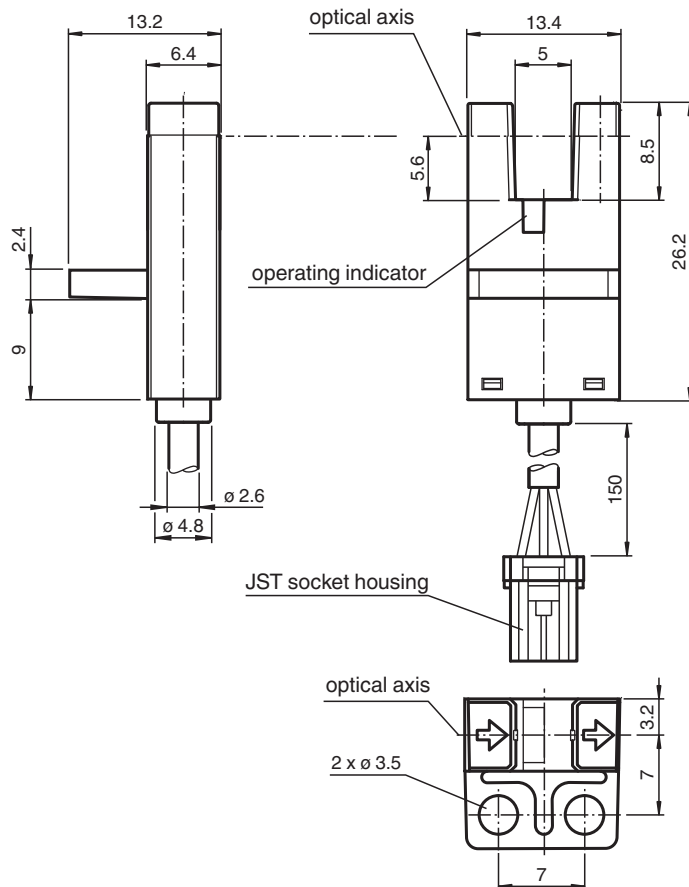
Function

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



Release date: 2023-12-28 Date of issue: 2023-12-28 Filename: 816806_eng.pdf

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 _d		3760 a	
Mission Time (T _M)		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 _B	5 ... 24 V DC , class 2	
No-load supply current	I ₀	max. 20 mA	
Time delay before availability	t _v	< 2 ms	
Output			
Switching type		light-on	
Signal output		1 NPN , overvoltage protected	
Switching voltage		max. 30 V DC	
Switching current		max. 50 mA , resistive load	
Voltage drop	U _d	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			
Degree of protection		IP50	
Connection		0.15 m cable with 3-pin JST connector	
Material			
Housing		PBT	
Mass		3 g	
Tightening torque, fastening screws		0.6 Nm	
Dimensions			
Height		13.4 mm	
Width		13.2 mm	
Length		26.2 mm	
Cable length		0.15 m	

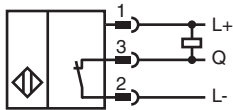
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Connection Assignment



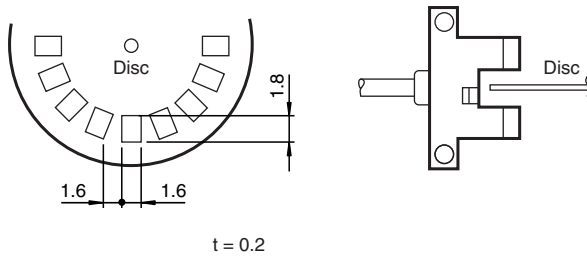
Connection



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	BU	(blue)
3	BK	(black)

Technical Features



Response frequency

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

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