

Inductive full-metal sensor

IEK3002BBPKG/AM/SC/US-104-DPS



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 welding applications
Pressure rating [bar]	50
Pressure rating [MPa]	10
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 S_r [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
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IER200



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Hysteresis	[% of Sr]	1...20
Switch point drift	[% of Sr]	-10...10

Operating conditions

Ambient temperature	[°C]	0...85
Protection		IP 67; IP 68

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	0...70 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	A030
	File number UL	E174191

Mechanical data

Weight	[g]	21.5
Housing		threaded type
Mounting		flush mountable
Dimensions	[mm]	M8 x 1 / L = 60
Thread designation		M8 x 1
Materials		housing: stainless steel (316L/1.4404) anti-spatter; sensing face: stainless steel (316L/1.4404) anti-spatter; LED window: PEI; lock nuts: stainless steel (316L/1.4404) anti-spatter
Tightening torque	[Nm]	< 5
Full-metal housing		yes

Displays / operating elements

Display	switching status	4 x 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



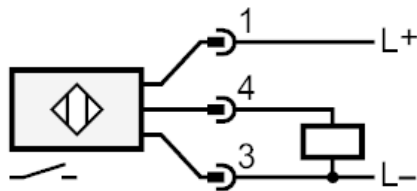
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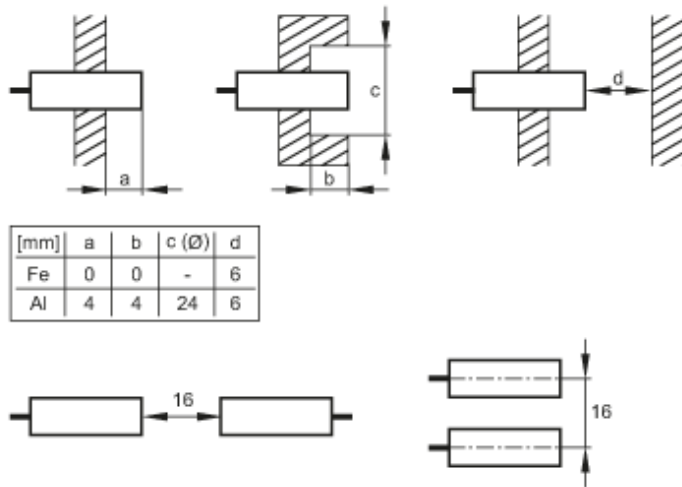
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Connection



Diagrams and graphs

Installation



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