Dimensions

optical axis

19
13.4
5
8.5
2.9
13.8
11
5.5
5

operating indicator

6.2
22.2

25.4
19
optical axis
7
3.5
ø 3.2 (2x)

Model Number

GL5-U/28a/155

Photoelectric slot sensor
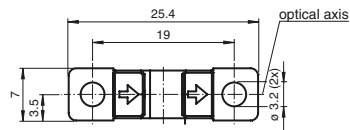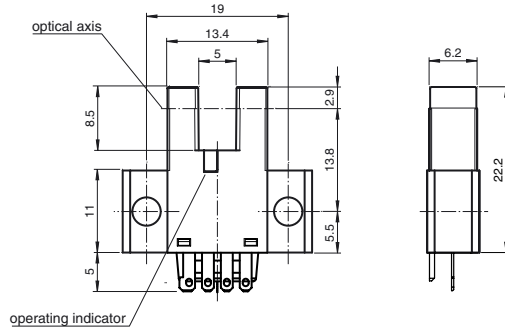With flat connector, 4-pin

Features

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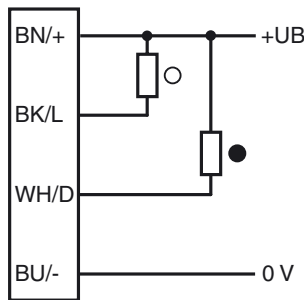- Clearly visible LED functional display

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.

Electrical connection

BN/+   +UB

BK/L

WH/D

BU/-   0 V

○ = Light on
● = Dark on

Subject to modifications without notice
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PEPPERL+FUCHS
SENSING YOUR NEEDS

1

Technical data

General specifications

Light source		IRED
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

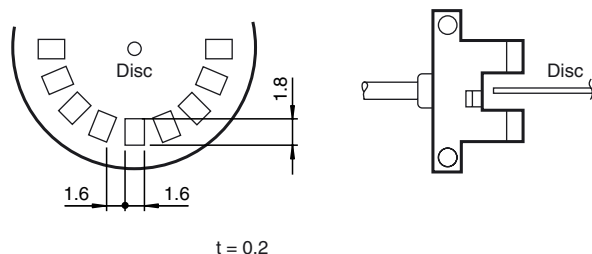### Compliance with standards and directives

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.

Accessories

CBL SET GL5
Connection cable for GL5 series

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

Response frequency

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

t = 0.2

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

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