



## Features & Options

- Probe Lengths: 2", 4" & 8" (fit standard BAPI Thermowell lengths)
- Series 304 Stainless Steel Probes and Six Enclosure Styles
- Double Encapsulated Sensors & Etched Teflon Leadwires

Immersion Units are available in 2", 4" and 8" probe lengths. The sensor is potted inside a 1/4" stainless steel probe with thermally conductive compound. All Immersion Units have etched Teflon leadwires and double encapsulated sensors to create a watertight package that can withstand high humidity and condensation.

Immersion Units come standard with a 2"x4" steel J-Box but are also available with a BAPI-Box 4 or three styles of watertight enclosure: Weatherproof, BAPI-Box or BAPI-Box 2. BAPI also offers optional liquid-tight fittings.



### BAPI Thermowells

Immersion Unit Probes are designed to be inserted into a Thermowell. For more info on Thermowells, see page A48.

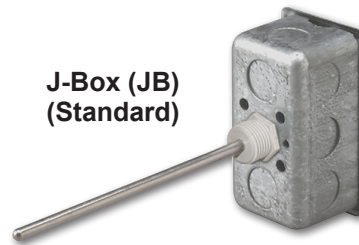
### Pierceable Knockout Plug

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

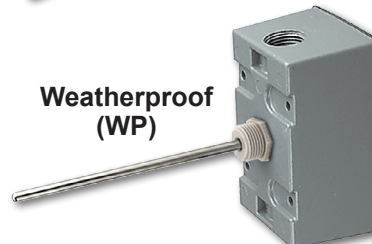
BAPI-Box 4 Immersion Sensor with Plug Installed



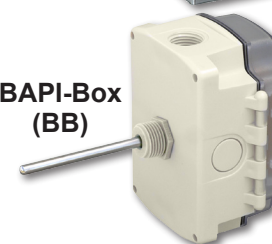
J-Box (JB)  
(Standard)



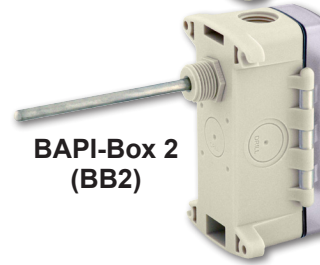
Weatherproof  
(WP)



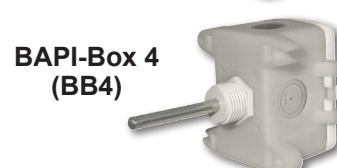
BAPI-Box  
(BB)



BAPI-Box 2  
(BB2)



BAPI-Box 4  
(BB4)



## Specifications

### Environmental Operation Range:

Temperature Sensor: -40 to 105 °C  
Temperature Transmitter: -20 to 70 °C  
Humidity: 0 to 100%, non-condensing

### Enclosure Rating:

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

### Enclosure Material:

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

### Encl. 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.





Rev. 01/04/16

# Immersion Probes w/ nylon fitting

## Temperature Sensors

**A45**

Ordering Information		Immersion Units - Temperature		
BA/	Sensor Type	Required selection	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>SEMICONDUCTORS</b>	
	<b>20K</b>	20K $\Omega$ @ 25 °C	<b>334</b> LM334 Semiconductor	
	<b>47K</b>	47K $\Omega$ @ 25 °C	<b>592</b> AD592 Semiconductor, 273 $\mu$ A @ 0 °C	
	<b>50K</b>	50K $\Omega$ @ 25 °C	<b>592-10K</b> AD592 Semicond. w/ 10 k $\Omega$ shunt resistor, 2.73 V @ 0 °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>30 TO 81F</b>	<b>-1 TO 27C</b>	<b>32 TO 212F</b> <b>0 TO 100C</b>	
	<b>0 TO 100F</b>	<b>-18 TO 38C</b>	<b>40 TO 240F</b> <b>4 TO 116C</b>	
	<b>20 TO 120F</b>	<b>-7 TO 49C</b>	<b>50 TO 250F</b> <b>10 TO 121C</b>	
	<b>32 TO 134F</b>	<b>0 TO 57C</b>		
<b>Configuration</b>	<b>Required selection</b>			
<b>-I-2"</b>	2" length of 1/4" Diameter, Stainless Steel Probe (Use 2" BAPI Well)			
<b>-I-4"</b>	4" length of 1/4" Diameter, Stainless Steel Probe (Use 4" BAPI Well)			
<b>-I-8"</b>	8" length of 1/4" Diameter, Stainless Steel Probe (Use 8" BAPI Well)			
<b>-I-XX</b>	Custom lengths of 1/4" Diameter, Stainless Steel Probe are available. Call for Details (Custom well required)			
	<b>Enclosure Options</b> <i>2"x4" J-Box comes standard</i>			
	<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>Optional Terminal Block</b> <b>An enclosure is required</b>		
	<b>-TS</b>	Terminal Strip Connection (BB or BB2 required for units with a Thermistor, RTD or Semiconductor)***		
EXAMPLE				
<b>BA/</b>	<b>10K-2</b>	<b>-I-8"</b>	<b>-BB</b>	
Part Number: BA/10K-2-I-8"-BB				
<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.

\*Transmitters with matched outputs require a Class A sensor.

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

\*\*\*TS option is not available with the 592-10K Semiconductor sensor or the T10K transmitters.

