

Inductive sensor

IEB3003BBNKG/V4A/K1/2M/PUR



1: LED yellow



EC 1935/2004



Product characteristics

Electrical design	NPN
Output function	normally closed
Sensing range [mm]	3
Housing	Threaded type
Dimensions [mm]	M8 x 1 / L = 37.5

Application

System	Increased sensing range; correction factor = 1; Magnetic-field immune
Application	Industrial applications
Magnetic-field immune	yes
Max. electromagnetic field immunity [mT]	300

Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 20
Protection class	III
Reverse polarity protection	yes

Outputs

Electrical design	NPN
Output function	normally closed
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	2000
Short-circuit protection	yes
Overload protection	yes

Monitoring range

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: 1 / brass: 1 / aluminum: 1 / copper: 1	
Hysteresis [% of Sr]	3...15	
Switch-point drift [% of Sr]	-10...10	
Correction factor = 1	yes	
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 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
Continuous shock resistance	EN 60068-2-27	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
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]	701	
Embedded software included	yes	
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A013
	File number UL	E174191
Mechanical data		
Weight [g]	45	
Housing	Threaded type	
Mounting	flush mountable	
Dimensions [mm]	M8 x 1 / L = 37.5	
Thread designation	M8 x 1	
Material	stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)	
Tightening torque [Nm]	A = 6 mm: 2 Nm; B: 5 Nm	
Displays / operating elements		
Display	Switching status	1 x LED, yellow
Accessories		
Items supplied	lock nuts: 2	
Remarks		
Pack quantity	1 pcs.	



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Electrical connection

Cable: 2 m, PUR; 3 x 0.14 mm²

Connection



Core colors :
 BK = black
 BN = brown
 BU = blue

Diagrams and graphs

Installation

