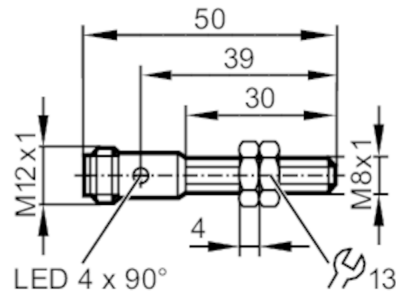


IES230



Inductive sensor

IEB3003BBPKG/V4A/US-104



Product characteristics

Electrical design		PNP
Output function		normally open
Sensing range	[mm]	3
Housing		threaded type
Dimensions	[mm]	M8 x 1 / L = 50

Application

Special feature		Increased sensing range
Application		Suitable for industrial, mobile, cooling and lubricating applications; Industrial applications / factory automation

Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 10
Protection class		III
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]	100
Short-time current rating of switching output	[mA]	100
Switching frequency DC	[Hz]	1500
Short-circuit protection		yes
Overload protection		yes

Detection zone

Sensing range	[mm]	3
Real sensing range S_r	[mm]	$3 \pm 10\%$
Operating distance	[mm]	0...2.43
Increased sensing range		yes

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Accuracy / deviations		
Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.4 / aluminium: 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 65; IP 66; IP 67; IP 68; IP 69K	
Tests / approvals		
EMC	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 61000-4-6 HF conducted	10 V
	EN 55011	class B
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 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
Continuous shock resistance	EN 60068-2-27	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
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]	1396	
Embedded software included	yes	
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	A028
	File number UL	E174191
Mechanical data		
Weight [g]	17.5	
Housing	threaded type	
Mounting	flush mountable	
Dimensions [mm]	M8 x 1 / L = 50	
Thread designation	M8 x 1	
Materials	stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)	
Tightening torque [Nm]	A = 5 mm: 2 Nm; B: 5 Nm	
Displays / operating elements		
Display	switching status	4 LED, yellow
Accessories		
Items supplied	lock nuts: 2	
Remarks		
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; coding: A		

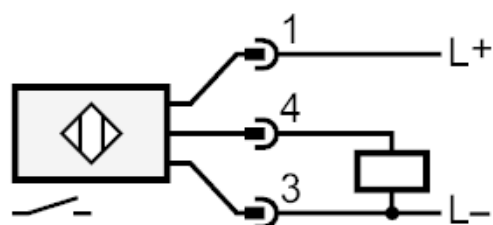
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Connection



Diagrams and graphs

Installation

