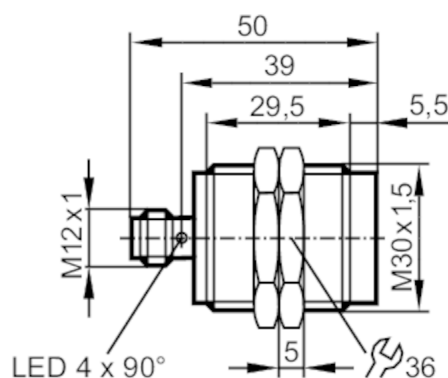




Inductive full-metal sensor

IIB3018QBPKG/AM/P/US-104



Product characteristics

Electrical design		PNP
Output function		normally open
Sensing range	[mm]	18
Dimensions	[mm]	M30 x 1.5 / L = 50

Application

Application		constant cleaning with aggressive cleaning agents; regular cleaning processes
Pressure rating	[bar]	100
Pressure rating	[MPa]	10
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]	100
Short-circuit protection		yes
Overload protection		yes

Detection zone

Sensing range	[mm]	18
Real sensing range S_r	[mm]	$18 \pm 10 \%$
Operating distance	[mm]	0...14.58



Inductive full-metal sensor

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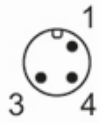
Accuracy / deviations			
Correction factor		steel: 1 / stainless steel: 1 / brass: 0.4 / aluminium: 0.3 / copper: 0.2	
Hysteresis	[% of Sr]	3...15	
Switch point drift	[% of Sr]	-10...10	
Operating conditions			
Ambient temperature		[°C]	0...100
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K	
Tests / 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 emission		class B
Impact resistance			1 J
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 Nc		TA = 0°C; TB = 100°C; t1 = 30 min; t2 = < 10 s 50 cycles
MTTF	[years]	1385	
Embedded software included		yes	
UL approval	Ta		0...70 °C
	Enclosure type		Type 1
	power supply		Limited Voltage/Current
	UL Approval no.		A012
	File number UL		E174191
Mechanical data			
Weight	[g]	99.8	
Mounting	quasi flush		
Dimensions	[mm]	M30 x 1.5 / L = 50	
Thread designation	M30 x 1.5		
Materials	housing: stainless steel (316L/1.4404); sensing face: stainless steel (316L/1.4404); LED window: PEI; lock nuts: stainless steel (316L/1.4404)		
Tightening torque	[Nm]	80	
Displays / operating elements			
Display	switching status		4 x 90° LED, yellow
Accessories			
Items supplied	lock nuts: 2		
Remarks			
Pack quantity	1 pcs.		

Inductive full-metal sensor

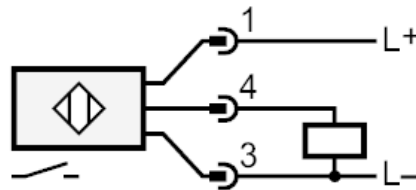
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Electrical connection

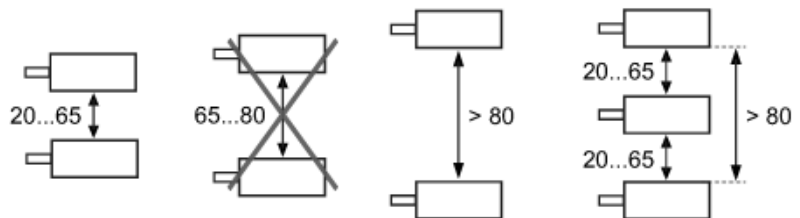
Connector: 1 x M12; coding: A



Connection



Diagrams and graphs



IIT245

Inductive full-metal sensor

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