

Photoelectric slot sensor

GL5-J/25/46a/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, PNP output, light on, 150 mm fixed cable with JST plug, 3-pin



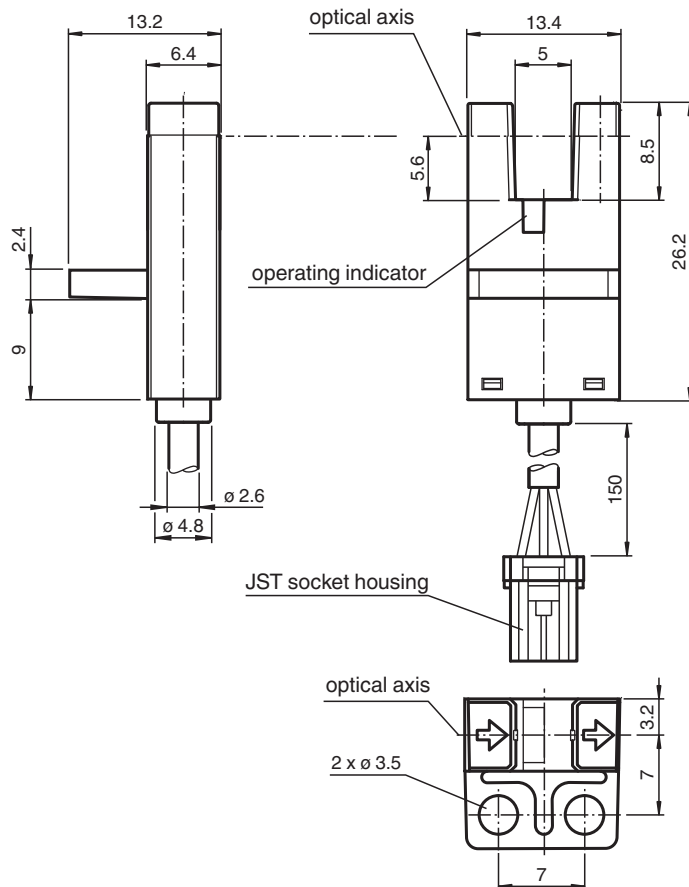
Function

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



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

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Technical Data

| General specifications | | | |
|---|----------------|--|--|
| Light source | | | IRE D |
| 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 PNP , 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 |

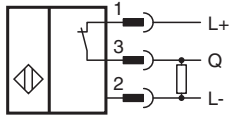
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Connection Assignment



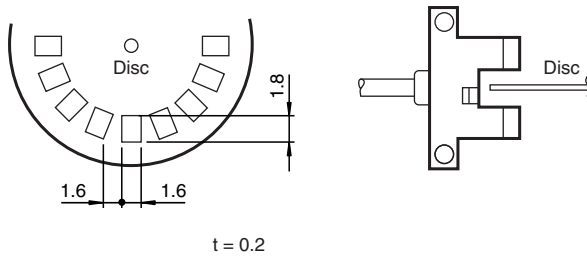
Connection



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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