

Miniature photoelectric slot sensor for the detection of small parts, Y 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.

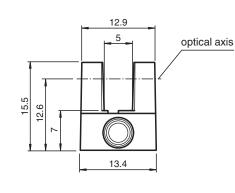
Application

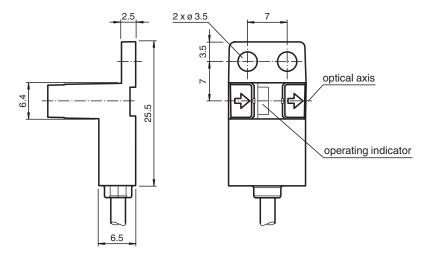
- Detection of lead frames
- · Detection of cam positions
- · Detection of limit positions of moving objects
- · Position detection of wafer cases

Refer to "General Notes Relating to Pepperl+Fuchs Product Information"



Dimensions





Technical Data

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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

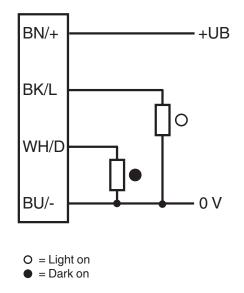
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Directive conformity EN 60947-5-2:2007+A1:2012 EMC Directive 2004/108/EC EN 60947-5-2:2007+A1:2012 Standard conformity UL 60947-5-2 Standards UL 60947-5-2 Approvals and certificates UL 60947-5-2 UL approval CUL us Recognized, Class 2 Power Source CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions -25 55 °C (-13 131 °F) Storage temperature -30 80 °C (-22 176 °F) Pollution degree 2	Technical Data		
Compliance with standards and directives Directive conformity EN 60947-5-2:2007+A1:2012 Standard conformity UL 60947-5-2 Standards UL 60947-5-2 Approvals and certificates UL 60947-5-2 UL approval CCC approval / Marking not required for products rated ≤36 V Ambient conditions CCC approval / marking not required for products rated ≤36 V Ambient temperature -25 55 °C (-13 131 °F) Storage temperature -30 80 °C (-22 176 °F) Pollution degree 25.5 mm Housing width 13.4 mm Degree of protection 13.4 mm Degree of protection 2 m cable , 4 x 0.08 mm², PVC Material PBT Housing teight 6 Mass 25 g Tightening torque, fastening screws 0.6 Nm	Response time		40 μs Light beam is not interrupted 80 μs Light beam is interrupted
Descrive conformity EN 60947-5-2:2007+A1:2012 Standard conformity UL 60947-5-2:2007+A1:2012 Standards UL 60947-5-2 Approvals and certificates UL 60947-5-2 UL approval Image: CCC approval CCC approval / marking not required for products rated <36 V	Repeat accuracy	R	0.03 mm
EMC Directive 2004/108/EC EN 60947-5-2:2007+A1:2012 Standard conformity UL 60947-5-2 Standards UL 60947-5-2 Approvals and certificates cULus Recognized, Class 2 Power Source UL approval cULus Recognized, Class 2 Power Source CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions -2555 °C (-13 131 °F) Ambient temperature -2555 °C (-13 131 °F) Storage temperature -30 80 °C (-22 176 °F) Pollution degree 2 Mechanical specifications 13.4 mm Housing width 13.4 mm Pogree of protection IP50 Connection 1950 Material PBT Mass 25 g Tightening torque, fastening screws 0.6 Nm	Compliance with standards and directives		
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Storage temperatureImage: Storage temperature-30 80 °C (-22 176 °F)Pollution degree2Pollution degree2Mechanical specifications25.5 mmHousing widthS2.5 mmHousing heightImage: Storage temperatureDegree of protectionIP50ConnectionImage: Storage temperatureMaterialImage: Storage temperatureHousingImage: Storage temperatureMassS5 gTightening torque, fastening screwsImage: Storage temperature	Ambient conditions		
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Housing height13.4 mmDegree of protectionIP50Connection2 m cable , 4 x 0.08 mm² , PVCMaterialPBTHousingPBTMass25 gTightening torque, fastening screws0.6 Nm	Mechanical specifications		
Degree of protection IP50 Connection 2 m cable , 4 x 0.08 mm² , PVC Material PBT Mass 25 g Tightening torque, fastening screws 0.6 Nm	Housing width		25.5 mm
Connection 2 m cable, 4 x 0.08 mm², PVC Material PBT Mass 25 g Tightening torque, fastening screws 0.6 Nm	Housing height		13.4 mm
Material PBT Mass 25 g Tightening torque, fastening screws 0.6 Nm	Degree of protection		IP50
Housing PBT Mass 25 g Tightening torque, fastening screws 0.6 Nm	Connection		2 m cable , 4 x 0.08 mm ² , PVC
Mass 25 g Tightening torque, fastening screws 0.6 Nm	Material		
Tightening torque, fastening screws 0.6 Nm	Housing		PBT
	Mass		25 g
Cable length 2 m	Tightening torque, fastening screws		0.6 Nm
	Cable length		2 m

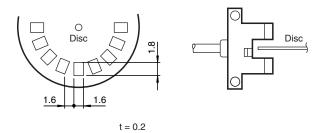
Connection Assignment



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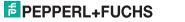
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Technical Features



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

Refer to "General Notes Relating to Pepperl+Fuchs Product Information"



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