



Product Data

A/1K-NI Series Nickel Temperature Sensor

Product Description

The A/1K-NI Series temperature sensors incorporate a thin film RTD sensor, which provides a predictable output over the specified temperature range of -50 to 275°F. These sensors are available in a two-wire configuration incorporating high accuracy and interchangeability throughout a wide operating temperature range. (See www.workaci.com for complete curve/chart specifications)

These units are offered in Room, Room with Setpoint, Room with Override, Room with Setpoint and Override, and Room with Setpoint, Override, and RJ11 Jack, Stainless Steel Duct and Duct without Box, Immersion, Stainless Plate, Raw, Strap-On, Bullet Probe, Button Sensor and Outdoor Air Configurations.

All ACI Room sensors may be ordered with an optional setpoint (see chart on the following page), override, or with a 4 pin RJ11 or 6 pin RJ12 communication jack with terminal blocks, for remote programming. These units are also available with a 1/8" RS232 Stereo Jack.

The A/1K-NI series is covered by ACI's Five (5) Year Limited Warranty, which is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's web site, which is: www.workaci.com.

Product Specifications

Output	1K Ohms @ 70°F (21°C)		
Accuracy	Temp	Resistance	Accuracy
	-50°F	674 Ohms	+/- 1.4°F
	-30°F	725 Ohms	+/- 1.2°F
	32°F	892 Ohms	+/- 0.5°F
	70°F	1000 Ohms	+/- 0.4°F
	170°F	1314 Ohms	+/- 1.3°F
	250°F	1597 Ohms	+/- 1.7°F
Operating Temp. Range	-32 to 275°F (0 to 134.8°C)		
Temp. Coefficient	0.00527 Ohm/Ohm/°C		
Tolerance	T<0°C (32°F)	+/-0.4 + 0.028 * T(°C)	
Tolerance	T>0°C (32°F)	+/-0.4 + 0.007 * T(°C)	
For sensors with Display option see -LCD Temp display cut sheet			

Wiring Diagrams available at www.workaci.com

RTD



Attributes

- Double Potting Process avoids moisture issues
- Non-polarity sensitive

Applications

- OEM/Industrial
- Light Industrial
- DDC Systems



Made in the **USA**

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TEMPERATURE

RELATIVE HUMIDITY

PRESSURE

CURRENT

GAS SENSORS

ACCESSORIES

INTERFACE DEVICES

Ordering Information

A/1K-NI (choose configuration below)

-Configuration		-Length		-Enclosure Type		-Optional Plenum Wire
D	(Duct)	4", 8", 12", 18"		PB, GD, BB, 4X, EH		
DO	(Duct without Box)	4", 8", 12", 18"		-----		6'CL2P, 10'CL2P, 20'CL2P
I	(Immersion w/ well)	2.5", 4", 6"		PB*, GD, BB, 4X, EH		
INW	(Immersion no well)	2.5", 4", 6"		PB*, GD, BB, 4X, EH		
A	(Copper Averaging)	8', 12', 24'		PB, GD, BB, 4X, EH		
FA	(Flex. Cable Averaging)	8', 12', 24'		PB, GD, BB, 4X, EH		
RA	(Rigid Averaging)	18", 24", 36"		PB, GD, BB, 4X, EH		
S	(Strap)	-----		PB*, GD, 4X		
O	(Outdoor Air)	-----		EH, BB, 4X		
SP	(Stainless Plate)					
W	(Raw Potted Sensor)					
W-6'	(Raw w/ 6' Leads)					
BP	(Bullet Probe)					
BP-20'Z	(BP w/20' of Zip Wire)					
BBS	(Brass Button Sensor)					
SBS	(Stainless Button Sensor)					
PBS	(Plastic Button Sensor)					

Enclosure Key

PB = Plastic Box
GD = Galvanized Box
BB = NEMA 3R
4X = NEMA 4X
EH = Euro Housing (Weather tight)

*Please note that the **-PB** (Plastic Box) is rated to 140° F and may not be suitable for high temperature applications.

Example: A/1K-NI-D-4"-PB

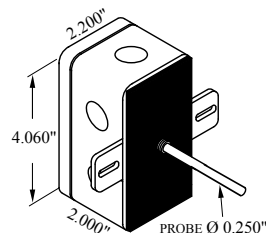
Room configurations:

Configuration		Communication Jack		Pot Value*		Setpoint Indicator*		Pot Action*		Display
- 		- 		- 		- 		- 		-
R -	Room	RJ4	(4 Pin RJ11)	400	5K	Cool Warm		DA (Direct)		() No Display (Standard)
RS* -	Room w/ Setpoint	RJ6	(6 Pin RJ12)	1K	8.5K	55 t o 85		RA (Reverse)		(DF) LCD Display (Degrees F)
RO -	Room w/ Override	RS232	(Stereo Jack)	2K	10K	10 t o 30°C				(DC) LCD Display (Degrees C)
RSO* -	Room w/ Setpoint & Override			3K	20K					
					100K					

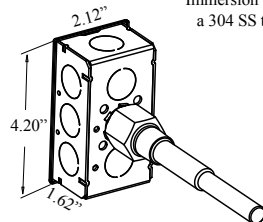
Room Sensors with* require setpoint specs (value, indication, and action) and are not listed on your packing slip or invoice.

Example: A/1K-NI-RSO- 10K- Cool/Warm-DA

Standard enclosure defaults:

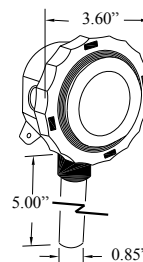


Duct
(Plastic Box)

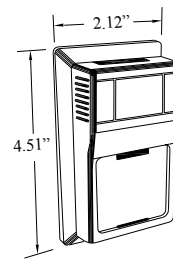


Immersion
(Galvanized Box)

Immersion units include a 304 SS thermowell



Outdoor Air
(Euro Enclosure)



Room

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