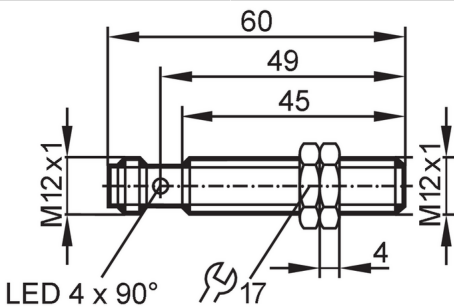


IF503A



Inductive full-metal sensor

IFK3003BBPKG/AM/US104DPS/3G/3D



Product characteristics

Electrical design	PNP
Output function	normally open
Sensing range [mm]	3
Housing	threaded type
Dimensions [mm]	M12 x 1 / L = 60

Application

Special feature	Gold-plated contacts; Increased sensing range; Full-metal housing	
Application	For applications in hazardous areas	
Pressure rating	100 bar	10 MPa
Note on pressure rating	sensing face	

Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 20
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]	100
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range [mm]	3
Real sensing range Sr [mm]	3 ± 10 %
Operating distance [mm]	0...2.43
Increased sensing range	yes

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 0.6 / brass: 0.7 / aluminium: 0.6 / copper: 0.3
Hysteresis [% of Sr]	1...20

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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 T6 Gc	
		II 3D Ex tc IIIC T85°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 50 cycles	
Salt spray test	EN 60068-2-52 Kb	severity level 5 (4 test cycles)	
MTTF	[years]	1258	
Embedded software included		no	
Mechanical data			
Weight	[g]	54	
Housing		threaded type	
Mounting		flush mountable	
Dimensions	[mm]	M12 x 1 / L = 60	
Thread designation		M12 x 1	
Materials		housing: stainless steel (316L/1.4404); LED window: PEI; lock nuts: stainless steel	
Tightening torque	[Nm]	15	
Full-metal housing		yes	
Displays / operating elements			
Display	switching status	4 x 90° LED, yellow	
Accessories			
Items supplied		lock nuts: 2	
Remarks			
Pack quantity		1 pcs.	
Electrical connection - plug			
Connector: 1 x M12; coding: A; Contacts: 3, gold-plated			
			

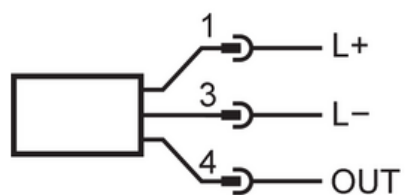
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Inductive full-metal sensor

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Connection



1	L+	
3	L-	
4	OUT	DO (NO)

DO: digital output; NO: normally open