

AA1 Series

Miniaturised Cylindrical Inductive Sensors



Technical Datasheet

Key Features

- Complete range of ultra-miniaturised inductive sensors Ø3mm
- IP65 rated



Options & Ordering Codes

AA		1		/		A		P		-		1		A	
Series		Housing				Output State		Output Logic		Distance		Cable Exit			
Ø3 Inductive Sensor		Miniaturised Housing				Normally Open Output		N		1		A		2m PUR cable exit	
						Normally Closed Output		P		3					

Technical Specification

Models	AA*/**-1*	AA*/**-3*
Nominal Sensing Distance Sn	0.6mm	1mm
Operating Distance	0...0.48mm	0...0.81mm
Hysteresis	1...20%	
Standard Target	3x3mm FE360	
Repeatability	5% @ UB = 20...30V; Ta = 23°C ± 5°C	
Operating Voltage	10...30VDC	
Ripple	≤ 10%	
Output Type	NPN or PNP - NO or NC	
Output Current	≤ 100 mA	
Output Voltage Drop	≤ 1.5V @ 100mA	
No-Load Supply Current	≤ 10 mA	
Leakage Current	≤ 10 µA	
Switching frequency	3 kHz	3.5 kHz
Power On Delay	≤ 50 ms	
Temperature Range	-25°C...+70°C	
Temperature Drift	10%	
Power Supply Protections	Polarity Reversal	
Output Protection	Short Circuit (Auto-reset), Overvoltage Pulses	
EMC	In conformity with the EMC Directive according to IEC 60947-5-2	
Shock & Vibration	IEC 60947-5-2	
Protection Degree	IP67	
Housing Material	Stainless Steel AISI 303	
Active Head Material	PBT	
Correction Factor	see table	
LEDs	On (Yellow LED)	
Connection	2m PUR cable	

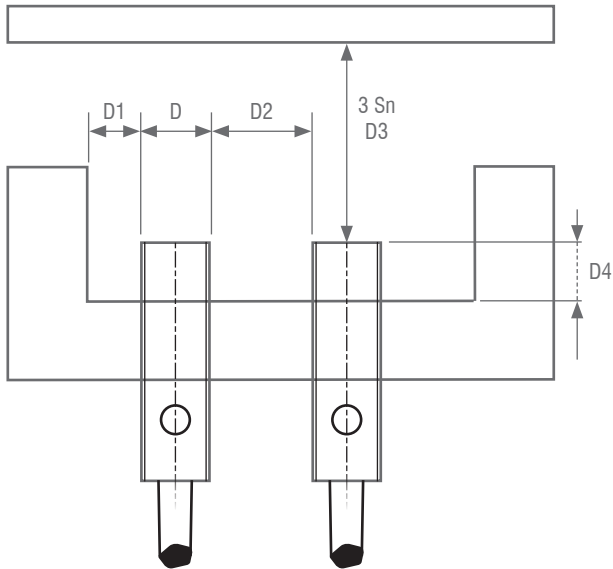
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Correction Factors

Models	FE 360	Copper	Aluminium	Brass	Stainless Steel
AA1/**-**	1	$0.32 \pm 10\%$	$0.24 \pm 10\%$	$0.39 \pm 10\%$	$0.57 \pm 10\%$
AA1/**-3*	1	$0.33 \pm 10\%$	$0.29 \pm 10\%$	$0.35 \pm 10\%$	$0.71 \pm 10\%$

Installation

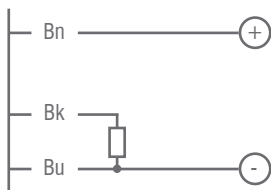


Models	D4	D1	D2	D3
AA1/**-**	$\geq 0\text{mm}$	$\geq 2\text{mm}^{(1)}$	$\geq 3\text{mm}$	$\geq 1.8\text{mm}$
AA1/**-3*	$\geq 2.5\text{mm}$	$\geq 2\text{mm}^{(2)}$	$\geq 3\text{mm}$	$\geq 3\text{mm}$

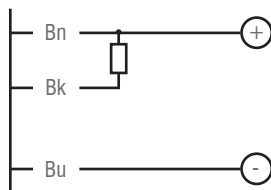
⁽¹⁾ $\geq 3\text{ mm}$ without ferro-magnetic material
⁽²⁾ $\geq 3\text{ mm}$ without ferro-magnetic material

Wiring Diagrams

PNP



NPN



LEGEND

BN - Brown
 BU - Blue
 BK - Black
 WH - White

Dimensions (mm)

