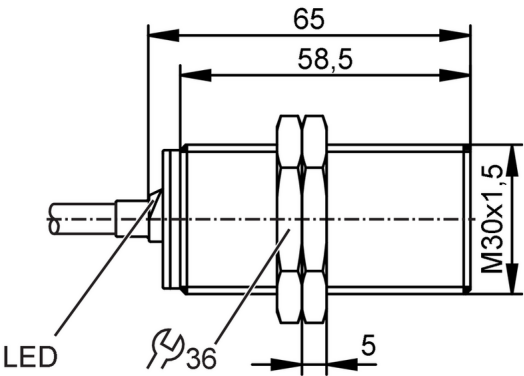


IIM220



Inductive sensor

IHK3012BBPKG/M/60V/25M/ZH



1 LED



Product characteristics

Electrical design	PNP
Output function	normally open
Sensing range [mm]	12
Housing	Threaded type
Dimensions [mm]	M30 x 1.5 / L = 65

Application

Special feature	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
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Monitoring range

Sensing range [mm]	12
Real sensing range Sr [mm]	12 ± 10 %
Operating distance [mm]	0...9.72
Increased sensing range	yes



Inductive sensor

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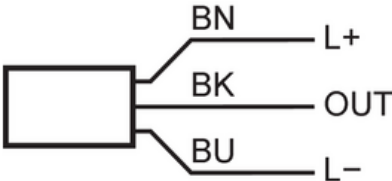
Accuracy / deviations			
Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.45 / copper: 0.35	
Hysteresis	[% of Sr]	1...20	
Switch-point drift	[% of Sr]	-10...10	
Operating conditions			
Ambient temperature		[°C]	-40...85
Protection		IP 67; IP 69K	
Tests / approvals			
EMC	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	
		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]	907	
Mechanical data			
Weight	[g]	1045.6	
Housing		Threaded type	
Mounting		flush mountable	
Dimensions	[mm]	M30 x 1.5 / L = 65	
Thread designation		M30 x 1.5	
Material		housing: stainless steel (1.4404 / 316L); sensing face: LCP natural; LED window: PEI; lock nuts: brass	
Displays / operating elements			
Display		Switching status	1 x LED, yellow

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Accessories		
Items supplied		lock nuts: 2
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 25 m, PUR, Ø 4.0 mm; burning behaviour to ECE R118 rev. 2; 3 x 0.34 mm²		
Connection		
		
BK = BN = BU = Core colors : black brown blue		
BN BK BU L+ OUT L- DO (NO)		
DO: digital output; NO: normally open		