Model Number
GL5-T/43a/115
Photoelectric slot sensor with fixed cable

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 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.
**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**
- MTTFd: 3760 a
- Mission Time (TM): 20 a
- Diagnostic Coverage (DC): 0%

**Indicators/operating means**
- Function indicator: red LED lights up when receiving the light beam

**Electrical specifications**
- Operating voltage: $U_B = 5 \ldots 24$ V DC, class 2
- No-load supply current: $I_0 = \text{max. } 20$ 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: $U_d = \text{max. } 0.2$ V at 10 mA max. 0.6 V at 50 mA
- Switching frequency: $f = \text{max. } 5$ kHz
- Response time: $40 \mu$s Light beam is not interrupted
- $80 \mu$s 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)

**Mechanical specifications**
- Degree of protection: IP50
- Connection: 2 m PVC cable, 4 x 0.09 mm²
- Material:
  - Housing: PBT
  - Mass: 25 g
  - Tightening torque, fastening screws: 0.6 Nm
  - Cable length: 2 m

**Compliance with standards and directives**
- 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

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

![Response frequency diagram](image)

**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