Model Number

GL80-IR/32/40a/98a

Photoelectric slot sensor
with 3-pin, M8 x 1 connector

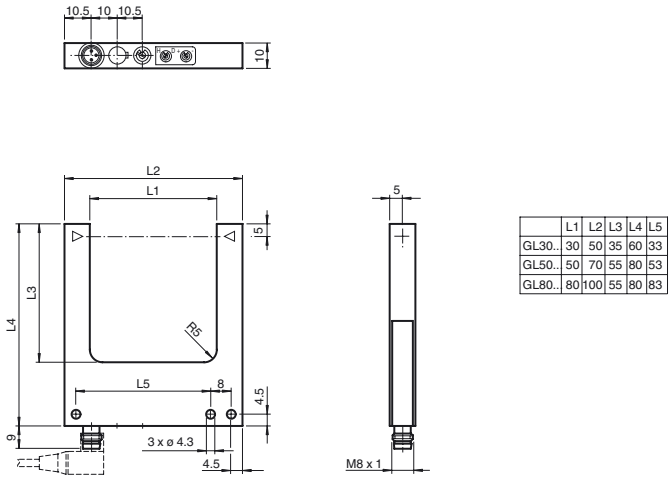
Features

- Optimized for the detection of small parts
- High switching frequency
- Multiple device installation possible, no mutual interference (no cross-talk)
- Sensitivity adjuster and light/dark switch as standard features of this series
- Infrared light
- Degree of protection IP67
- cULus approval
- Diecast zinc housing, powder coated

Product information

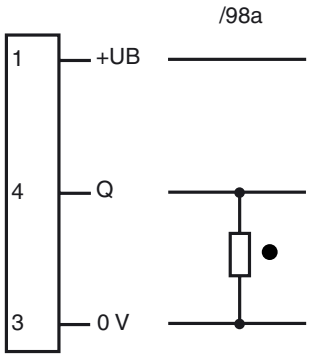
Photoelectric slot sensors offer vast installation benefits thanks to their housing design. When it comes to operation, these new generation devices boast features such as high resolution, high repeatability, automatic signal threshold adjustment, ambient light resistance, and detection of and/or light transmission through transparent objects. Cross-talk protection enables parallel installation of devices despite extremely high switching frequency. These characteristics guarantee reliable detection of small parts, from 0.3 mm, across the entire detection range, even in very fast moving applications.

Dimensions



	L1	L2	L3	L4	L5
GL30..	30	50	35	60	33
GL50..	50	70	55	80	53
GL80..	80	100	55	80	83

Electrical connection



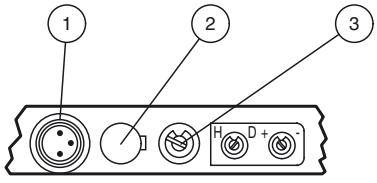
○ = Light on
● = Dark on

Pinout

Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
3	BU	(blue)
4	BK	(black)

Indicators/operating means



1	Functional display	red
2	Light-/dark switch	
3	Sensitivity adjuster	

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Technical data

General specifications		
Light source		IRED
Light type		modulated infrared light
Tests		EN 60947-5-2
Target size		0.3 mm
Slot width		80 mm
Slot depth		55 mm
Ambient light limit		100000 Lux
Functional safety related parameters		
$MTTF_d$		1290 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Function indicator		LED red in connector
Control elements		Sensitivity adjuster, light/dark switch
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC, class 2
Ripple		10 %
No-load supply current	I_0	≤ 15 mA
Output		
Switching type		light/dark on
Signal output		1 PNP, short-circuit protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Repeat accuracy		0.05 mm
Switching frequency	f	2 kHz
Response time		≤ 250 µs
Conformity		
Product standard		EN 60947-5-2
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-20 ... 75 °C (-4 ... 167 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		M8 connector, 3-pin
Material		
Housing		powder coated diecast zinc
Optical face		glass
Mass		125 g

Approvals and certificates	
CE conformity	CE
UL approval	cULus
CCC approval	CCC approval / marking not required for products rated ≤36 V

Operating principle

Photoelectric slot sensors are photoelectric sensors that operate according to the thru-beam sensor principle. The transmitter sends signals directly to the receiver. If an object breaks the light beam, the switching element function is triggered. The special U-shaped design means the transmitter and receiver can be accommodated in one housing, which ensures high resistance to vibrations. In contrast to standard thru-beam sensors, photoelectric slot sensors have the added advantage of not requiring complex electrical installation, as only one device needs to be connected. Also, adjustment of the optical axes is not necessary.

Accessories

V3-WM-2M-PUR
Female cordset single-ended, M8, 3-pin, PUR cable

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

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