

Inductive sensor

IHK3012BBPKG/M/60V/US-104



Product characteristics

Electrical design	PNP
Output function	normally open
Sensing range [mm]	12
Housing	threaded type
Dimensions [mm]	M30 x 1.5 / 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
Output function	normally open
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	200
Switching frequency DC [Hz]	100
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range [mm]	12
Operating distance [mm]	0...9.72
Increased sensing range	yes

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.45 / copper: 0.35
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Hysteresis	[% of Sr]	1...20
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Operating conditions

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

Tests / approvals

EMC	automotive area	
	noise emission and noise immunity: 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, 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 change	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]	907
UL approval	Ta	0...40 °C
	Enclosure type	Type 1
	power supply	Class 2
	File number UL	E174191

Mechanical data

Weight	[g]	126
Housing		threaded type
Mounting		flush mountable
Dimensions	[mm]	M30 x 1.5 / L = 70
Thread designation		M30 x 1.5
Materials		threaded sleeve: 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
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IIM208



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Remarks

Pack quantity

1 pcs.

Electrical connection - plug

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



Connection

