

Fail-safe inductive sensor

GIIK4008B2PS/SIL2/AM/US



Product characteristics

Electrical design	PNP
Enable zone [mm]	0...6
Housing	Threaded type
Dimensions [mm]	M30 x 1.5 / L = 65

Application

System	gold-plated contacts; Full-metal housing
Type of operation	permanent operation
Safety-related sub-function	safe state when properly undamped
Application	Use in hygienic areas / regular cleaning processes

Electrical data

Operating voltage [V]	10...30 DC
Rated insulation voltage [V]	60
Current consumption [mA]	< 10; (24 V)
Protection class	III
Reverse polarity protection	yes
Max. power-on delay time [ms]	500

Outputs

Electrical design	PNP
Max. voltage drop switching output DC [V]	2.5
Number of OSSD outputs	2
Max. current load per OSSD output [mA]	50
Output data	Interface type C class 1
Output voltage at 24 V	compatible with EN 61131-2 inputs type 1, 2
Short-circuit protection	yes
Overload protection	yes
Max. capacitive load CL_max [nF]	20



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Monitoring range		
Enable zone	[mm]	0...6
Safe switch-off distance sAs (sar)	[mm]	18
Accuracy / deviations		
Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.8 / aluminum: 0.6 / copper: 0.3	
Reaction times		
Response time when approaching the enable zone, turn-on time (ton)	[ms]	20
Response time to safety request, turn-off time (toff)	[ms]	20
Risk time / error handling time (toff max)	[ms]	100; (flush mounting with a single stainless steel fixing nut: 250 ms)
Operating conditions		
Ambient temperature	[°C]	-25...100
Max. height above sea level	[m]	3000
Ionizing radiation	not permissible	
Protection	IP 65; IP 66; IP 67; IP 68; IP 69K	
Chemical media	the following media were tested for 28 days at 40 °C and with a concentration of 5 %	P3-topax 19
		P3-topax 56
		P3-topax 66
		Topactive OKTO
Tests / approvals		
EMC	industrial environments	
	EN 60947-5-3	
	EN 61000-4-2 ESD	6 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	20 V/m 80...1000 MHz
	EN 61000-4-3 HF radiated	10 V/m 1,4...2,0 GHz / 3 V/m 2,0...6,0 GHz
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-5 Surge	2 kV
	EN 61000-4-6 HF conducted	10 V
	EN 61000-4-8	30 A/m 50/60 Hz / 1000 A/m 0 Hz
	EN 55011	class B
Shock resistance	EN 60068-2-27 Ea	100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes
Continuous shock resistance	EN 60068-2-27 Ea	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
Fast temperature changes	EN 60068-2-14 Nc	TA = 0 °C; TB = 100 °C; t1 = 30 min; t2 = 10 s 50 cycles
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles per frequency; 1 octave per minute in 3 axes
Safety classification		
Complies with the requirements	ISO 13849-1 Category 2, PL d	
	IEC 61508 SIL 2, HFT 0, SC 2	
MIssion time TM	[h]	≤ 87600
Mission time TM (additional indication)	industrial environments Temperature range -25...70 °C ≤ 175200	



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PFH	[1/h]	< 1,5E-07
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Mechanical data

Weight	[g]	134.8
Housing		Threaded type
Mounting		flush mountable
Dimensions	[mm]	M30 x 1.5 / L = 65
Thread designation		M30 x 1.5
Material		threaded sleeve: stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PEI; LED sealing: PU; lock nuts: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	70
Full-metal housing		yes

Displays / operating elements

Display	Display switching status	4 LED, yellow
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Accessories

Items supplied	lock nuts: 2
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Remarks

Remarks	can be used in applications up to SIL 2 in accordance with IEC 62061
	Unless stated otherwise, all data refer to the reference target plate to IEC 60947-5-2 over the whole temperature range.
	(FE360 = ST37-2K) 30x30x1 mm
	the correction factors apply to an ambient temperature of 20°C
	do not use a correction factor for the safe switch-off distance sAs/(sar)
Pack quantity	1 pcs.

Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: gold-plated



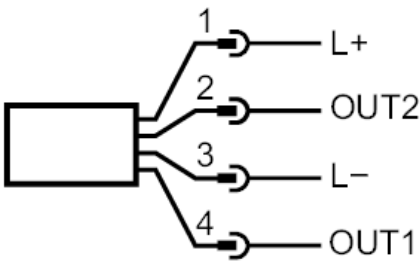
GI762S



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Connection



1	L+	
2	OUT2	OSSD2
3	L-	
4	OUT1	OSSD1

OUT: Output