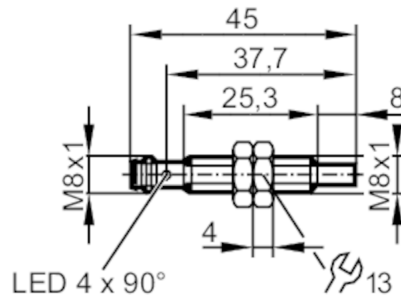


Inductive full-metal sensor

IEB3005-BPKG/AM/PIAS



Product characteristics

Electrical design		PNP
Output function		normally open
Sensing range	[mm]	5
Housing		threaded type
Dimensions	[mm]	M8 x 1 / L = 45

Application

Special feature		Gold-plated contacts; Increased sensing range; Full-metal housing
Application		Use in machine tools, coolants and lubricants
Pressure rating	[bar]	50
Note on pressure rating		sensing face

Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 20
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
Switching frequency DC	[Hz]	500
Short-circuit protection		yes
Overload protection		yes

Detection zone

Sensing range	[mm]	5
Real sensing range Sr	[mm]	5 ± 10 %
Operating distance	[mm]	0...4.05
Increased sensing range		yes

IEC212



Inductive full-metal sensor

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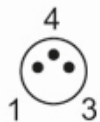
Accuracy / deviations		
Correction factor	steel: 1 / stainless steel: 1 / brass: 0.8 / aluminium: 0.7 / copper: 0.6	
Hysteresis [% of Sr]	3...15	
Switch point drift [% of Sr]	-10...10	
Operating conditions		
Ambient temperature [°C]	-40...85	
Protection	IP 65; IP 66; IP 67; IP 68; IP 69K; (with ifm socket duly screwed on)	
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]	1261	
UL approval	Ta	-25...85 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL Approval no.	A017
	File number UL	E174191
Mechanical data		
Weight [g]	15.272	
Housing	threaded type	
Mounting	non-flush mountable	
Dimensions [mm]	M8 x 1 / L = 45	
Thread designation	M8 x 1	
Materials	stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PPSU; lock nuts: stainless steel (1.4404 / 316L)	
Tightening torque [Nm]	5	
Full-metal housing	yes	
Displays / operating elements		
Display	switching status	4 x 90° LED, yellow
Accessories		
Items supplied	lock nuts: 2	
Remarks		
Pack quantity	1 pcs.	
Electrical connection - plug		
Connector: 1 x M8; Contacts: gold-plated		

IEC212



Inductive full-metal sensor

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Connection

