

IF509A



Inductive full-metal sensor

IFB3004BBPKG/AM/US-104/3G/3D



Product characteristics

Electrical design	PNP
Output function	normally open
Sensing range [mm]	4
Housing	Threaded type
Dimensions [mm]	M12 x 1 / L = 45

Application

System	gold-plated contacts; Increased sensing range; Full-metal housing	
Pressure rating	100 bar	10 MPa
Note on pressure rating	sensing face	

Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 10
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

Monitoring range

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

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.6 / aluminum: 0.5 / copper: 0.2
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Hysteresis	[% of Sr]	1...15
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Operating conditions

Ambient temperature	[°C]	0...60
Note on ambient temperature	when used outside the hazardous area: 0...100°C	
Protection	IP 67; (when used outside the hazardous area: IP 65, IP 66, 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 emission	class B
MTTF	[years]	1217

Mechanical data

Weight	[g]	43.8
Housing	Threaded type	
Mounting	flush mountable	
Dimensions	[mm]	M12 x 1 / L = 45
Thread designation	M12 x 1	
Material	stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)	
Tightening torque	[Nm]	25
Full-metal housing	yes	

Displays / operating elements

Display	Switching status	4 x LED, yellow
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Accessories

Items supplied	lock nuts: 2
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Remarks

Pack quantity	1 pcs.
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Electrical connection



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Connection



Electrical connection - plug

Connector: 1 x M12; Contacts: gold-plated