

**Model Number**

**GL5-R/28a/115**

Photoelectric slot sensor  
with fixed cable

**Features**

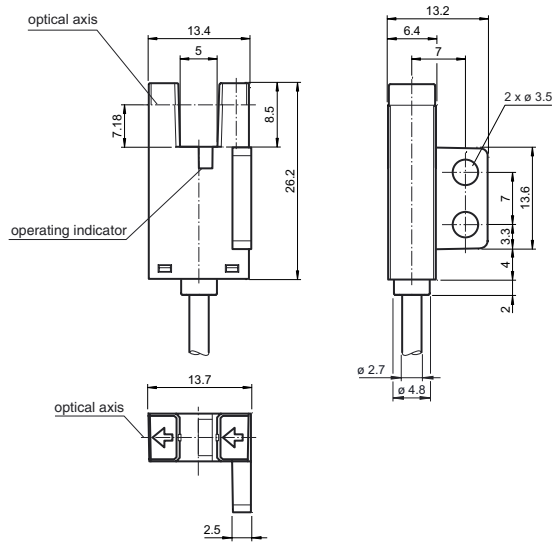
- Miniature design
- Optimized for the detection of small parts
- High switching frequency
- Simple and fast mounting
- Clearly visible LED functional display

**Product information**

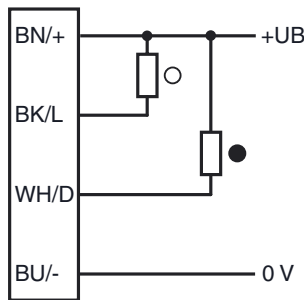
The GL5 miniature slot sensor compares a high optical performance in a small housing and is optimized to the requirements in semi-conductors industry for small part detection. A wide voltage range of 5 - 24 V DC and the fastest switching frequency of 5 kHz in its class stands for the quality of this 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	IRE D
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 <sub>d</sub>	3760 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Function display	red LED lights up when receiving the light beam
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**Electrical specifications**

Operating voltage	U <sub>B</sub>	5 ... 24 V DC, class 2
No-load supply current	I <sub>0</sub>	max. 20 mA
Time delay before availability	t <sub>v</sub>	< 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 <sub>d</sub>	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	2 m PVC cable, 4 x 0.09 mm <sup>2</sup>
Material	
Housing	PBT
Mass	25 g

**Compliance with standards and directives**

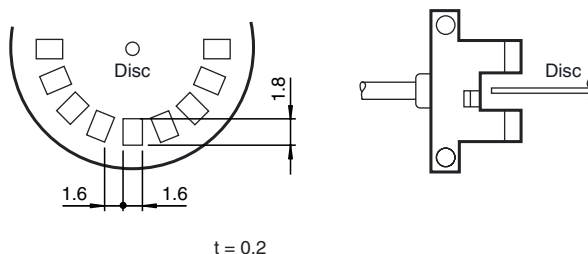
Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

**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