

Photoelectric slot sensor

GL5-L/43a/115-5M

- 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, L design, fork width 5 mm, infrared light, PNP outputs, fixed cable



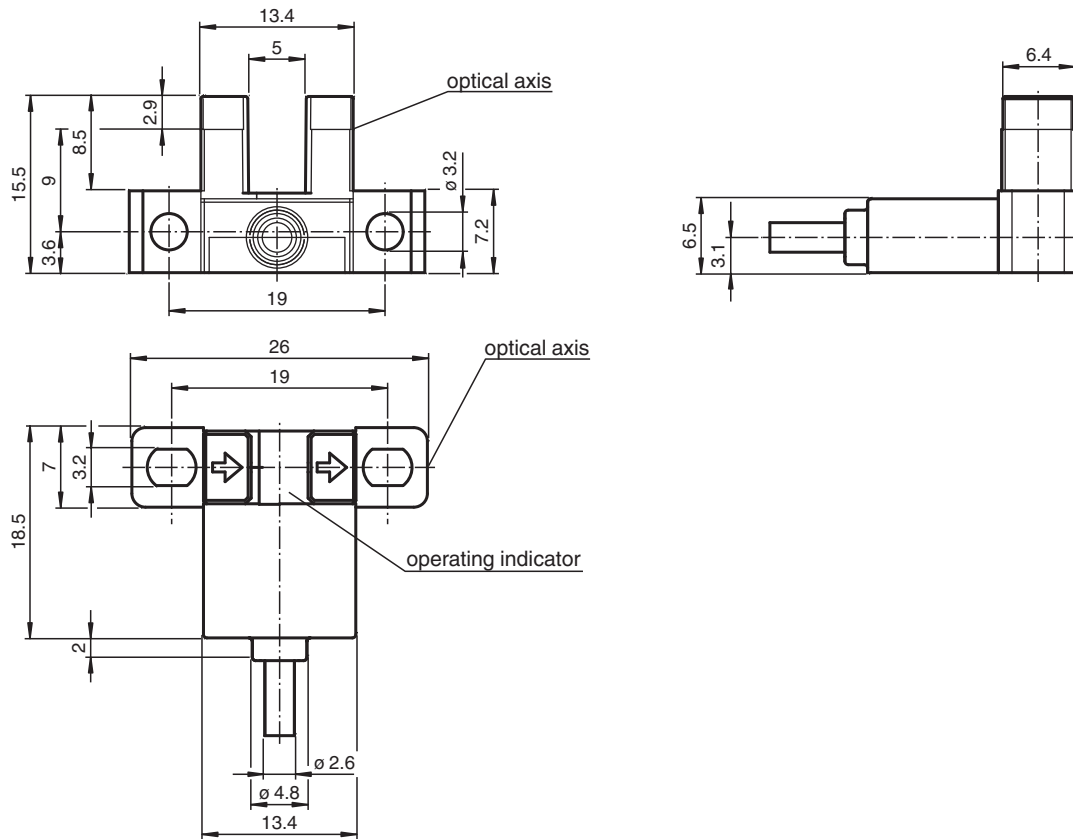
Function

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

Product Photo



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 |

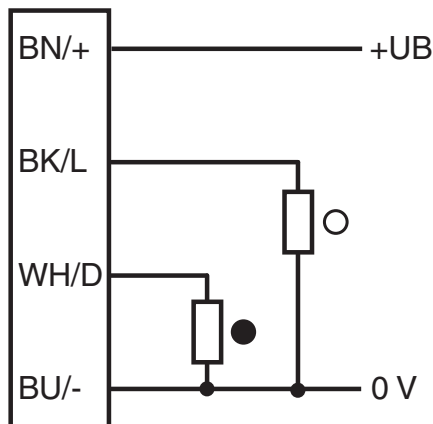
Output

| | | |
|---------------------|---|--|
| Switching type | light/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 _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 |

Technical Data

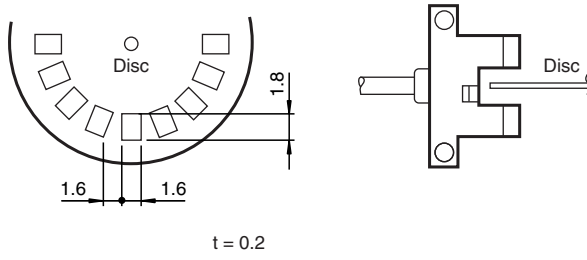
| | | |
|---|---|--|
| Repeat accuracy | R | 0.03 mm |
| Compliance with standards and directives | | |
| Directive conformity | | |
| EMC Directive 2004/108/EC | | EN 60947-5-2:2007+A1:2012 |
| Standard conformity | | |
| Standards | | UL 60947-5-2 |
| Approvals and certificates | | |
| UL approval | | 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 | | 5 m fixed cable |
| Material | | |
| Housing | | PBT |
| Mass | | 25 g |
| Tightening torque, fastening screws | | 0.6 Nm |
| Dimensions | | |
| Height | | 26 mm |
| Width | | 18.5 mm |
| Length | | 15.5 mm |
| Cable length | | 5 m |

Connection Assignment



- = Light on
- = Dark on

Technical Features



Response frequency

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