

IFS246



Inductive sensor

IFB3004BANKG/US-104



Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 10
Protection class		III
Reverse polarity protection		yes

Outputs

Electrical design		NPN
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]	700
Short-circuit protection		yes
Overload protection		yes

Detection zone

Sensing range	[mm]	4
Real sensing range S_r	[mm]	$4 \pm 10\%$
Operating distance	[mm]	0...3.24
Increased sensing range		yes

Accuracy / deviations

Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.4 / copper: 0.3
Hysteresis	[% of S_r]	3...15
Switch point drift	[% of S_r]	-10...10

Operating conditions

Ambient temperature	[°C]	-40...85
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K



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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
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 60068-2-29 Eb	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
Salt spray test	EN 60068-2-52 Kb	severity level 5 (4 test cycles)
MTTF	[years]	1598
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL Approval no.	A001
	File number UL	E174191
Mechanical data		
Weight	[g]	24.6
Housing		threaded type
Mounting		flush mountable
Dimensions	[mm]	M12 x 1 / L = 45
Thread designation		M12 x 1
Materials		brass white bronze coated; sensing face: PBT orange; LED window: PEI; lock nuts: brass white bronze coated
Displays / operating elements		
Display	switching status	4 x LED, yellow
Accessories		
Accessories (supplied)		lock nuts: 2
Remarks		
Pack quantity		1 pcs.
Electrical connection - plug		
Connector: 1 x M12; Contacts: gold-plated		

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Connection

