

IFR207



Inductive full-metal sensor

IFB3004BBPKG/AM/SC/V4A/US-104



Product characteristics	
Electrical design	PNP
Output function	normally open
Sensing range [mm]	4
Housing	Threaded type
Dimensions [mm]	M12 x 1 / L = 45
Application	
Special feature	gold-plated contacts; Increased sensing range; Full-metal housing; Magnetic-field immune
Application	Inductive sensors for welding applications
Pressure rating	100 bar / 10 MPa
Note on pressure rating	sensing face
Magnetic-field immune	yes
Max. electromagnetic field immunity [mT]	100
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]	2
Short-circuit protection	yes
Overload protection	yes
Monitoring range	
Sensing range [mm]	4
Real sensing range S_r [mm]	$4 \pm 10 \%$
Operating distance [mm]	0...3.24

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Increased sensing range		yes
Accuracy / deviations		
Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.6 / aluminum: 0.5 / copper: 0.2
Hysteresis	[% of Sr]	3...15
Switch-point drift	[% of Sr]	-10...10
Operating conditions		
Ambient temperature	[°C]	-40...85
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K
Tests / approvals		
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		1 J
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles per frequency; 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	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
Fast temperature changes	EN 60068-2-14 Na	TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles
MTTF	[years]	1176
Embedded software included		yes
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A012
	File number UL	E174191
Mechanical data		
Weight	[g]	26.3
Housing		Threaded type
Mounting		flush mountable
Dimensions	[mm]	M12 x 1 / L = 45
Thread designation		M12 x 1
Material		stainless steel (1.4404 / 316L) weld coated; sensing face: stainless steel (1.4404 / 316L) weld coated; LED window: PEI; lock nuts: brass weld coated
Tightening torque	[Nm]	6
Full-metal housing		yes
Displays / operating elements		
Display	Switching status	4 x LED, yellow
	Power	1 x LED, green
Accessories		
Items supplied		lock nuts: 2

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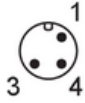
Remarks

Pack quantity

1 pcs.

Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: 3, gold-plated



Connection

