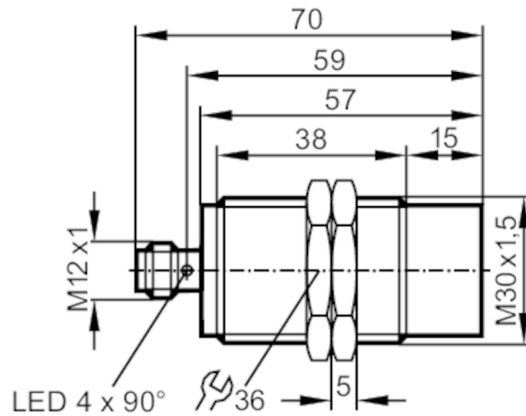




Inductive sensor

IIK3022-BPKG/M/60V/US-104



Electrical data

Operating voltage	[V]	10...60 DC; ("supply class 2" to cULus)
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]	22
Real sensing range Sr	[mm]	22 ± 10 %
Operating distance	[mm]	0...17.82
Increased sensing range		yes

Accuracy / deviations

Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 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



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Tests / approvals								
EMC	automotive area							
	noise emission and noise interference according to the automotive directive 95/54/EC		E1 type approval					
	noise immunity according to DIN ISO 11452-2		100 V/m					
	conducted interference acc. to ISO 7637-2							
	pulse		1	2	3a	3b	4	5
	severity level		IV	IV	IV	IV	IV	IV
	failure criterion		C	C	A	A	A	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 60068-2-29 Eb		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]	900						
UL approval	Ta		0...40 °C					
	Enclosure type		Type 1					
	voltage supply		Class 2					
	File number UL		E174191					
Mechanical data								
Weight	[g]	123.6						
Housing		threaded type						
Mounting		non-flush mountable						
Dimensions	[mm]	M30 x 1.5 / L = 70						
Thread designation		M30 x 1.5						
Materials		housing: stainless steel; sensing face: LCP natural; connector housing: PEI; lock nuts: brass						
Displays / operating elements								
Display		switching status	4 x 90° LED, yellow					
Accessories								
Accessories (supplied)		lock nuts: 2						
Remarks								
Pack quantity		1 pcs.						
Electrical connection - plug								
Connector: 1 x M12; Contacts: gold-plated								

IIM209

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Connection

