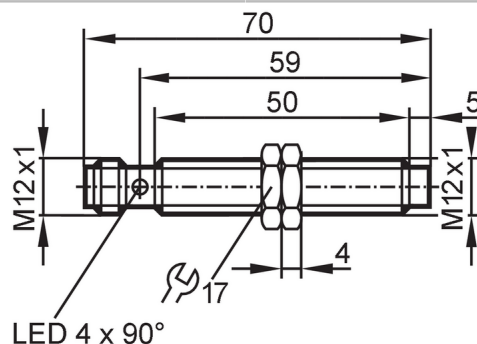


IFM215



Inductive sensor

IFKC007-BSKG/60V/V4A/US-104



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

Special feature	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
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
Increased sensing range	yes

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Accuracy / deviations				
Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.4 / copper: 0.3		
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
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]	1079	
Mechanical data				
Weight		[g]	31.2	
Housing		Threaded type		
Mounting		non-flush mountable		
Dimensions		[mm]	M12 x 1 / L = 70	
Thread designation		M12 x 1		
Material		housing: stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: brass white bronze coated		
Tightening torque		[Nm]	15	
Displays / operating elements				
Display		Switching status		4 x 90° LED, yellow
Accessories				
Items supplied		lock nuts: 2		
Remarks				
Pack quantity		1 pcs.		

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Inductive sensor

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Electrical connection - plug

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



Connection

