



## Features & Options

- Averaging Lengths: 12", 2' and 4'
- Several Enclosure Styles
- Wide Selection of Temperature Sensing Elements

BAPI Rigid Averaging Units feature closed cell foam to seal the probe insertion hole and absorb vibration. Mounting tabs allow for easy installation directly to the wall of the duct. All units have etched Teflon leadwires and encapsulated sensors to create a watertight package that can perform under real world conditions.

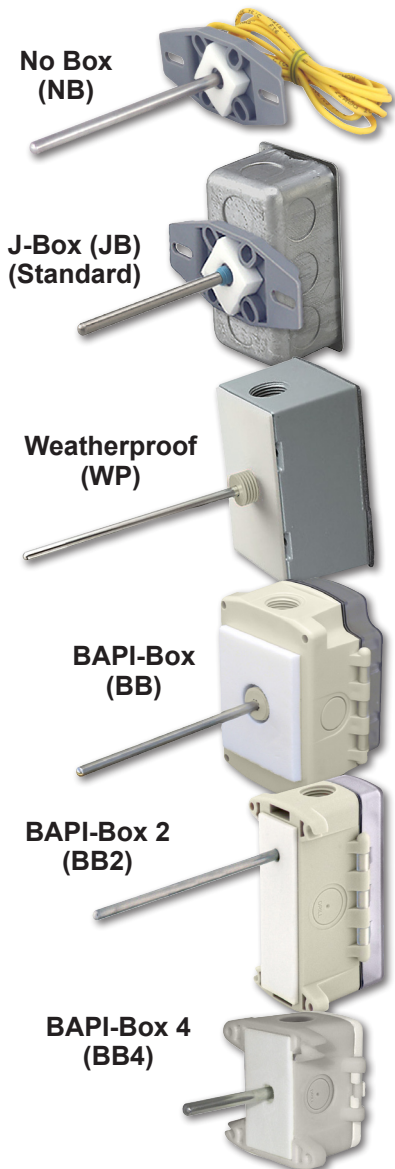
Averaging probes should be used wherever there is a chance for stratified layers of hot and cold air. Averaging probes are made of 1/4" diameter stainless steel tubing.

Rigid Averaging Units come standard with a 2"x4" steel J-Box but are also available with No Box, an ABS plastic BAPI-Box 4 or three watertight enclosures: the metal Weatherproof and the UV-resistant polycarbonate BAPI-Box and BAPI-Box 2. BAPI also offers optional liquid-tight fittings.

### Pierceable Knockout Plug

A Pierceable Knockout Plug is available for the open port in the BAPI-Box 4 enclosure (and for other enclosures). With the plug installed, the BAPI-Box 4 carries an IP44 rating. See "Accessories" for more info.

BAPI-Box 4 Rigid Averaging Sensor  
with Knockout Plug Installed



## Specifications

### Environmental Operation Range:

Temperature Sensor:  
 BAPI-Boxes: -40 °C to 85 °C  
 J-Box, WP, NB: -40 °C to 100 °C  
 Temp. Transmitter: -20 °C to 70 °C  
 Humidity: 0 to 95%, non-condensing

### Enclosure Rating:

J-Box: IP20, NEMA 1  
 BB4 Models: IP10  
 (IP44 with Knockout Plug)  
 WP Model: NEMA 3R  
 BB & BB2 Models: IP66, NEMA 4

### Enclosure Material:

WP Model: Cast Aluminum  
 BB & BB2: Polycarbonate, UL94, V-0  
 J-Box Model: Galv. Steel  
 BB4 Model: Nylon & Plastic, UL94, V-0

### Enclosure Dimensions: H x W x D

BAPI-Box (BB)	5 x 4.1 x 2.5" (127 x 104 x 63.5mm)
BAPI-Box 2 (BB2)	4.9 x 2.8 x 2.35" (125 x 71.6 x 60mm)
BAPI-Box 4 (BB4)	2.8 x 2.8 x 2.06" (72 x 71.4 x 52.3mm)
J-Box (JB)	4.2 x 3.9 x 1.94" (106 x 98.4 x 49mm)
Weatherproof (WP)	4.5 x 2.75 x 2.2" (114 x 70 x 55mm)

(For enclosure dimension drawings, turn to the end of the section.)

**For detailed specifications on the Sensors & Transmitters, see the "Sensors" section.**

\*All Passive Thermistors 20KΩ and smaller are CE compliant.





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## Rigid Averaging Units

Temperature Sensors

A39

Ordering Information		Rigid Averaging Units - Temperature	
BA/	Sensor Type (Required)	Use the designator number (shown to the left in bold) to indicate the sensor	
#		<b>THERMISTORS</b>	<b>RTDs</b>
	<b>1.8K</b>	1.8K $\Omega$ @ 25 °C	<b>1K[375]</b> 1K $\Omega$ Platinum @ 0 °C, 3.75 $\Omega$ /°C temp. coeff.
	<b>2.2K</b>	2.2K $\Omega$ @ 25 °C	<b>1K[Ni]</b> 1K $\Omega$ Nickel @ 21°C, 5 $\Omega$ /°C temp. coeff.
	<b>3K</b>	3K $\Omega$ @ 25 °C	<b>1K</b> 1K $\Omega$ Platinum @ 0 °C, 3.85 $\Omega$ /°C temp. coeff.
	<b>3.25K</b>	3.25K $\Omega$ @ 25 °C (T30 type)	<b>2K</b> 2K $\Omega$ Silicon @ 20°C, 8 $\Omega$ /°C temp. coeff.
	<b>3.3K</b>	3.3K $\Omega$ @ 25 °C	
	<b>10K-2</b>	10K $\Omega$ @ 25 °C	
	<b>10K-3</b>	10K $\Omega$ @ 25 °C	
	<b>10K-3[11K]</b>	5,238 $\Omega$ @ 25 °C	
	<b>20K</b>	20K $\Omega$ @ 25 °C	
	<b>47K</b>	47K $\Omega$ @ 25 °C	
	<b>50K</b>	50K $\Omega$ @ 25 °C	
	<b>100K</b>	100K $\Omega$ @ 25 °C	
		<b>TEMPERATURE TRANSMITTERS</b> <i>Must include a "range" figure. Requires an enclosure.</i>	
	<b>T1K[range]</b>	1K Platinum RTD, 1,000 $\Omega$ @ 0 °C with 4 to 20 mA Output	
	<b>T1KM[range]</b>	1K Platinum RTD, 1,000 $\Omega$ @ 0 °C with MATCHED 4 to 20 mA Output*	
	<b>T10K[range]</b>	10K Thermistor, 10,000 $\Omega$ @ 25 °C with 4 to 20 mA Output**	
	<b>T10K5[range]</b>	10K Thermistor, 10,000 $\Omega$ @ 25 °C with 0-5 VDC Output**	
	<b>T10K10[range]</b>	10K Thermistor, 10,000 $\Omega$ @ 25 °C with 0-10 VDC Output**	
		<b>TEMPERATURE TRANSMITTER RANGES</b>	
		Custom temperature transmitter ranges are available. Common ranges are listed below	
		<b>40 TO 90F</b>	<b>4 TO 32C</b>
		<b>0 TO 100F</b>	<b>-18 TO 38C</b>
		<b>20 TO 120F</b>	<b>-7 TO 49C</b>
		<b>32 TO 134F</b>	<b>0 TO 57C</b>
		<b>-30 TO 130F</b>	<b>-34 TO 54C</b>
		<b>32 TO 212F</b>	<b>0 TO 100C</b>
		<b>30 TO 234F</b>	<b>-1 TO 112C</b>
	<b>Configuration (Required)</b>		
	<b>-RA-12"</b>	12" Rigid Averaging - 1/4" Diameter, Stainless Steel	
	<b>-RA-2'</b>	2' Rigid Averaging - 1/4" Diameter, Stainless Steel	
	<b>-RA-3'</b>	3' Rigid Averaging - 1/4" Diameter, Stainless Steel	
	<b>-RA-4'</b>	4' Rigid Averaging - 1/4" Diameter, Stainless Steel	
	<b>-RA-XX</b>	Custom Length Rigid Averaging - 1/4" Diameter, Stainless Steel, Call for details. <sup>1</sup>	
		<b>Optional Enclosure</b>	<b>2"x4" J-Box comes standard</b>
		<b>-NB</b>	No Junction Box, 6" Etched Teflon Leadwires
		<b>-BB</b>	BAPI-Box Enclosure - IP66 rated, UV-resistant polycarbonate
		<b>-BB2</b>	BAPI-Box 2 Enclosure- IP66 rated, UV-resistant polycarbonate
		<b>-BB4</b>	BAPI-Box 4 Enclosure - IP10 rated, nylon & plastic (Not for Transmitters) (IP44 rated if Pierceable Knockout Plug is installed in the open port.)
		<b>-WP</b>	Weatherproof Enclosure - NEMA 3R rated, cast aluminum
		<b>Options</b>	<b>An enclosure is required</b>
		<b>-TB</b>	Test & Balance Switch (BB or BB2 required, includes a Terminal Strip Connection, not available with Temp. Transmitter)
		<b>-TS</b>	Terminal Strip Connection (BB or BB2 required for units with a Thermistor, RTD or Semiconductor)***
<b>EXAMPLE</b>			
<b>BA/</b>	<b>10K-2</b>	<b>-RA-12"</b>	<b>-NB</b>
Example Part Number: BA/10K-2-RA-12"-NB			
<b>Your Part Number:</b>			

Call BAPI if you have questions about the above ordering grid or the configuration of the product you are ordering.

\*MATCHED Transmitter use Class A RTD's &amp; are matched at 25%, 50% &amp; 75% of calibrated scale limited to within -25°C to 150°C.

\*\*Range is limited to -40 to 185°F (-40 to 85°C)

\*\*\*TS option is not available with the T10K transmitters.

<sup>1</sup>As a rule the in-between lengths will be priced at the next higher standard length list. The length is specified in whole inches (XX") and 48 inches is max. and 12 inches is the minimum.

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