

# CE cUus

## **Model Number**

#### GL40-IR/32/40a/98a

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

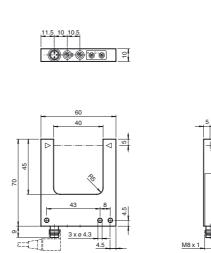
#### Features

- 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
- Sturdy aluminum housing

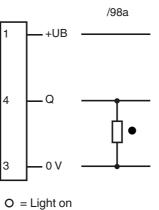
## **Product information**

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



## **Electrical connection**

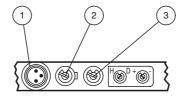


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## Indicators/operating means



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

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

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Techn	ical	data	
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General specifications     IRED       Light source     RRED       Light type     modulated infrared light       Tests     EN 60947-5-2       Target size     0.3 mm       Slot width     40 mm       Ambient light limit     100000 Lux       IndicatorSoperating means     Enction indicator       Function indicator     LED red in connector       Control elements     Sensitivity adjuster, light/dark switch       Electrical specifications     0       Operating voltage     UB     10 30 V DC, class 2       Ripple     10 %       No-load supply current     Ig< ≤ 15 mA       Output     Ight/dark on       Signal output     1 PNP, short-circuit protected, open collector       Switching type     max. 30 V DC       Switching frequency     f     2 kHz       Repeat accuracy     0.05 mm       Switching frequency     f     2 kHz       Repeat accuracy     0.05 mm       Switching frequency     f     2 kHz       Repeat accuracy     0.05 mm       Storage temperature     -20.	leonnoar data		
Light typemodulated infrared lightTestsEN 60947-5-2Target size0.3 mmSlot width40 mmAmbient light limit100000 LuxIndicators/operating meansEn connectorFunction indicatorLED red in connectorControl elementsSensitivity adjuster, light/dark switchElectrical specificationsOperating voltageOperating voltageUg1030 V DC, class 2Ripple10 %No-load supply currentI₀Ight/dark onSignal outputSwitching typelight/dark onSignal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 30 V DCSwitching frequencyf<2 kHzResponse time< 250 µsAmbient temperature-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 167 °F)MetarialHeck andized aluminumOptical faceglassMass45 gApprovalcLE sectificatesC conformityCEUL approvalcULus	General specifications		
TestsEN 60947-5-2Target size0.3 mmSlot width40 mmAmbient light limit00 mmAmbient light limit10 mmIndicators/operating meansEnction indicatorFunction indicatorLED red in connectorControl elementsSensitivity adjuster, light/dark switchElectrical specifications0Operating voltageUg0 perating voltageUg10 30 V DC, class 2Ripple10 %No-load supply currentIo10515 mAOutputSwitching typelight/dark onSignal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 300 mARepeat accuracy0.05 mmSwitching frequencyfget accuracy0.05 mmSwitching frequencyf2 kHzResponse time< 250 µs	Light source		IRED
Target size0.3 mmSlot width40 mmAmbient light limit100000 LuxIndicators/operating meansElectrical connectorFunction indicatorLED red in connectorControl elementsSensitivity adjuster, light/dark switchElectrical specificationsOperating voltageOperating voltageUg10 30 V DC, class 2Ripple10 %No-load supply currentIgSwitching typeiight/dark onSignal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 30 V DCSwitching voltage0.05 mmSwitching frequencyfResponse time-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 140 °F)Storage temperature-20 75 °C (-4 140 °F)Mechanical specificationsIP67ConnectionIP67ConnectionglassMaterial-Poproval and certificatesglassCE conformityCEOptical faceglassMase45 g	Light type		modulated infrared light
Slot width40 mmAmbient light limit100000 LuxIndicators/operating meansElectrical specificationFunction indicatorLED red in connectorControl elementsSensitivity adjuster, light/dark switchElectrical specificationsOperating voltageOperating voltageUB10 30 V DC, class 2Ripple10 %No-load supply currentI0 $\leq$ 15 mAOutputIght/dark onSwitching typelight/dark onSignal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 30 V DCSwitching voltagemax. 30 V DCSwitching requencyfResponse time> 20 60 °C (-4 140 °F)Storage temperature-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 140 °F)Mechanical specificationsImage: Senset S	Tests		EN 60947-5-2
Ambient light limit   100000 Lux     Indicators/operating means   ELED red in connector     Function indicator   LED red in connector     Control elements   Sensitivity adjuster, light/dark switch     Electrical specifications   U     Operating voltage   UB   1030 V DC, class 2     Ripple   10 %     No-load supply current   I0   5 15 mA     Output   1 PNP, short-circuit protected, open collector     Switching type   light/dark on     Signal output   1 PNP, short-circuit protected, open collector     Switching requency   fo 2 kHz     Repeat accuracy   0.05 mm     Switching frequency   f     Switching frequency   f     Switching frequency   f     Ambient temperature   -20 60 °C (-4 140 °F)     Storage temperature   -20 75 °C (-4 167 °F)     Mechanical specifications   IP67     Connection   M8 connector, 3-pin     Material   U   IP67     Housing   black anodized aluminum     Optical face   glass     Material   45 g	Target size		0.3 mm
Indicators operating means   LED red in connector     Control elements   Sensitivity adjuster, light/dark switch     Electrical specifications   0     Operating voltage   UB   1030 V DC, class 2     Ripple   10 %     No-load supply current   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 requency   0.05 mm     Switching frequency   1 2 kHz     Response time   ≤ 250 µs     Ambient temperature   -20 60 °C (-4 140 °F)     Storage temperature   -20 75 °C (-4 140 °F)     Storage temperature   -20 60 °C (-4 140 °F)     Material   Housing     Material   Material     Housing   black anodized aluminum     Optical face   glass     Mass   45 g	Slot width		40 mm
Function indicator   LED red in connector     Control elements   Sensitivity adjuster, light/dark switch     Electrical specifications   0     Operating voltage   UB   10 30 V DC, class 2     Ripple   10 %     No-load supply current   Ig   ≤ 15 mA     Output   Switching type   light/dark on     Signal output   1 PNP, short-circuit protected, open collector     Switching voltage   max. 30 V DC     Switching output   1 PNP, short-circuit protected, open collector     Switching voltage   max. 100 mA     Repeat accuracy   0.05 mm     Switching frequency   f   2 kHz     Response time   < 250 µs	Ambient light limit		100000 Lux
Control elementsSensitivity adjuster, light/dark switchElectrical specificationsSensitivity adjuster, light/dark switchOperating voltageUB10 30 V DC, class 2Ripple10 %No-load supply currentI0 $\leq$ 15 mAOutputSwitching typelight/dark onSignal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 30 V DCSwitching currentmax. 30 V DCSwitching frequencyfRepeat accuracy0.05 mmSwitching frequencyfZ kHzResponse time $\leq 250 \ \mu$ sAmbient temperature-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 167 °F)Mechanical specificationsDegree of protectionIP67ConnectionM8 connector, 3-pinMaterial	Indicators/operating means		
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     Response time   ≤ 250 µs     Ambient temperature   -20 60 °C (-4 140 °F)     Storage temperature   -20 60 °C (-4 140 °F)     Storage temperature   -20 75 °C (-4 167 °F)     Mechanical specifications   Pegree of protection     Degree of protection   IP67     Connection   M8 connector, 3-pin     Material   -     Housing   black anodized aluminum     Optical face   glass     Mass   45 g	Function indicator		LED red in connector
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Ripple10 %No-load supply current $l_0$ $\leq$ 15 mAOutputIight/dark onSwitching typelight/dark onSignal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 30 V DCSwitching currentmax. 100 mARepeat accuracy0.05 mmSwitching frequencyf2 kHzResponse time $\leq$ 250 µsAmbient conditionsAmbient temperature-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 167 °F)Mechanical specificationsDegree of protectionIP67ConnectionMa B connector, 3-pinMaterial	Electrical specifications		
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Output Ight/dark on   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   Ambient conditions -20 60 °C (-4 140 °F)   Storage temperature -20 75 °C (-4 167 °F)   Mechanical specifications -20 75 °C (-4 167 °F)   Degree of protection IP67   Connection M8 connector, 3-pin   Material -   Housing black anodized aluminum   Optical face glass   Mass 45 g   CE conformity CE   UL approval cULus	Ripple		10 %
Switching typelight/dark onSignal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 30 V DCSwitching currentmax. 100 mARepeat accuracy0.05 mmSwitching frequencyf2 kHzResponse time≤ 250 µsAmbient conditionsAmbient temperature-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 167 °F)Degree of protectionIP67ConnectionM8 connector, 3-pinMaterialHousingHousingblack anodized aluminumOptical faceglassMass45 gCE conformityCEUL approvalcULus	No-load supply current	I <sub>0</sub>	≤ 15 mA
Signal output1 PNP, short-circuit protected, open collectorSwitching voltagemax. 30 V DCSwitching currentmax. 100 mARepeat accuracy0.05 mmSwitching frequencyf2 kHzResponse time≤ 250 µsAmbient conditionsAmbient temperature-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 167 °F)Mechanical specificationsDegree of protectionIP67ConnectionM8 connector, 3-pinMaterialHousingblack anodized aluminumOptical faceglassMass45 gApprovals and certificatesCE conformityCEUL approvalcULus	Output		
Switching voltagemax. 30 V DCSwitching currentmax. 100 mARepeat accuracy0.05 mmSwitching frequencyf2 kHzResponse time≤ 250 μsAmbient conditionsAmbient temperature-20 60 °C (-4 140 °F)Storage temperature-20 75 °C (-4 167 °F)Mechanical specificationsDegree of protectionIP67ConnectionM8 connector, 3-pinMaterial-Housingblack anodized aluminumOptical faceglassMass45 gApprovals and certificatesCE conformityCEUL approvalcULus	Switching type		light/dark on
Switching current max. 100 mA   Repeat accuracy 0.05 mm   Switching frequency f 2 kHz   Response time ≤ 250 μs   Ambient conditions -20 60 °C (-4 140 °F)   Storage temperature -20 75 °C (-4 167 °F)   Mechanical specifications -20 75 °C (-4 167 °F)   Mechanical specifications IP67   Connection M8 connector, 3-pin   Material -   Housing black anodized aluminum   Optical face glass   Mass 45 g   CE conformity CE   UL approval cULus	Signal output		1 PNP, short-circuit protected, open collector
Repeat accuracy 0.05 mm   Switching frequency f   Response time ≤ 250 µs   Ambient conditions -20 60 °C (-4 140 °F)   Ambient temperature -20 75 °C (-4 167 °F)   Mechanical specifications -20 75 °C (-4 167 °F)   Mechanical specifications IP67   Connection M8 connector, 3-pin   Material -   Housing black anodized aluminum   Optical face glass   Mass 45 g   CE conformity CE   UL approval cULus	Switching voltage		max. 30 V DC
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Degree of protection IP67   Connection M8 connector, 3-pin   Material Image: Connection   Housing black anodized aluminum   Optical face glass   Mass 45 g   CE conformity   CE conformity CE   UL approval cULus	Storage temperature		-20 75 °C (-4 167 °F)
Connection M8 connector, 3-pin   Material Material   Housing black anodized aluminum   Optical face glass   Mass 45 g   Approvals and certificates   CE conformity CE   UL approval cULus	Mechanical specifications		
Material   Housing black anodized aluminum   Optical face glass   Mass 45 g   Approvals and certificates CE   CE conformity CE   UL approval cULus	Degree of protection		IP67
Housing black anodized aluminum   Optical face glass   Mass 45 g   Approvals and certificates E   CE conformity CE   UL approval cULus	Connection		M8 connector, 3-pin
Optical face glass   Mass 45 g   Approvals and certificates CE   CE conformity CE   UL approval cULus	Material		
Mass 45 g   Approvals and certificates CE   CE conformity CE   UL approval cULus	Housing		black anodized aluminum
Approvals and certificates   CE conformity CE   UL approval cULus	Optical face		glass
CE conformity CE UL approval cULus	Mass		45 g
UL approval cULus	Approvals and certificates		
	CE conformity		CE
CCC approval CCC approval / marking not required for products rated ≤36	UL approval		cULus
	CCC approval		CCC approval / marking not required for products rated ${\leq}36$ V

	ories

V3-GM-2M-PUR Cable socket, M8, 3-pin, PUR cable

V3-WM-2M-PUR Cable socket, M8, 3-pin, PUR cable

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

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