

Inductive full-metal sensor

IEK3002BBPKG/AM/US-104



Product characteristics

Electrical design	PNP
Output function	normally open
Sensing range [mm]	2
Housing	threaded type
Dimensions [mm]	M8 x 1 / L = 60

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]	< 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
Switching frequency DC [Hz]	100
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range [mm]	2
Real sensing range Sr [mm]	$2 \pm 10\%$
Operating distance [mm]	0...1.62
Increased sensing range	yes

Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.7 / aluminium: 0.6 / copper: 0.5
Hysteresis [% of Sr]	1...20



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Switch point drift	[% of Sr]	-10...10
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Operating conditions

Ambient temperature	[°C]	-25...70
Protection		IP 67; IP 68; IP 69K; ("Coolant")

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
Impact resistance		1 J
MTTF	[years]	1446
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]	21.4
Housing		threaded type
Mounting		flush mountable
Dimensions	[mm]	M8 x 1 / L = 60
Thread designation		M8 x 1
Materials		stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PEI; 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
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Accessories

Items supplied	lock nuts: 2
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Remarks

Pack quantity	1 pcs.
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Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: gold-plated

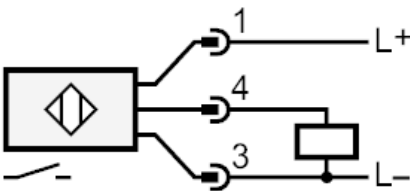




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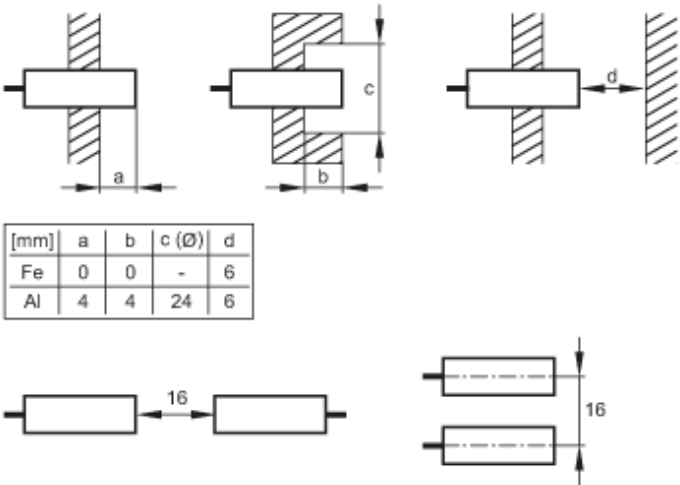
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Connection



Diagrams and graphs

Installation



[mm]	a	b	c (Ø)	d
Fe	0	0	-	6
Al	4	4	24	6