

IFS317



Inductive sensor

IFK3010-APKG/K1/V4A/US-104



Application

Magnetic-field immune	yes
Max. magnetic field immunity [mT]	300

Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 20
Protection class	III
Reverse polarity protection	yes

Outputs

Electrical design	PNP
Output function	normally closed
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	2000
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range [mm]	10
Real sensing range S_r [mm]	$10 \pm 10\%$
Operating distance [mm]	0...8.1
Increased sensing range	yes

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 1 / brass: 1 / aluminium: 1 / copper: 1
Hysteresis [% of S_r]	3...15
Switch point drift [% of S_r]	-10...10
Correction factor $K = 1$	yes

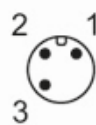
Operating conditions

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



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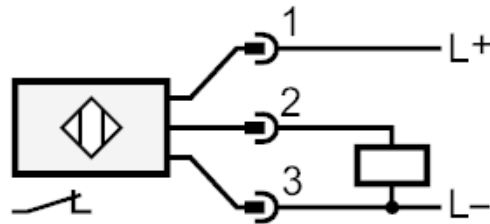
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Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	10 V
	EN 55011	class B
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles per frequency; 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]	659
UL approval	UL Approval no.	A005
Mechanical data		
Weight	[g]	25.6
Housing		threaded type
Mounting		non-flush mountable
Dimensions	[mm]	M12 x 1 / L = 60
Thread designation		M12 x 1
Materials		stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)
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



Diagrams and graphs

Installation

