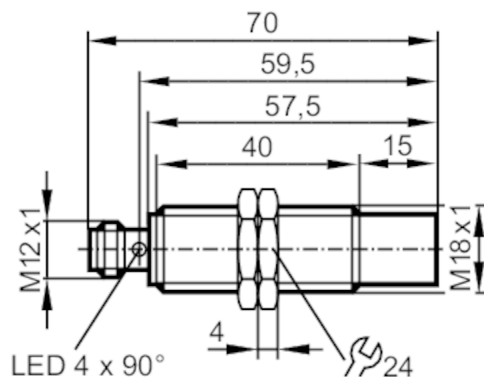


IG511A



Inductive full-metal sensor

IGK3012-BPKG/AM/P/US104/3G/3D



Product characteristics

Electrical design	PNP
Output function	normally open
Sensing range [mm]	12
Housing	threaded type
Dimensions [mm]	M18 x 1 / L = 70

Application

Special feature		Gold-plated contacts; Increased sensing range; Full-metal housing
Pressure rating	[bar]	100
Pressure rating	[MPa]	10
Note on pressure rating		sensing face

Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 25
Protection class		III
Reverse polarity protection		yes

Outputs

Electrical design	PNP
Output function	normally open
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	500
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range	[mm]	12
Real sensing range Sr	[mm]	12 ± 10 %
Operating distance	[mm]	0...9.72

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Increased sensing range	yes	
Accuracy / deviations		
Correction factor	steel: 1 / stainless steel: 1 / brass: 0.9 / aluminium: 0.8 / copper: 0.5	
Hysteresis [% of Sr]	1...20	
Switch point drift [% of Sr]	-10...10	
Operating conditions		
Ambient temperature [°C]	-40...60	
Protection	IP 67; (when used outside the hazardous area: IP 65, IP 67, IP 68, IP 69K)	
Tests / approvals		
Approval	BVS 20 ATEX E 055 X; IECEx BVS 20.0042 X	
ATEX marking	 II 3G Ex ec IIC T4 Gc	
	 II 3D Ex tc IIIC T95°C Dc	
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	10 V
	EN 55011	class B
Impact resistance	EN 60068-2-75 Ehc	1 J
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles, 1 octave per minute, in 3 axes
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 change	EN 60068-2-14 Na	TA = -40°C; TB = 85°C; t1 = 30 min; t2 = 10 s
Salt spray test	EN 60068-2-52 Kb	50 cycles
MTTF [years]	1352	
Mechanical data		
Weight [g]	79.5	
Housing	threaded type	
Mounting	non-flush mountable	
Dimensions [mm]	M18 x 1 / L = 70	
Thread designation	M18 x 1	
Materials	stainless steel (316L/1.4404); PEI; lock nuts: brass white bronze coated	
Tightening torque [Nm]	50	
Full-metal housing	yes	
Displays / operating elements		
Display	switching status	4 x 90° LED, yellow
Accessories		
Items supplied	lock nuts: 2	
Remarks		
Remarks	To maintain the EMC data:	
	Equalise potential by connecting the sensor housing to the machine earth.	
Pack quantity	1 pcs.	

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Electrical connection - plug

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



Connection



Diagrams and graphs

