



Photoelectric slot sensor GL30-RT/30/40a/98a



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

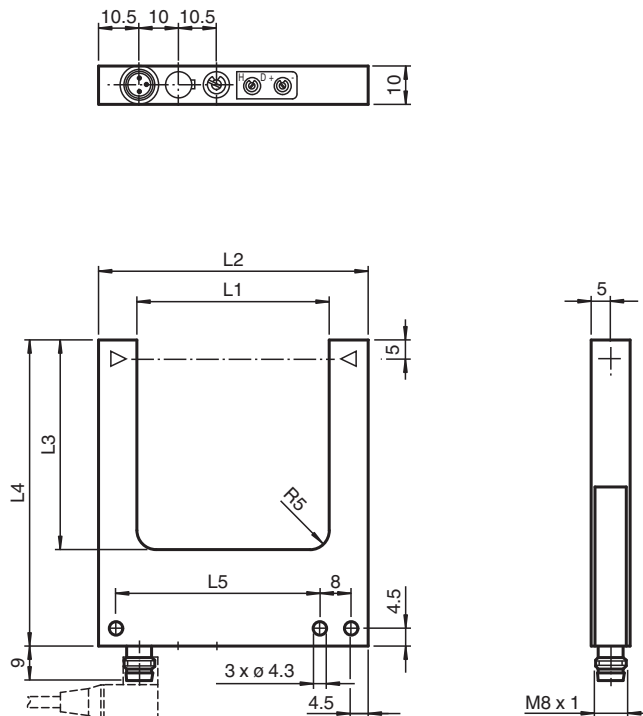
Photoelectric slot sensor, zinc pressure diecast housing, 30 mm slot width, red light, light/dark on, sensitivity adjuster, DC version, NPN output, 3-pin M8 plug



Function

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

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

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Technical Data

General specifications			
Light source			LED
Light type			modulated visible red light
Target size			0.3 mm
Slot width			30 mm
Slot depth			35 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
Ripple			10 %
No-load supply current	I ₀		≤ 15 mA
Output			
Switching type			light/dark on
Signal output			1 NPN, short-circuit protected open collector
Switching voltage			max. 30 V DC
Switching current			max. 100 mA
Repeat accuracy			0.05 mm
Switching frequency	f		3 kHz
Response time			≤ 160 μs
Conformity			
Product standard			EN 60947-5-2
Approvals and certificates			
CE conformity			CE
UL approval			cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval			CCC approval / marking not required for products rated ≤36 V
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			60 g

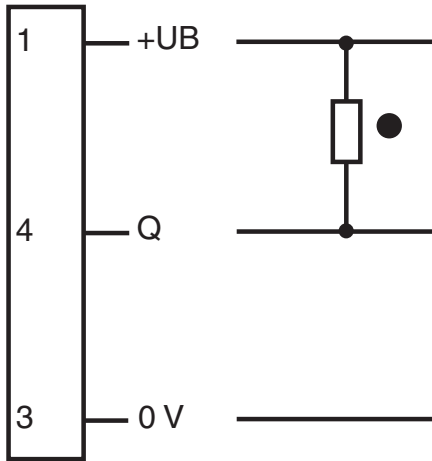
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Connection Assignment



○ = Light on
● = Dark on

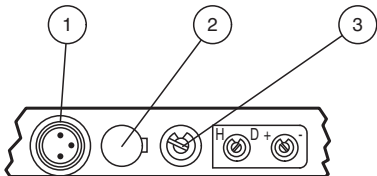
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Assembly

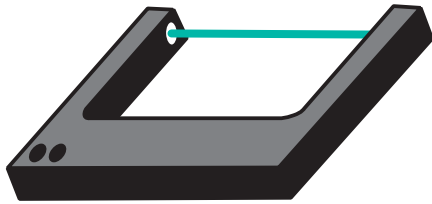


1	Functional display	red
2	Light-/dark switch	
3	Sensitivity adjuster	

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Application



Function 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 angled A-coded, 3-pin, PUR cable grey
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Application

- Small part detection, from object size 0.3 mm
- Can also be used for systems with strong vibrations
- Detection of small needles in transparent hollow needles
- Counting of small parts on conveyors
- Feed and correct separation verification
- Web edge control
- Elevator car position in elevators