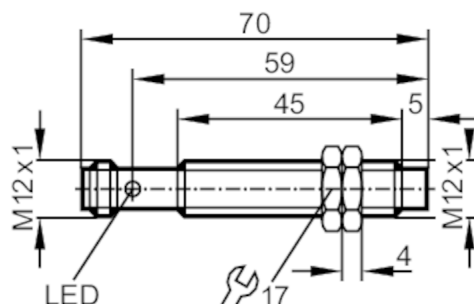


IFM215



Inductive sensor

IFKC007-BSKG/M/60V/US-104-DRO



Product characteristics

Electrical design	PNP/NPN
Output function	normally closed
Sensing range [mm]	7
Housing	Threaded type
Dimensions [mm]	M12 x 1 / L = 70

Application

System	gold-plated contacts; Increased sensing range
Application	Use in mobile and harsh applications

Electrical data

Operating voltage [V]	10...60 DC
Current consumption [mA]	< 10; (only in 3-wire operation)
Protection class	II
Reverse polarity protection	yes

Outputs

Electrical design	PNP/NPN
Output function	normally closed
Max. voltage drop switching output DC [V]	2.5
Minimum load current [mA]	2; (only in 2-wire operation)
Max. leakage current [mA]	0.5; (only in 2-wire operation)
Permanent current rating of switching output DC [mA]	200
Switching frequency DC [Hz]	300
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Monitoring range

Sensing range [mm]	7
Real sensing range Sr [mm]	7 ± 10 %
Operating distance [mm]	0...5.67

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Increased sensing range		yes	
Accuracy / deviations			
Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.5 / copper: 0.4	
Hysteresis [% of Sr]		1...20	
Switch-point drift [% of Sr]		-10...10	
Operating conditions			
Ambient temperature [°C]		-40...85	
Protection		IP 67; IP 69K	
Tests / approvals			
EMC	Automotive area		
	Noise emission and noise interference: ECE R10		E1 type approval
	noise immunity according to DIN ISO 11452-2		100 V/m
	conducted interference in 24 V networks to ISO 7637-2: 2004 (pulse 1 to 4) and ISO16750-2: 2012 (load dump)		
	pulse		1 2a 2b 3a 3b 4 Load dump
	Severity level		III III III III III Test A
	Failure criterion		C A C A A C C
	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 61000-4-5 Surge		0,5 kV mains line to line
	EN 61000-4-6 HF conducted		10 V
	EN 55011		class B
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / -20...50 °C	
		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 / -40...85 °C	
Continuous shock resistance	EN 60068-2-27	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes / -20...50 °C	
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]	666		
Mechanical data			
Weight [g]	29.75		
Housing	Threaded type		
Mounting	non-flush mountable		
Dimensions [mm]	M12 x 1 / L = 70		
Thread designation	M12 x 1		
Material	housing: stainless steel; sensing face: LCP natural; LED window: PEI; lock nuts: brass		
Displays / operating elements			
Display	Switching status	4 x 90° LED, yellow	

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Accessories	
Items supplied	lock nuts: 2
Remarks	
Pack quantity	1 pcs.
Electrical connection - plug	

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

