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Photoelectric slot sensor

GL20-RT/30/40a/98a



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

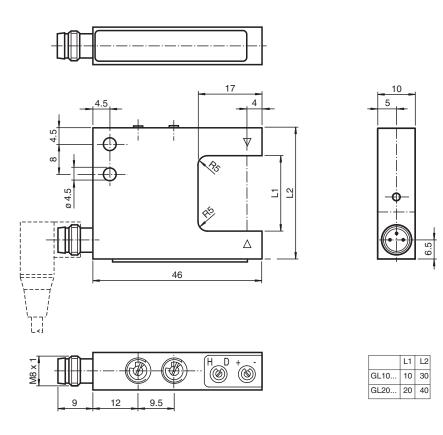
Photoelectric slot sensor, aluminum housing, 20 mm slot width, red light, light/dark on, sensitivity adjuster, DC version, NPN output, 3-pin M8 plug



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





Switching current

Repeat accuracy

Response time

Conformity Product standard

Switching frequency

Approvals and certificates

Technical Data General specifications LED Light source Light type modulated visible red light Target size 0.3 mm Slot width 20 mm Slot depth 17 mm 100000 Lux Ambient light limit 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** U_B 10 ... 30 V DC Operating voltage Ripple 10 % ≤ 15 mA No-load supply current Output Switching type light/dark on Signal output 1 NPN, short-circuit protected open collector Switching voltage max. 30 V DC

max. 100 mA

EN 60947-5-2

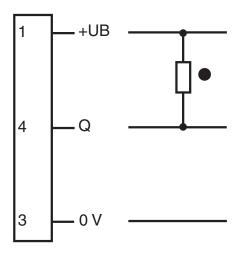
0.05 mm 3 kHz

≤ 160 µs

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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	black anodized aluminum
Optical face	glass
Mass	25 g

Connection Assignment



- O = Light on
- = Dark on

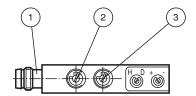
Connection Assignment



Wire colors in accordance with EN 60947-5-2

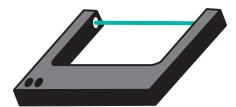
1 BN (brown) 3 BU (blue) 4 BK (black)

Assembly



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

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

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