A68 Outside Air Units

Temperature Sensors

Rev. 06/09/11

Features & Options

- Quick-Response Sensor
- Well-Vented, Light-Colored Sensor Guard
- Four Watertight Enclosure Styles
- Wide Selection of Temperature Sensing Elements

Outside Air Units are designed to be mounted outdoors. The UV-resistant plastic shield keeps the sensor out of the sunlight and allows for excellent air circulation. The units are available in a Weather Tight (**EU**) UV-resistant enclosure with an IP66 rating. They are also available in a cast aluminum Weatherproof **(WP)** enclosure which carries a NEMA 3R rating or a BAPI-Box **(BB)** or BAPI-Box 2 **(BB2)** which are made of UV-resistant polycarbonate and carry an IP66 rating. BAPI also offers optional liquid-tight fittings. For a comparison of the enclosure styles, please see the App. Notes section.

All Outside Air Units have etched Teflon leadwires and can withstand high humidity and condensation and perform under real world conditions. This is especially important in an outside air application which can be exposed to rain, snow and large temperature swings.

* All Passive Thermistors 10K Ω and smaller are CE compliant.

For detailed specs on the individual Sensors & Transmitters, turn to the "Sensors" Section.

BAPI-Box (BB)

BAPI-Box 2 (BB2)

Weatherproof (WP)

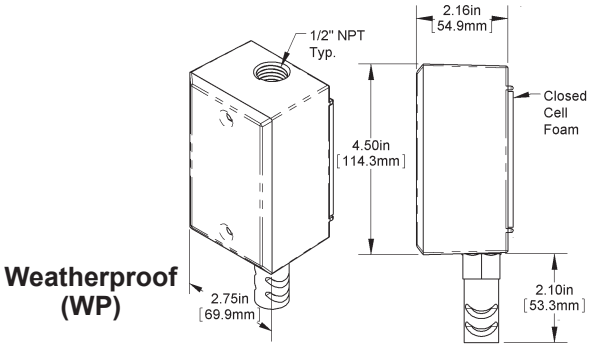
Weather Tight (EU)

Specifications

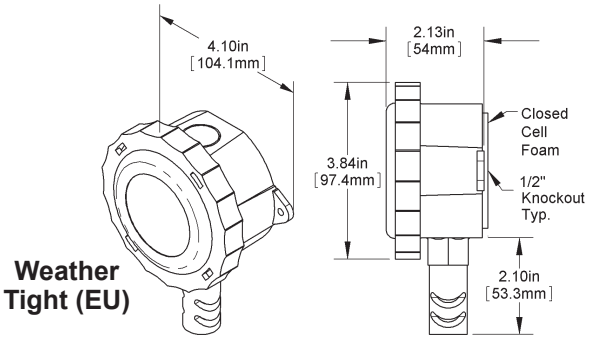
Enclosure Material:
EU Model: ABS Plastic, UL94, V-0
BB & BB2 Models: UV-resistant polycarbonate, UL94, V-0
WP Model: Cast Aluminum

Enclosure Rating:
WP Model: NEMA 3R
EU, BB & BB2 Models: IP66, NEMA 4

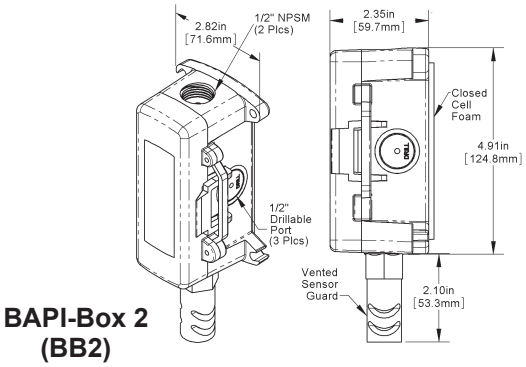
Environmental Operation Range:
Temperature Sensor: -40 °C to 85 °C
Temperature Transmitter: -20 °C to 70 °C
Humidity: 0 to 100%, non-condensing



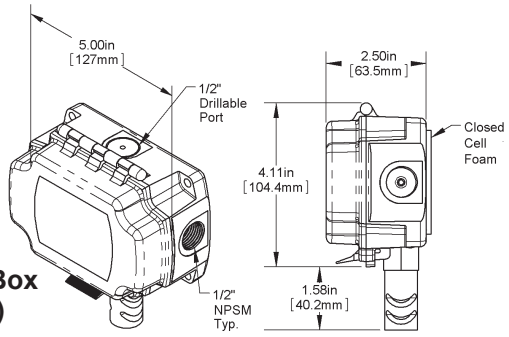
Weatherproof (WP)



Weather Tight (EU)



BAPI-Box 2 (BB2)



BAPI-Box (BB)

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Rev. 06/09/11

Ordering Information **Outside Air Units - Temperature**

BA/

Sensor Type Required selection Use the designator number (shown to the left in bold) to indicate the sensor

#

THERMISTORS

1.8K	1.8K Ω @ 25 °C
2.2K	2.2K Ω @ 25 °C
3K	3K Ω @ 25 °C
3.25K	3.25K Ω @ 25 °C (T30 type)
3.3K	3.3K Ω @ 25 °C
10K-2	10K Ω @ 25 °C
10K-3	10K Ω @ 25 °C
10K-3[11K]	5,238 Ω @ 25 °C
20K	20K Ω @ 25 °C
47K	47K Ω @ 25 °C
50K	50K Ω @ 25 °C
100K	100K Ω @ 25 °C

RTDs

100	100 Ω Platinum @ 0 °C, .385 Ω/°C temp. coeff.
100[3W]	3 Wire 100 Ω Plat. @ 0 °C, .385 Ω/°C temp. coeff.
1K[375]	1K Ω Platinum @ 0 °C, 3.75 Ω/°C temp. coeff.
1K[NI]	1K Ω Nickel @ 21°C, 5 Ω/°C temp. coeff.
1K	1K Ω Platinum @ 0 °C, 3.85 Ω/°C temp. coeff.
2K	2K Ω Silicon @ 20 °C, 8 Ω/°C temp. coeff.

SEMICONDUCTORS

334	LM334 Semiconductor
592	AD592 Semiconductor, 273 µA @ 0 °C
592-10K	AD592 Semicond. w/ 10 kΩ shunt resistor, 2.73 V @ 0 °C

TEMPERATURE TRANSMITTERS ***Must include a "range" figure. Requires an enclosure.***

T100[range]	100 Platinum RTD, 100 Ω @ 0 °C with 4 to 20 mA Output
T100M[range]	100 Platinum RTD, 100 Ω @ 0 °C with MATCHED 4 to 20 mA Output*
T1K[range]	1K Platinum RTD, 1,000 Ω @ 0 °C with 4 to 20 mA Output
T1KM[range]	1K Platinum RTD, 1,000 Ω @ 0 °C with MATCHED 4 to 20 mA Output*
T10K[range]	10K Thermistor, 10,000 Ω @ 25 °C with 4 to 20 mA Output**
T10K5[range]	10K Thermistor, 10,000 Ω @ 25 °C with 0-5 VDC Output**
T10K10[range]	10K Thermistor, 10,000 Ω @ 25 °C with 0-10 VDC Output**

TEMPERATURE TRANSMITTER RANGES

Custom temperature transmitter ranges are available. Common ranges are listed below

32 TO 122F	**0 TO 50C**	**-30 TO 140F**	**-34 TO 60C**
20 TO 120F	**-7 TO 49C**	**-22 TO 158F**	**-30 TO 70C**
-20 TO 120F	**-29 TO 49C**	**-52 TO 152F**	**-47 TO 67C**
0 TO 150F	**-18 TO 66C**		

Configuration	**Required selection**
-O-BB	BAPI-Box Enclosure - IP66 rated, UV-resistant polycarbonate
-O-BB2	BAPI-Box 2 Enclosure - IP66 rated, UV-resistant polycarbonate
-O-EU	Weather Tight Enclosure - IP 66 UV-resistant enclosure
-O-EUD	Weather Tight Enclosure - IP66 rated UV-resistant enclosure (Probe is attached to the base of the enclosure, similar to a duct sensor)
-O-WP	Weather Proof Enclosure - NEMA 3R rated cast aluminum enclosure

Options	**An enclosure is required**
-TB	Test & Balance Switch (BB or BB2 required, includes a Terminal Strip Connection, not available with Temp. Transmitter)
-TS	Terminal Strip Connection (BB or BB2 required for units with a Thermistor, RTD or Semiconductor)***

EXAMPLE

BA/	**10K-2**	**-O-EU**		

Example Part Number: BA/10K-2-O-EU Outside Air Unit with Weathertight Enclosure and 10K-2 Thermistor

Your Part Number

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 & are matched at 25%, 50% & 75% of calibrated scale limited to within -25ºC to 150ºC.

**Range is limited to -40 to 158°F (-40 to 70°C)

***TS option is not available with the 100[3W] RTD sensor, the 592-10K Semiconductor sensor or the T10K transmitters.