

NF501A



Inductive NAMUR sensor

IFB2004BN/US/1G/1D



Product characteristics

Electrical design	NAMUR
Output function	normally closed
Sensing range [mm]	4
Housing	threaded type
Dimensions [mm]	M12 x 1 / L = 45

Electrical data

Connection to switching amplifiers	yes
Switching amplifiers	connection to certified intrinsically safe circuits with the max. values: U = 15 V / I = 50 mA / P = 120 mW
Nominal voltage DC [V]	8.2; (1kΩ)
Supply voltage DC [V]	7.5...30; (when used outside the hazardous area)
Current consumption [mA]	< 1; (disabled; conductive: > 2,1)
Protection class	III

Outputs

Electrical design	NAMUR
Output function	normally closed
Permanent current rating of switching output DC [mA]	30; (when used outside the hazardous area)
Switching frequency DC [Hz]	700

Detection zone

Sensing range [mm]	4
Real sensing range Sr [mm]	4 ± 10 %
Operating distance [mm]	0...3.24

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.4 / copper: 0.3
Hysteresis [% of Sr]	1...15
Switch point drift [% of Sr]	-10...10

Operating conditions

Ambient temperature [°C]	-20...70
Protection	IP 67

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Tests / approvals		
Approval	BVS 04 ATEX E 091 X; IECEx BVS 06.0003X	
ATEX marking	II 1G Ex ia IIC T6 Ga	
	II 1D Ex ia IIIC T200 90°C Da	
EMC	EN 60947-5-6	
Shock/vibration resistance	30 g (11 ms) / 10-55 Hz (1 mm)	
MTTF	[years]	3119
Safety classification		
Max. internal capacitance	[nF]	210
Max. internal inductance	[μH]	115
Mechanical data		
Weight	[g]	78.55
Housing	threaded type	
Mounting	flush mountable	
Dimensions	[mm]	M12 x 1 / L = 45
Thread designation	M12 x 1	
Materials	housing: brass special coating; sensing face: PBT; LED window: PA	
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		
		

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Connection



1 = connection to NAMUR amplifiers