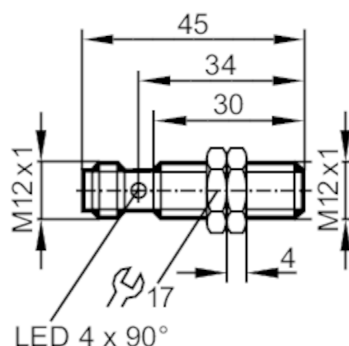


IFR207



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

System	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 Sr [mm]	4 ± 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	

IFR207



Inductive full-metal sensor

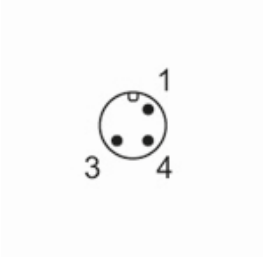
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Remarks

Pack quantity	1 pcs.
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Electrical connection - plug

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



Connection

