

Model Number

GL5-F/28a/155

Photoelectric slot sensor
With flat connector, 4-pin

Features

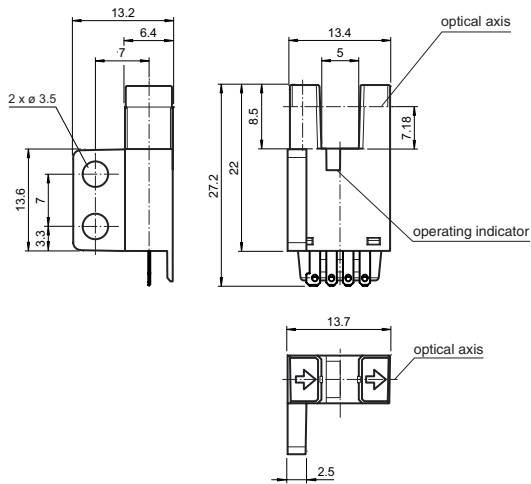
- Miniature design
- Optimized for the detection of small parts
- High switching frequency
- Simple and fast mounting
- Clearly visible LED functional display

Product information

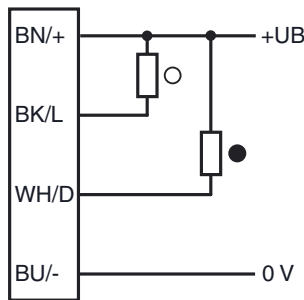
The GL5 miniature slot sensor compares a high optical performance in a small housing and is optimized to the requirements in semi-conductors industry for small part detection. A wide voltage range of 5 - 24 V DC and the fastest switching frequency of 5 kHz in its class stands for the quality of this 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.

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Dimensions



Electrical connection



- = Light on
- = Dark on

Technical data**General specifications**

| | |
|---------------------|------------------------------------|
| Light source | IREL |
| Light type | Infrared, continuous light, 940 nm |
| Target size | 0.8 x 1.8 mm |
| Fork width | 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 display | 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/dark on | |
| Signal output | 2 NPN complementary, 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 |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 55 °C (-13 ... 131 °F) |
| Storage temperature | -30 ... 80 °C (-22 ... 176 °F) |
| Pollution Degree | 2 |

Mechanical specifications

| | |
|-------------------|----------------------|
| Protection degree | IP50 |
| Connection | 4-pin flat connector |
| Material | |
| Housing | PBT |
| Mass | 3 g |

Compliance with standards and directives

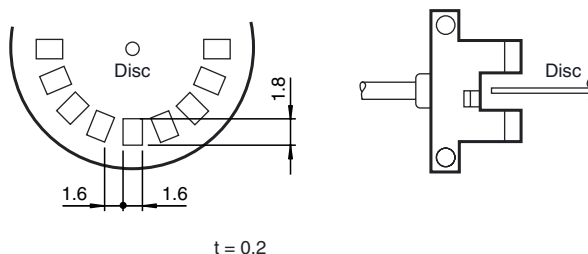
| | |
|---------------------------|---|
| Directive conformity | |
| EMC Directive 2004/108/EC | EN 60947-5-2:2007 |
| Standard conformity | |
| Product standard | EN 60947-5-2:2007 IEC 60947-5-2:2007 |

Approvals and certificates

| | |
|--------------|--|
| UL approval | cULus Recognized, Class 2 Power Source |
| CCC approval | Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval. |

Response frequency

The response frequency is the value when the disc, given in the figure below, is rotated.

**Applications**

The GL5 is suited for applications in the semiconductor and electronic industrial environment.

Typical applications include:

1. Detection of lead frames
2. Detection of cam positions
3. Detection of limit positions of moving objects
4. Position detection of wafer cases

Accessories**CBL SET GL5**

Connection cable for GL5 series

Other suitable accessories can be found at www.pepperl-fuchs.com