

Photoelectric slot sensor GL5-L/43a/115a



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

Miniature slot sensor for small part detection, L design, 5 mm slot width, infrared light, PNP output, with 0.2 m fixed cable and M8 plug, 4-pin



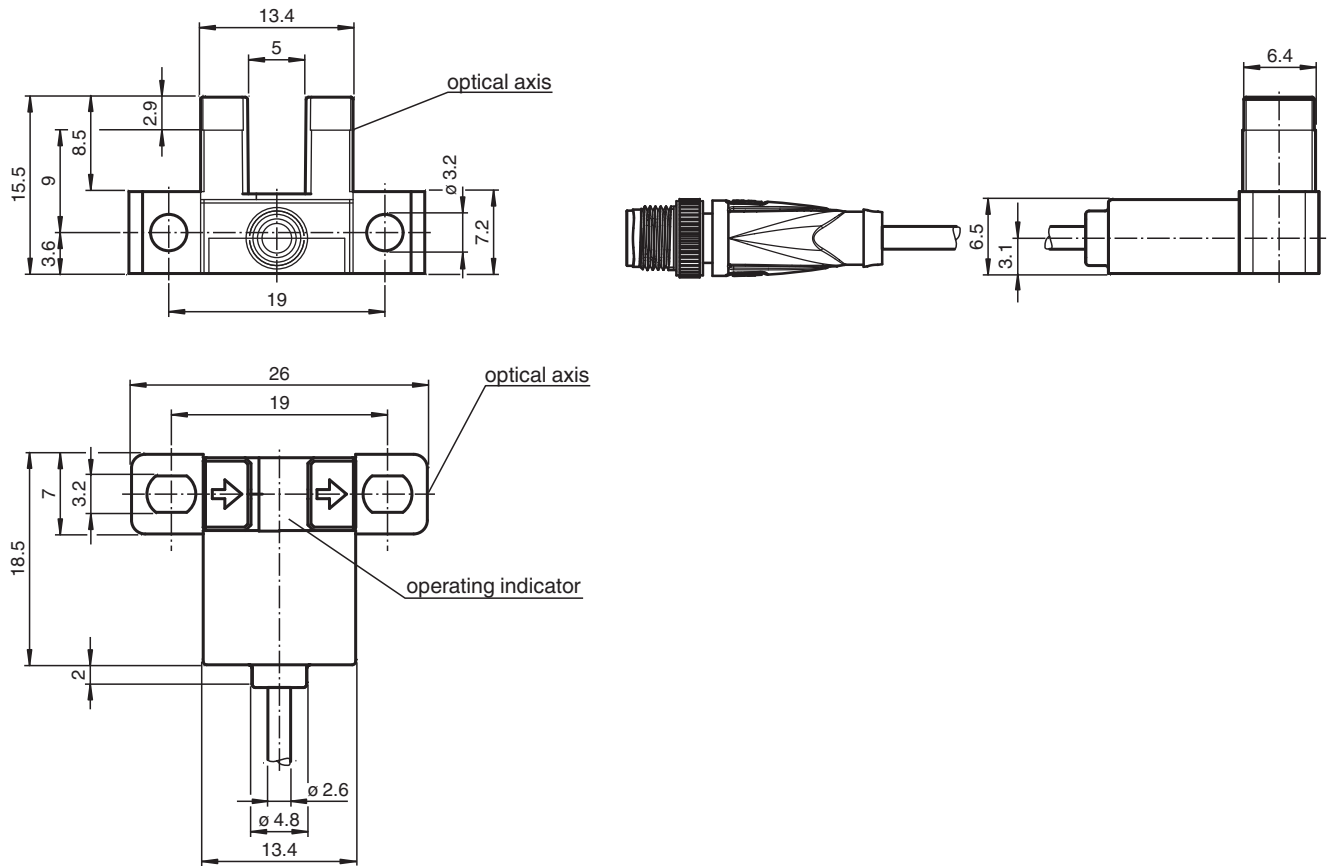
Function

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

Dimensions



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
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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

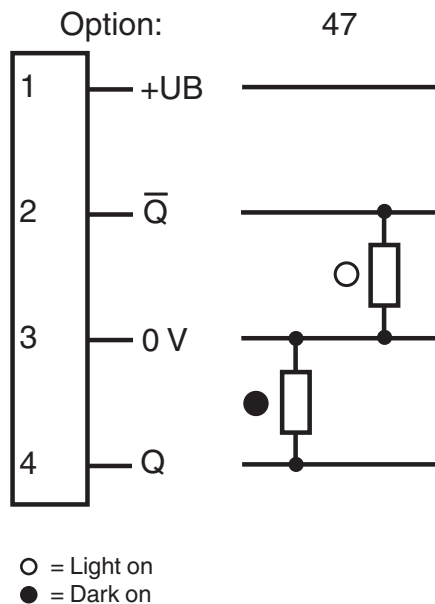
Output

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 μ s Light beam is not interrupted 80 μ s Light beam is interrupted

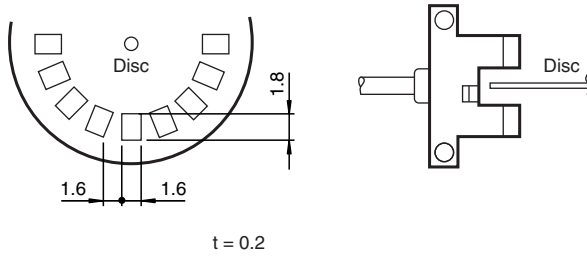
Technical Data

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		with 0.2 m fixed cable and M8 plug, 4-pin
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

Connection Assignment



Technical Features



Response frequency

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

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