

BUILDING AUTOMATION PRODUCTS INC.

PRODUCT LINE



TEMPERATURE



HUMIDITY



PRESSURE



AIR QUALITY



ACCESSORIES



WIRELESS



Changing the way you
think about sensors...

BAPI[®]
Sensors for HVAC/R



THE BAPI DIFFERENCE



BAPI headquarters in Gays Mills, Wisconsin.

Building Automation Products, Inc. (BAPI) is a premier sensor manufacturer for the HVAC/R industry. BAPI specializes in sensors for temperature, humidity, pressure, and air quality. Originating in Cross Plains, WI in 1993, BAPI's first facility was literally conducted out of a small two-car garage. Today, BAPI serves customers around the globe from its 50,000 square foot facility based in rural southwestern Wisconsin.

Global Support

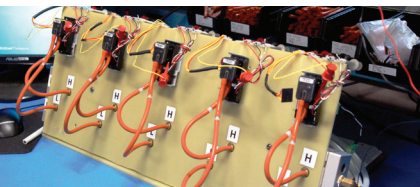
To support our customers in the United Kingdom and Europe BAPI has recently opened a sales office and warehouse facilities located in Farnborough, England. From our facility we are able to provide product assembly, technical support and after sales support. BAPI UK holds a wide variety of products in stock allowing for next day delivery.



BAPI office and warehouse in Farnborough, United Kingdom

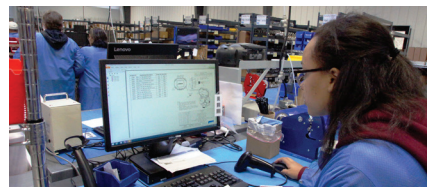
...it's in the details

BAPI continues the "...it's in the details" tradition by using the highest quality sensing elements paired with state-of-the-art manufacturing, meticulous testing and quality assurance to ensure a reliable product time after time. Over the past 25 years BAPI has forged a place in the marketplace by combining its expertise with customer feedback to find innovative ways to use advanced sensor technology on HVAC/R applications.



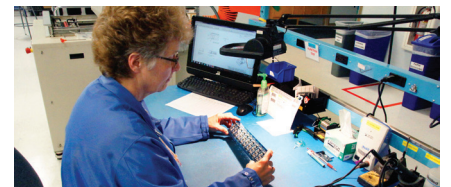
On-Site, Multi-Step Testing

Every product goes through testing at multiple steps to ensure quality.



Computer Aided Workstations

All of our workstations include a computer terminal to ensure build prints and process instructions are up to date.



99.94% Manufacturing Efficiency Rate

All products are traceable throughout the manufacturing process to track any nonconformance.

WE MAKE IT EASY FOR YOU

5-year warranty across all products.

Our products are designed and manufactured to last. We back up that claim by offering a 5 year warranty across all of our products.

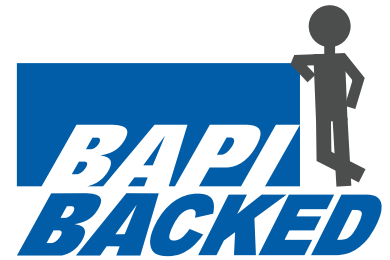
A lifetime limited warranty is also available on many of our single point, room and non-room temperature sensors.*



BAPI-Backed Labor Guarantee

At BAPI we stand behind our products and we stand behind you! Not only do we provide a comprehensive warranty, but we take it a step further...

If our product fails due to a manufacturing nonconformance we will not only repair or replace the product, we will also pay your labor cost to do so.*



0% Restock Fee on all stock products within 30 days.

New and unused received products that do not require repackaging or relabeling will not be charged for restocking if returned within 30 days.



BAPI Original

BAPI Originals are unique products inspired by quality vendors, talented employees and valuable customers. These three ingredients combined create industry leading, original solutions. Products that bear the "Another Original" stamp were designed by BAPI with quality components and driven by customer feedback to solve common HVAC/R problems.



Free Ground Shipping

At BAPI, we strive to be leaders in our industry by providing innovative, high quality products and services designed with you in mind. We are now proud to offer Free Ground Shipping on all orders in the contiguous United States. There's no price increase or minimum order quantity. It's just another way we are changing the way you think about sensors.

BAPI offers free ground shipping on all contiguous United States orders. All contiguous U.S. expedited shipping requests will be prepaid by BAPI and added to your invoice.



**For more information, please see our terms & conditions: www.bapihvac.com/terms-conditions/*

TABLE OF CONTENTS



Temperature Sensors

Page 5

Room • Button • Duct • Averaging • Immersion • Remote • Concave • Outside Air • Thermobuffers



Humidity Sensors

Page 19

Room • Duct • Outside Air



Pressure Sensors

Page 24

EZ-Presssure • ZPM Multi-Sensor • Pressure Pickup Ports • Pressure Probes • Pressure Switch



Air Quality Sensors

Page 31

VOC Room & Non-room • CO₂ Room & Non-room • CO • NO₂



Accessories

Page 40

Test Instruments • Power • Water Leak • Light Level • BAPI-Guard • Weather Shade



Wireless

Page 48

Room • Duct • Remote • Outside Air • Thermobuffer • Food Probe • Slim • Gateway



TEMPERATURE

BAPI-STAT QUANTUM WITH DISPLAY

Room Temperature Sensor

- Modern enclosure design
- High contrast display for improved clarity
- Optional fan speed and mode control

The BAPI-Stat Quantum room temperature sensors feature a modern enclosure style with pushbutton or slider setpoint adjustment and override. The LCD can display both temperature as well as room occupancy status. The display has been upgraded for higher contrast, providing improved clarity at greater distances.

The optional occupancy override can be configured in parallel with the sensor or setpoint, or as a separate output. An optional 3.5mm (1/8"), RJ11 or RJ22 communication jack can be mounted in the base to provide direct access to the network.

Fan speed and mode control is also available for applications with fan coils, heat pumps or unit ventilators.

ANOTHER
ORIGINAL



5
YEAR
WARRANTY

SPECIFICATIONS

POWER FOR 24 VDC POWER UNITS (DEFAULT):

0 to 5 VDC Setpoint or Resistive Setpoint 9 to 40 VDC (24 VDC nominal)
0 to 10 VDC Setpoint or Resistive Setpoint 15 to 40 VDC (24 VDC nominal)
Any Allowed Setpoint 15 to 28 VAC (24 VAC nominal)

Note: AC power requires a separate pair of shielded wires.

POWER FOR OPTIONAL 5 VDC POWER UNITS:

0 to 5 VDC Setpoint or Resistive Setpoint
5VDC, +/-1% nominal, Input regulation affects accuracy

POWER CONSUMPTION:

13 mA max DC; .32 VA max AC

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com for specs)

WIRING:

2 to 6 pair of 16 to 22AWG*

MOUNTING:

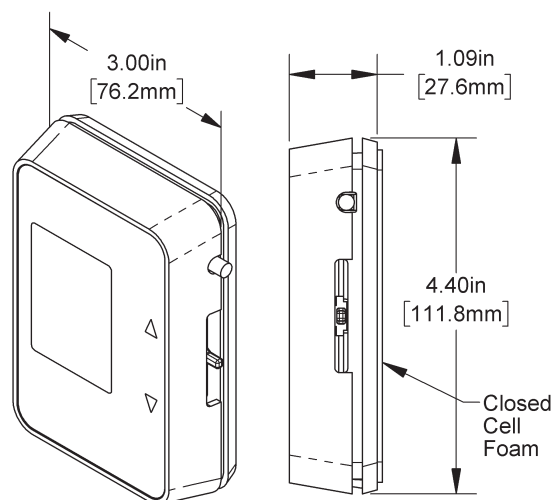
Standard 2" x 4" J-box or drywall mount (screws provided)

ENVIRONMENTAL OPERATION RANGE:

Temperature: 32 to 122°F (0 to 50°C)
Humidity: 0 to 95%, non-condensing

NOTES:

*BAPI recommends that you do not run wiring for sensors in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils. Also, these units are not designed for line voltage applications.



ALSO AVAILABLE:

BAPI-GUARD

Made from a durable polycarbonate, the BAPI-Guard protects thermostats from damage and unauthorized adjustment.

See page 45 to learn more.



BAPI-STAT QUANTUM PRIME WITH DISPLAY

Room Temperature Sensor

- Temperature and humidity setpoint adjustment
- High contrast display for improved clarity
- Membrane keypad for wipedown cleaning

The BAPI-Stat Quantum Prime is designed for operating rooms, clean rooms and elder care facilities. It features a large display and membrane keypad for wipedown cleaning. It is available with temperature and humidity measurement, temperature and humidity setpoint and occupant override.

The unit includes a number of field adjustments including °F or °C display, temperature and humidity offset and setpoint lockout. The display can also be set to show a large temperature and small %RH reading or a large %RH and a small temperature reading when 4 buttons are present. This unit can be configured with up to four transmitted variables. Contact your BAPI representative for details.



ANOTHER
ORIGINAL

TEMPERATURE

5
YEAR
WARRANTY

SPECIFICATIONS

POWER SUPPLY:

10 to 40 VDC (15 to 24 VDC Recommended) for 4 to 20 mA or 0 to 5 VDC Outputs
15 to 40 VDC (15 to 24 VDC Recommended) for 0 to 10 VDC Outputs
12 to 28 VAC (Requires a separate pair of shielded wires) for 0 to 5 VDC Outputs
15 to 28 VAC for 0 to 10 VDC Outputs

POWER CONSUMPTION:

60 mA max DC: 4 to 20 mA Output (<30mA typical)
36 mA max DC: 0 to 5 or 0 to 10 VDC Outputs (6mA typical)
0.9 VA max AC: 0 to 5 or 0 to 10 VDC Outputs (0.2VA typical)

OUTPUTS:

4 active outputs plus 1 passive temp sensor
Volts..... 0 to 5 VDC or 0 to 10VDC, Impedance >10KΩ
Current..... 4 to 20 mA, Impedance <500Ω @ 24 VDC
Resistance..... Setpoint, 5 VDC @ 5 mA max
Relay Contact..... N.O., 500 mA @ 24 VDC max
Temp. Sensor..... Passive RTD or Thermistor

INPUTS:

External Override.... 5 VDC or 24 VDC/VAC
External Sensor..... 10K-2 Thermistor purchased separately.

SENSING ELEMENTS FOR ACTIVE OUTPUTS AND DISPLAY:

Temperature..... 10K-2 Thermistor
Humidity: Capacitive Polymer, ±2%RH @ 25°C (77°F), 20 to 80%RH
Temp: Semi-conductor Band Gap, ±0.3°C (±0.54°F) @ 20 to 40°C (68 to 104°F)

MOUNTING:

2" x 4" J-box or drywall mount - screws provided

ENVIRONMENTAL AMBIENT:

Temperature..... 32 to 122°F (0 to 50°C)
Humidity..... 0 to 95%, non-condensing
Storage..... 32 to 185°F (0 to 85°C)

WIRING:

2 to 6 pair of 16 to 22 AWG

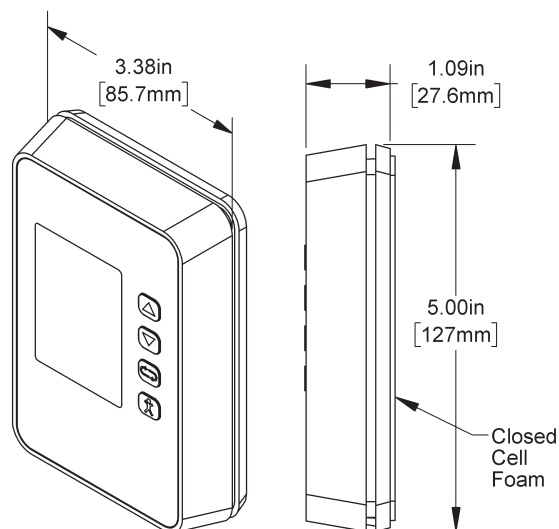
ENCLOSURE MATERIAL:

ABS Plastic, UL 94, V-0

NOTES:

*AC power requires a separate pair of shielded wires

*BAPI recommends that you do not run wiring for sensors in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils. Also, these units are not designed for line voltage applications.



BAPI-STAT QUANTUM SLIM

Room Temperature Sensor

- Modern enclosure design
- Wide selection of temperature sensing elements
- Lifetime limited warranty

The BAPI-Stat Quantum Slim Temperature Room Sensor is designed for applications where a temperature output is required with a sleek, low profile room enclosure. Available with thermistor and RTD elements. Ideal for locations where aesthetics are as important as the temperature measurement. Available in black or white.



ANOTHER
ORIGINAL

LIFETIME
LIMITED
WARRANTY

SPECIFICATIONS

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

WIRING:

One pair of 16-22 AWG wires

MOUNTING:

Surface or drywall mount (screws provided, does not fit 2" x 4" J-Box)

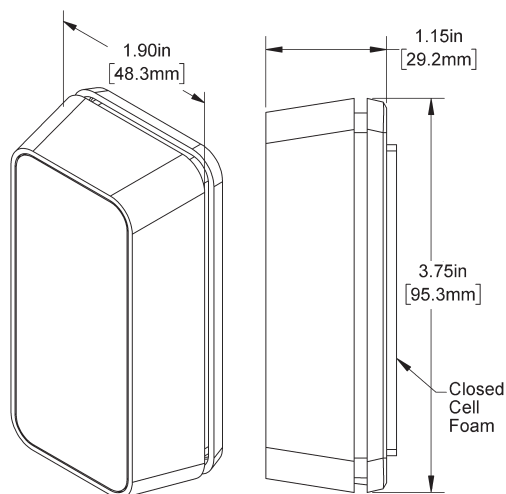
ENVIRONMENTAL OPERATION RANGE:

Temperature: 32 to 122°F (0 to 50°C)

Humidity: 0 to 95%, non-condensing

MATERIAL & RATING:

ABS Plastic - UL 94, V-0



BAPI-STAT QUANTUM WITHOUT DISPLAY

Room Temperature Sensor

- Modern enclosure design
- Optional setpoint, override and communication jack
- Lifetime limited warranty

Setpoint is available as a slidepot in various ranges. Multiple options are available including an override that can be configured to work with any controller and a communication jack with a 3.5 mm phono plug style jack. A pressure pickup port is also available for the enclosure, see the pressure section for more information.

ANOTHER
ORIGINAL



TEMPERATURE

LIFETIME
LIMITED
WARRANTY

SPECIFICATIONS

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

WIRING:

1 to 4 pair of 16-22 AWG wires

MOUNTING:

2" x 4" J-box or drywall mount (screws provided)

ENVIRONMENTAL OPERATION RANGE:

Temperature: 32 to 122°F (0 to 50°C)

Humidity: 0 to 95%, non-condensing

MATERIAL & RATING:

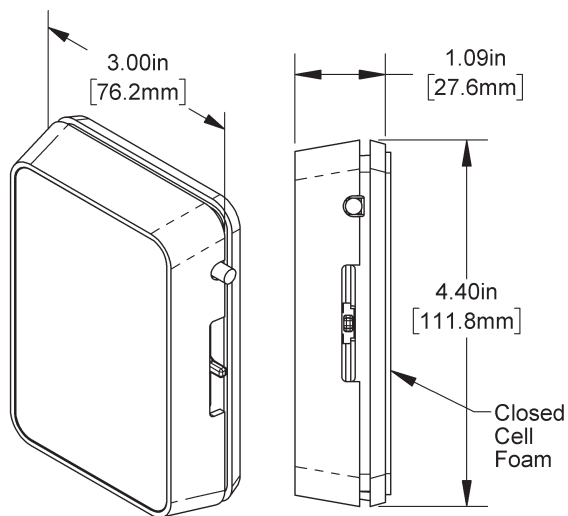
ABS Plastic - UL 94, V-0

ALSO AVAILABLE:

BAPI-GUARD

Made from a durable polycarbonate, the BAPI-Guard protects thermostats from damage and unauthorized adjustment.

[See page 45 to learn more.](#)



LOW PROFILE BUTTON SENSOR

Room Temperature Sensor

- Small flush sensor mounting
- Accurate direct air measurement
- Paintable with latex or oil base paint

The Low Profile Button Sensor is ideal for locations where aesthetics are as important as the temperature measurement. The inconspicuous wall sensor mounts easily by pushing through a 1/2" hole and secured with a peel off tape strip. The only visible portion is a flush 7/8" dot on the wall.

The Low Profile "Button" Sensor is available in white or black with multiple thermistor or RTD sensors.



**LIFETIME
LIMITED
WARRANTY**

SPECIFICATIONS

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

WIRING:

One pair of 22 AWG wires

WIRE INSULATION:

Etched Teflon, Plenum Rated

MOUNTING:

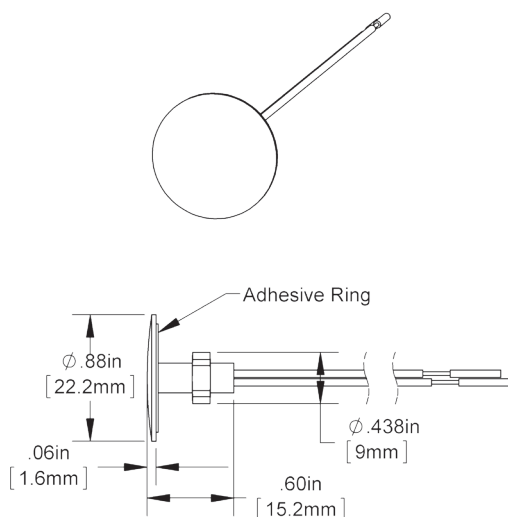
1/2" hole, push in plastic sheath with peel off tape strip

MATERIAL & RATING:

Plastic - UL 94, V-0

AMBIENT:

0 to 100% RH, Non-condensing
-40°F to 185°F, (-40° To 85°C)



DUCT SENSOR

BAPI-Box Crossover

- Series 304 stainless steel probes: 2, 4, 6, 8, 12 and 18"
- Double encapsulated sensors & etched Teflon leads
- Wide selection of temperature sensing elements

Single Point Duct Units feature closed cell foam to seal the probe insertion hole and to absorb vibration. Mounting tabs allow for easy installation directly to the wall of the duct. The sensor is potted inside a 1/4" stainless steel probe with thermally conductive compound.

All Duct Units have etched Teflon leadwires and double encapsulated sensors to create a watertight package that can withstand high humidity and condensation and perform under real world conditions. Duct Units have probe lengths from 2" to 18" to accommodate most duct shapes and sizes. Custom probe lengths are also available.



**LIFETIME
LIMITED
WARRANTY**

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Temperature: BAPI-Box Crossover: -40 to 85°C

Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

PROBE MATERIAL:

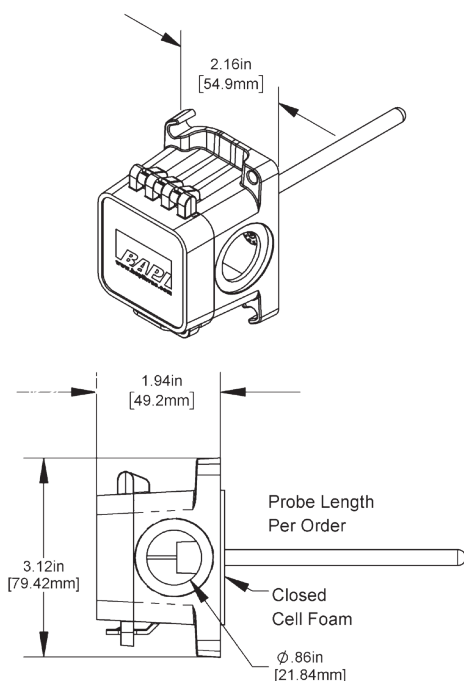
Stainless Steel, 1/4" diameter

ENCLOSURE MATERIAL:

UV-resistant polycarbonate, UL94, V-0

ENCLOSURE RATING:

BAPI-Box Crossover (BBX): IP10, NEMA 1



DUCT AVERAGING SENSOR

BAPI-Box Crossover

- Averaging lengths: 8', 12' and 24'
- Durable BAPI-Box Crossover enclosure
- Measures temperature along the entire length

BAPI Duct Averaging Units feature closed cell foam to seal the probe insertion hole and absorb vibration. Mounting tabs allow for easy installation to 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 bendable aluminum tubing and measure temperature along their entire length.



ANOTHER
ORIGINAL

5
YEAR
WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Temperature: BAPI-Box Crossover: -40 to 85°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

PROBE MATERIAL:

Bendable Aluminum, 3/16" diameter

ENCLOSURE MATERIAL:

UV-resistant polycarbonate, UL94, V-0

ENCLOSURE RATING:

BAPI-Box Crossover (BBX): IP10, NEMA 1

ALSO AVAILABLE:

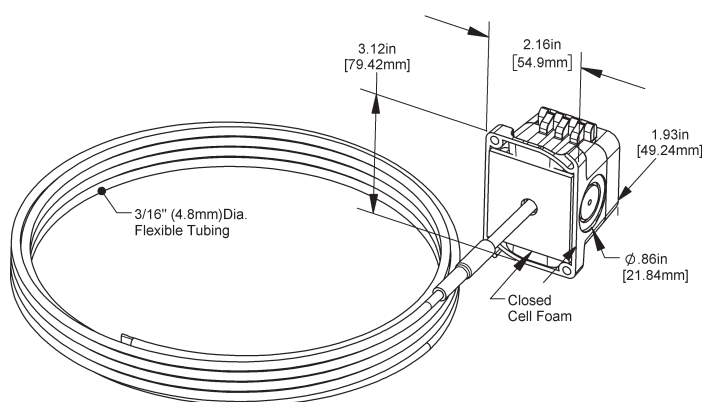
FLEXIBLE PROBE BRACKET (FPB)

The Flexible Probe Bracket (FPB) is used to mount averaging sensors, low limit thermostats, or liquid fill thermostats in duct applications for probe diameters from 1/8", 1/4" and 3/8".

The bracket is used to reverse the direction of the flexible probe with a smooth arc to eliminate the risk of kinking the sensor and damaging the probe.



Visit www.bapihvac.com to learn more.



IMMERSION SENSOR

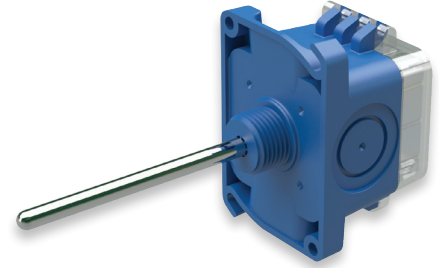
BAPI-Box Crossover with Nylon Fitting

- Probe lengths: 2", 4" and 8" (fit standard BAPI thermowell lengths)
- Series 304 stainless steel probes
- Double encapsulated sensors and 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 and perform under real world conditions..

ANOTHER
ORIGINAL



TEMPERATURE

LIFETIME
LIMITED
WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Temperature: BAPI-Box Crossover: -40 to 85°C

Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

PROBE MATERIAL:

Stainless Steel, 1/4" diameter

ENCLOSURE MATERIAL:

UV-resistant polycarbonate, UL94, V-0

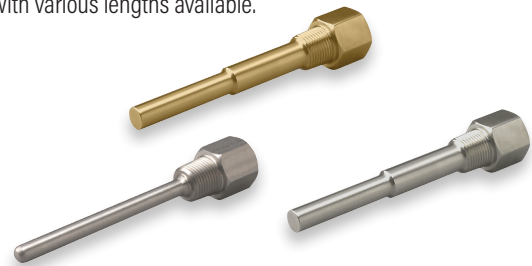
ENCLOSURE RATING:

BAPI-Box Crossover (BBX): IP10, NEMA 1

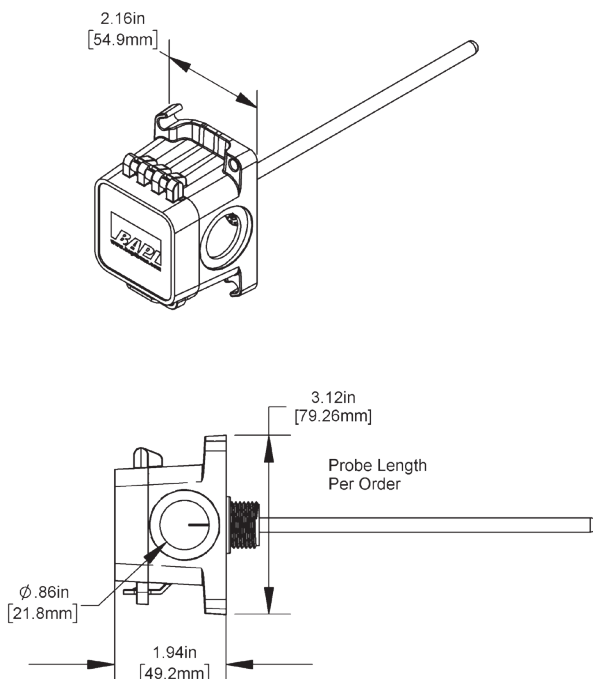
ALSO AVAILABLE:

THERMOWELLS

We offer a range of thermowells made from both stainless steel and brass with various lengths available.



Visit www.bapihvac.com to learn more.



REMOTE SENSOR

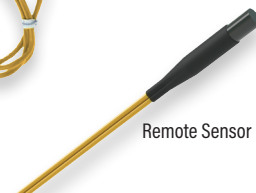
Temperature Sensors

- Etched Teflon leads on remote sensors
- Teflon or Plenum cable on remote sensors
- Available with the BAPI-Box Crossover enclosure

BAPI Remote Sensors feature a .75" long encapsulation shell and cable leads in lengths of 6', 18', 5', 10', 15', 20', and 25'. Remote Sensors are perfect for tight locations. Additional cable options and lead lengths are available.



Remote Sensor with BBX



Remote Sensor

**LIFETIME
LIMITED
WARRANTY**

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Temperature: -40 to 105°C

Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

PROBE MATERIAL:

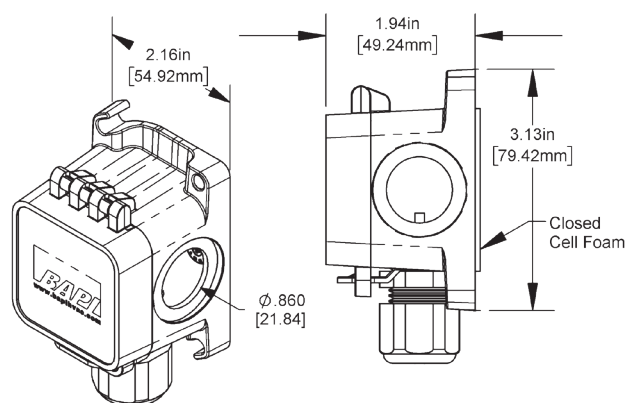
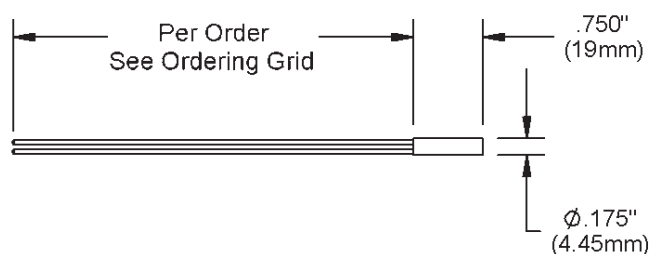
DAP, 7/40" diameter

ENCLOSURE MATERIAL:

UV-resistant polycarbonate, UL94, V-0

ENCLOSURE RATING:

BAPI-Box Crossover (BBX): IP10, NEMA 1



REMOTE PROBE

With Colored Cable

- Double encapsulated sensor
- Plenum or FEP cable
- FEP-jacketed cable available in 5 color choices

Remote Probes feature a 1.75" long stainless steel probe with either Plenum-Rated Cable or FEP Jacketed Cable. Lead lengths are 18', 5', 10', 15', 20', and 25'. Remote Probes are commonly used in refrigerated case or strap-on applications. They are ideal for hard to access areas or spaces where the usual Immersion or Duct Sensors do not fit well. Remote probes come with FEP-jacketed cable in a choice of 5 colors and lead lengths. Additional cable options and lead lengths are available upon request.



**LIFETIME
LIMITED
WARRANTY**

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Temperature: BAPI-Box Crossover: -40 to 85°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

PROBE MATERIAL:

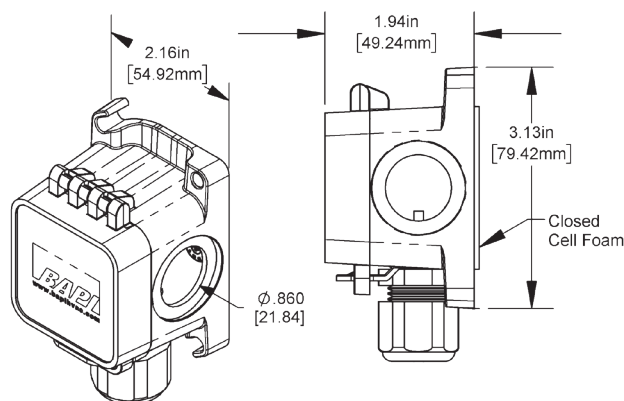
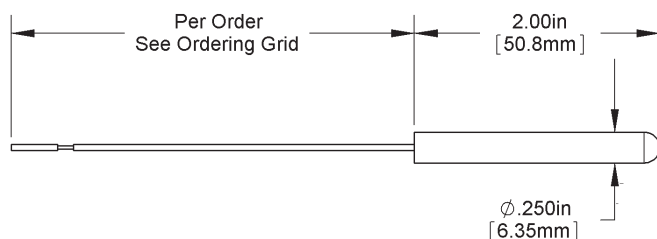
Stainless Steel, 1/4" diameter

ENCLOSURE MATERIAL:

UV-resistant polycarbonate, UL94, V-0

ENCLOSURE RATING:

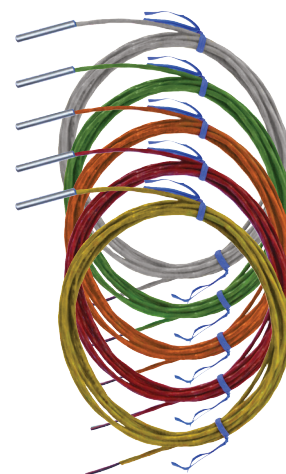
BAPI-Box Crossover (BBX): IP10, NEMA 1



Multiple colors available

Remote probes can be ordered with FEP wire in common color variations to help quickly identify what is being measured. Available colors are:

- Gray
- Green
- Orange
- Red
- Yellow

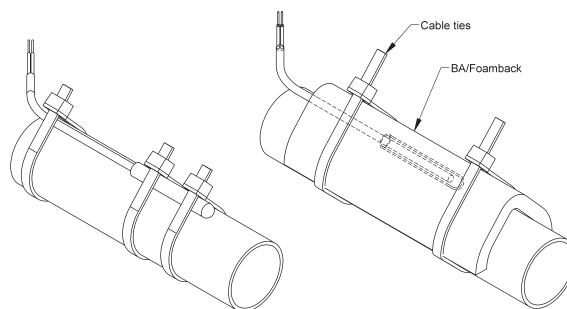


Contact us for more information.

APPLICATION NOTE:

MEASURING THE TEMPERATURE OF SMALL PIPES

Thermowells can be too large to fit into small pipes. Learn how to properly mount a remote sensor to measure the temperature of smaller pipes.



Visit www.bapihvac.com/resource-library to learn more.

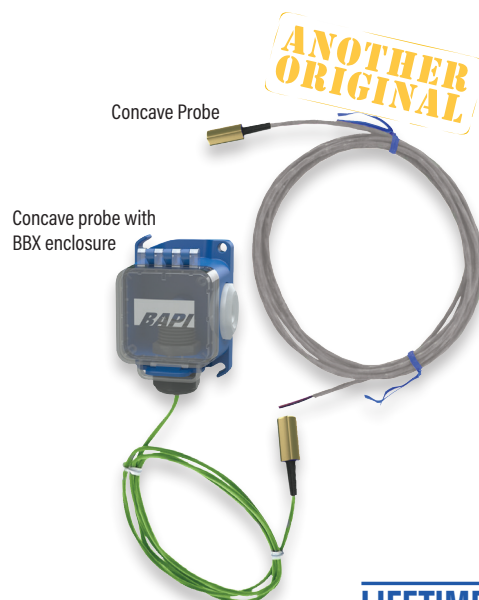
CONCAVE PROBE

Temperature Sensors

- Double encapsulated sensor
- Optional BAPI-Box Crossover Enclosure
- FEP-jacketed cable available in 5 color choices

The Remote Concave Probes feature a 0.81" long brass encapsulation shell with a concave indentation so that they fit on the outside of pipes such as condenser lines.

They come with plenum or FEP-jacketed cable and are available in multiple lengths and colors.



**LIFETIME
LIMITED
WARRANTY**

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Temperature: BAPI-Box Crossover: -40 to 85°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:

Thermistor or RTD (Visit www.bapihvac.com to view specs.)

PROBE MATERIAL:

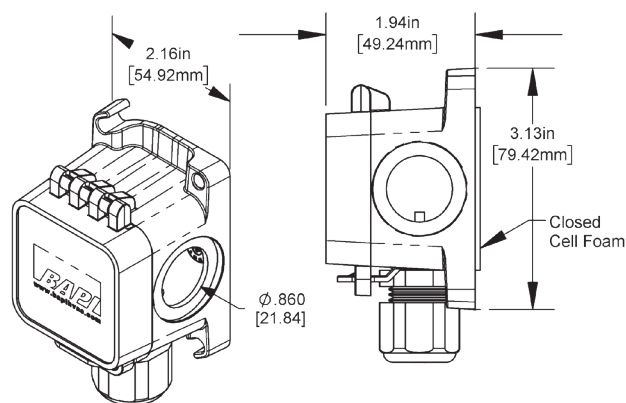
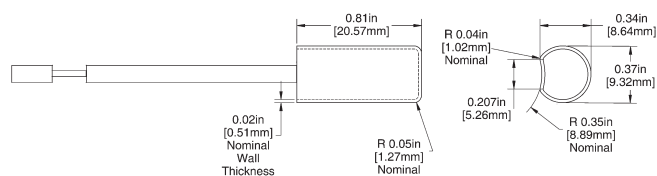
Concave Probe: Brass

ENCLOSURE MATERIAL:

BAPI-Box Crossover: UV-resistant polycarbonate, UL94, V-0

ENCLOSURE RATING:

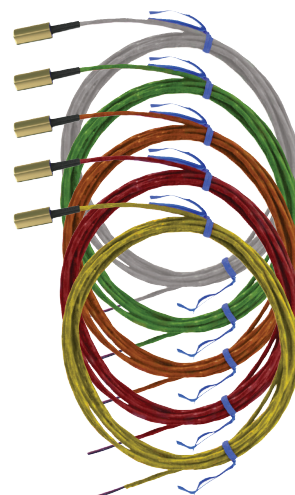
BAPI-Box Crossover (BBX): IP10, NEMA 1



Multiple colors available

Concave probes can be ordered with FEP wire in common color variations to help quickly identify what is being measured. Available colors are:

- Gray
- Green
- Orange
- Red
- Yellow

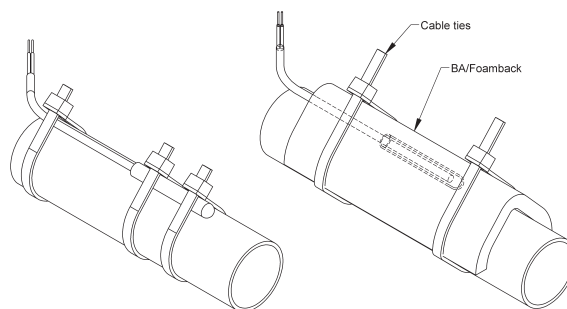


Contact us for more information.

APPLICATION NOTE:

MEASURING THE TEMPERATURE OF SMALL PIPES

Thermowells can be too large to fit into small pipes. Learn how to properly mount a remote sensor to measure the temperature of smaller pipes.



Visit www.bapihvac.com/resource-library to learn more.

THERMOBUFFER SENSOR

BAP-Box Crossover

- Fluid-filled chamber tracks temperature of freezer or cooler contents
- Easy wall mount or wire shelf hanger
- Available in stainless steel or aluminum

The BAPI Thermobuffer Temperature Sensor is used to simulate more closely the refrigerator contents rather than the refrigerator air temperature. The fluid-filled chamber allows for slower reaction to abrupt temperature changes, yet still maintains long-term accuracy if the change remains permanent.

The Thermobuffer comes in three buffer sizes 1", 2" and 4" and is designed to save valuable shelf space by mounting to the wall or by hanger in a refrigerator or freezer. The buffer chamber is machined in 304 Stainless Steel or aluminum and accommodates a variety of temperature sensors or transmitters to interface with all BAS systems.

ANOTHER ORIGINAL



BBX with 1" Cylinder



1" Hanging bracket

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

SENSOR:

Thermistor, RTD or Transmitter

PROBE:

Stainless steel

WIRE:

22 awg stranded, 2 or 3 wires

BUFFER CHAMBER CONSTRUCTION:

M304 Bar stock 304 Stainless Steel

MAL Bar stock Aluminum

CHAMBER FLUID:

(Customer supplied)

Food grade Glycol mix recommended

1" Chamber ~7 ml of fluid

2" Chamber ~24 ml of fluid

4" Chamber ~32 ml of fluid

SENSING ELEMENT:

Thermistor or RTD (See www.bapihvac.com for Specs.)

ENCLOSURE RATING:

BAP-Box Crossover (BBX): IP10, NEMA 1

ENCLOSURE MATERIAL:

BAP-Box Crossover Polycarbonate, UV rated, UL94 V-0

Hanging Bracket SS Bracket with Steel Clip

ENVIRONMENTAL OPERATING RANGE:

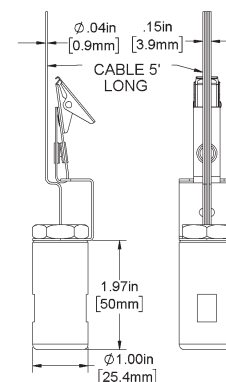
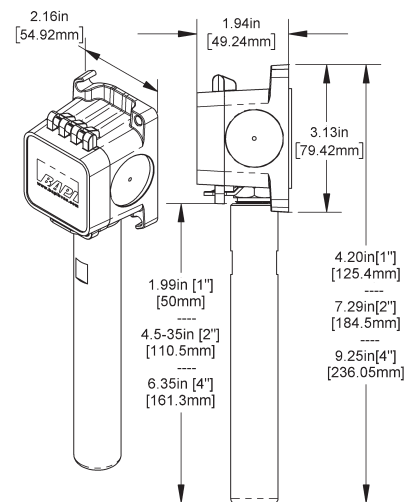
BAP-Box Crossover -40 to 185°F (-40 to 85°C)

Temperature Transmitter . . . -4 to 158°F (-20 to 70°C)

Sensor -40 to 100°C

Hanging Bracket -40 to 50°C

Humidity 0-100%RH, Condensing



OUTSIDE AIR SENSOR

BAPI-Box 2

- Quick-response sensor
- IP66/NEMA 4 BAPI-Box 2 enclosure
- Well-vented sensor guard

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 BAPI-Box 2 polycarbonate enclosure which carries an IP66/ NEMA 4 rating.

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.



**LIFETIME
LIMITED
WARRANTY**

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Temperature Sensor: -40 to 85°C

Temperature Transmitter: -20 to 70°C

Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:

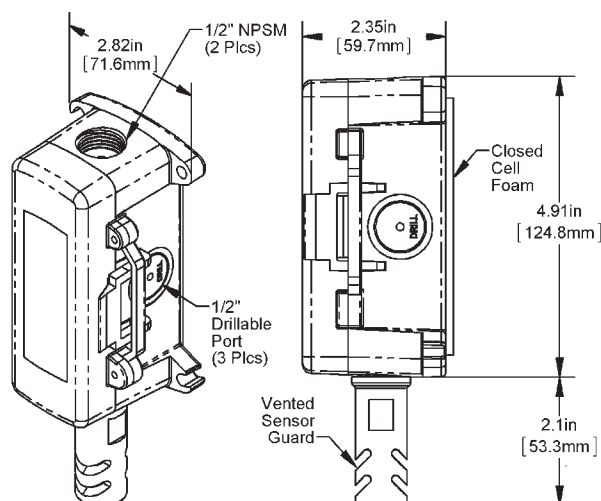
Thermistor or RTD (Visit www.bapihvac.com for Specs.)

ENCLOSURE RATING:

IP66, NEMA 4

ENCLOSURE MATERIAL:

UV-resistant polycarbonate, UL94, V-0



ALSO AVAILABLE:

WEATHER SHADE

External temperature, humidity and air quality sensors can be affected by solar heat gain. The BAPI Weather Shade effectively reduces solar heat gain, improving the accuracy of the sensor.



See page 47 to learn more.

HUMIDITY



BAPI-STAT QUANTUM HUMIDITY SENSOR

Room Temperature & Humidity Sensor

ANOTHER
ORIGINAL

- Modern enclosure design
- Optional temperature setpoint adjustment and occupant override
- Temperature, humidity and room occupancy status display

The BAPI-Stat Quantum room sensors feature a modern enclosure style with slider setpoint adjustment and occupancy override.

The optional LCD can display both temperature and humidity as well as room occupancy status. The display has been upgraded for higher contrast, providing improved clarity at greater distances.

The optional occupancy override can be configured in parallel with the sensor or setpoint, or as a separate output. An optional 3.5mm (1/8"), RJ11 or RJ22 Communication Jack can be mounted in the base to provide direct access to the network.



5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

12 to 35 VDC for 4 to 20 mA or 0 to 5 VDC Output
15 to 35 VDC for 0 to 10 VDC Output
15 to 28 VAC for 0 to 5 VDC or 0 to 10 VDC Output
(AC power requires a separate pair of shielded wires.)

POWER CONSUMPTION:

20 mA max. for 4 to 20 mA Output
4 mA max. for 0 to 5 VDC and 0 to 10 VDC Output
0.1 VA max. for 0 to 5 VDC and 0 to 10 VDC Output

RH/TEMP SENSOR CONSTRUCTION:

Communicating Integrated Circuit
Humidity: Capacitive Polymer, $\pm 2\%RH$ @ $25^{\circ}C$ ($77^{\circ}F$), 20 to 80%RH
Temp: Semi-conductor Band Gap, $\pm 0.3^{\circ}C$ ($\pm 0.54^{\circ}F$) @ 20 to $40^{\circ}C$ (68 to $104^{\circ}F$)

FIELD CALIBRATION ADJUSTMENT:

$\pm 5\%$ in 0.1% increments (Factory Calibrated)

OPTIONAL PASSIVE TEMPERATURE SENSOR ACCURACY:

$\pm 0.36^{\circ}F$ Thermistor, $\pm 0.5^{\circ}F$ RTD (Higher accuracy available)

WIRING:

2 to 5 pair of 16 to 22 AWG*

MOUNTING:

Standard 2" x 4" J-box or drywall mount - screws provided

ENVIRONMENTAL OPERATION RANGE:

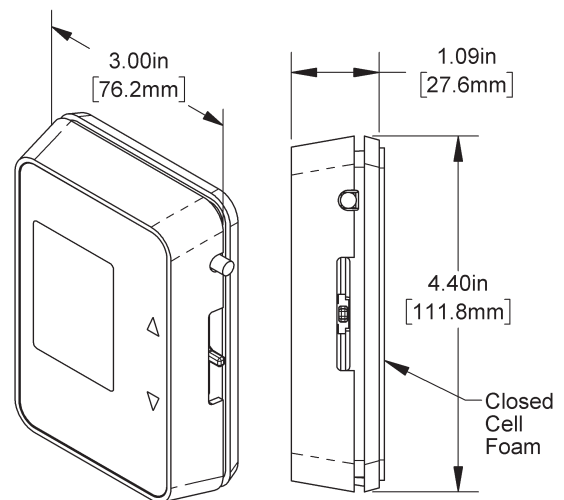
Temperature: 32 to $122^{\circ}F$ (0 to $50^{\circ}C$)
Humidity: 0 to 95%, non-condensing

MATERIAL & RATING:

ABS Plastic, UL 94, V-0

NOTES:

*BAPI recommends that you do not run wiring for sensors in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils. Also, these units are not designed for line voltage applications.



ALSO AVAILABLE:

BAPI-GUARD

Made from a durable polycarbonate the BAPI-Guard protects thermostats from damage and unauthorized adjustment.

See page 45 to learn more.



BAPI-STAT QUANTUM PRIME HUMIDITY SENSOR

Room Temperature & Humidity Sensor

- Modern enclosure design
- Membrane keypad for wipedown cleaning
- Temperature, humidity and room occupancy status display

The BAPI-Stat "Quantum Prime" Humidity Sensor is designed for operating rooms, clean rooms and elder care facilities. It features a large display and membrane keypad for wipedown cleaning. It is available with temperature and humidity measurement, temperature and humidity setpoint and occupant override.

The unit includes a number of field adjustments including °F or °C display, temperature and humidity offset and setpoint lockout. The display can also be set to show a large temperature and small %RH reading, a large %RH and a small temperature reading, or to alternate between the two. This unit can be configured with up to four transmitted variables.



ANOTHER
ORIGINAL

HUMIDITY

5
YEAR
WARRANTY

SPECIFICATIONS

POWER SUPPLY:

10 to 40 VDC (15 to 24 VDC Recommended) for 4 to 20 mA or 0 to 5 VDC Outputs
15 to 40 VDC (15 to 24 VDC Recommended) for 0 to 10 VDC Outputs
12 to 28 VAC (Requires a separate pair of shielded wires) for 0 to 5 VDC Outputs
15 to 28 VAC for 0 to 10 VDC Outputs

POWER CONSUMPTION:

60 mA max DC: 4 to 20 mA Output (<30mA typical)
36 mA max DC: 0 to 5 or 0 to 10 VDC Outputs (6mA typical)
0.9 VA max AC: 0 to 5 or 0 to 10 VDC Outputs (0.2VA typical)

OUTPUTS:

4 active outputs plus 1 passive temp sensor
Volts..... 0 to 5 VDC or 0 to 10VDC, Impedance >10KΩ
Current..... 4 to 20 mA, Impedance <500Ω @ 24 VDC
Resistance..... Setpoint, 5 VDC @ 5 mA max
Relay Contact..... N.O., 500 mA @ 24 VDC max
Temp. Sensor..... Passive RTD or Thermistor

INPUTS:

External Override.... 5 VDC or 24 VDC/VAC
External Sensor..... 10K-2 Thermistor purchased separately.

SENSING ELEMENTS FOR ACTIVE OUTPUTS AND DISPLAY:

Temperature..... 10K-2 Thermistor
Humidity: Capacitive Polymer, ±2%RH @ 25°C (77°F), 20 to 80%RH
Temp: Semi-conductor Band Gap, ±0.3°C (±0.54°F) @ 20 to 40°C (68 to 104°F)

MOUNTING:

2" x 4" J-box or drywall mount - screws provided

ENVIRONMENTAL AMBIENT:

Temperature..... 32 to 122°F (0 to 50°C)
Humidity..... 0 to 95%, non-condensing
Storage..... 32 to 185°F (0 to 85°C)

WIRING:

2 to 6 pair of 16 to 22 AWG

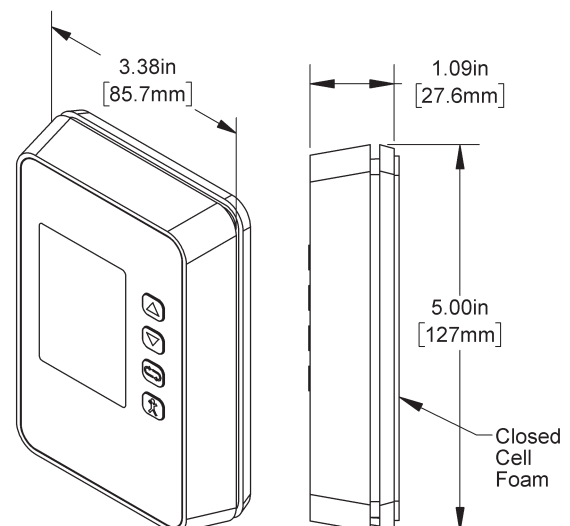
ENCLOSURE MATERIAL:

ABS Plastic, UL 94, V-0

NOTES:

*AC power requires a separate pair of shielded wires

*BAPI recommends that you do not run wiring for sensors in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils. Also, these units are not designed for line voltage applications.



OUTSIDE AIR TEMPERATURE AND HUMIDITY SENSOR

BAPI-Box 2

ANOTHER
ORIGINAL

HUMIDITY

- 10 points of calibration from 10 to 90%RH
- Humidity only or temperature/humidity combination
- 2% and 3%RH accuracies

Humidity control is an important aspect of any climate control system. Therefore, humidity sensors must be both accurate and dependable. BAPI's humidity transmitters are calibrated at 10 points from 10 to 90% RH for accuracy, eliminating field calibration.

The BAPI-Box 2 is made of UV-resistant polycarbonate and has an IP66 rating.



5
YEAR
WARRANTY

SPECIFICATIONS

POWER AND CONSUMPTION:

10 to 35 VDC, 22 mA max. (for 0 to 5 VDC or 4 to 20 mA Humidity Outputs)

15 to 35 VDC, 6 mA max. (for 0 to 10 VDC Humidity Output)

12 to 27 VAC, 0.53 VA max. (for 0 to 5 VDC Humidity Outputs)

15 to 27 VAC, 0.14 VA max. (for 0 to 10 VDC Humidity Output)

SENSOR:

Humidity: Capacitive 2% or 3%RH (10 to 90% RH @ 23°C)

Temperature: Thermistor or RTD (See www.bapihvac.com for specs)

ENCLOSURE RATING:

IP66, NEMA 4

ENCLOSURE MATERIAL:

UV-res. Polycarbonate, UL 94, V-0

ENVIRONMENTAL OPERATION RANGE:

Temp: -40 to 158°F (-40 to 70°C)

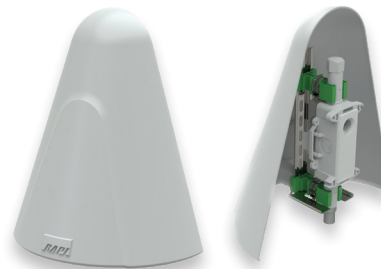
Humidity: 0% to 100% RH

Fully Temperature Compensated

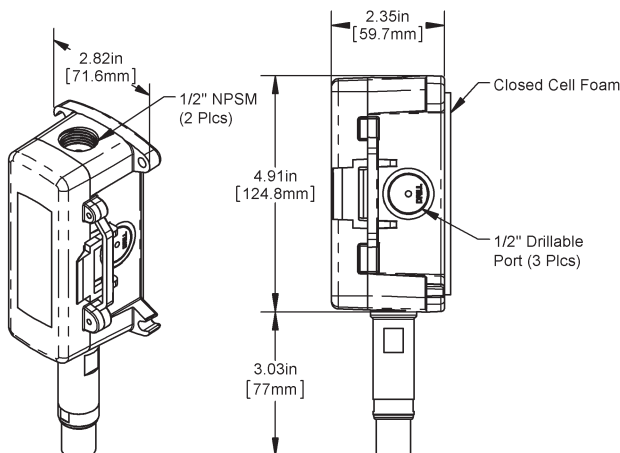
ALSO AVAILABLE:

WEATHER SHADE

External temperature, humidity and air quality sensors can be affected by solar heat gain. The BAPI Weather Shade effectively reduces solar heat gain, improving the accuracy of the sensor.



See page 47 to learn more.



DUCT TEMPERATURE AND HUMIDITY SENSOR

BAPI-Box Crossover

- 10 points of calibration from 10 to 90%RH
- Humidity only or temperature/humidity combination
- 2% and 3% RH accuracies

Humidity control is an important aspect of any climate control system. Therefore, humidity sensors must be both accurate and dependable. BAPI's humidity transmitters are calibrated at 10 points from 10 to 90% RH for accuracy, eliminating field calibration.

The Duct Units are also extremely dependable, featuring two robust enclosures. The BAPI-Box and BAPI-Box Crossover Enclosures are made of UV-resistant polycarbonate. The BAPI-Box has an IP66 rating and is only available for units with a temperature transmitter and a humidity transmitter.



ANOTHER
ORIGINAL

HUMIDITY

5
YEAR
WARRANTY

SPECIFICATIONS

POWER AND CONSUMPTION:

10 to 35 VDC, 22 mA max. (for units with 0 to 5 VDC or 4 to 20 mA Humidity Outputs)

15 to 35 VDC, 6 mA max. (for units with 0 to 10 VDC Humidity Output)

12 to 27 VAC, 0.53 VA max. (for units with 0 to 5 VDC Humidity Outputs)

15 to 27 VAC, 0.14 VA max. (for units with 0 to 10 VDC Humidity Output)

SENSOR:

Humidity: Capacitive 2% or 3%RH (10 to 90% RH @ 23°C)

Temperature: Thermistor or RTD (See www.bapihvac.com for specs)

ENCLOSURE MATERIAL:

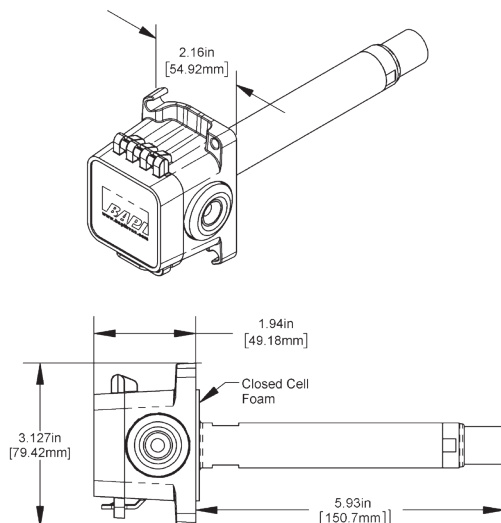
UV-res. Polycarbonate, UL 94, V-0

ENVIRONMENTAL OPERATION RANGE:

Temp: -40 to 158°F (-40 to 70°C)

Humidity: 0% to 100% RH

Fully Temperature Compensated





PRESSURE

EZ PRESSURE SENSOR

Standard and Low Ranges

- 10 pressure ranges & 3 output options — all field selectable
- Standard or low range units
- Snaptrack, DIN rail or surface mounting

Measuring building pressure, air velocities and volumes doesn't get any easier than with the BAPI EZ Pressure Sensor. The revolutionary mounting system allows for 2.75" snaptrack, DIN rail or surface mounting, and the three output options and 10 pressure ranges are field selectable by simply turning the rotary switch and pressing the "Next" button.

Besides being easy to set up and install, it is also accurate, rugged and economical. The heart of the unit is a micro-machined silicon pressure sensor with excellent accuracy, repeatability and stability. The unit also features short circuit proof outputs and reverse polarity protected inputs to perform under real world conditions.



ANOTHER ORIGINAL

PRESSURE

5 YEAR WARRANTY

SPECIFICATIONS

POWER:

7 to 40 VDC (4 to 20 mA Output)
7 to 40 VDC or 18 to 28 VAC (0 to 5 VDC Output)
13 to 40 VDC or 18 to 28 VAC (0 to 10 VDC Output)

POWER CONSUMPTION:

20 mA max, DC only at 4 to 20 mA Output
4.9 mA max DC at 0 to 5 or 0 to 10 VDC Output
0.12 VA max AC at 0 to 5 or 0 to 10 VDC Output

LOAD RESISTANCE:

4 to 20 mA Output 850 Ω Maximum @ 24 VDC
0 to 5 VDC or 0 to 10 VDC output 1K Ω minimum

STABILITY:

$\pm 0.25\%$ F.S. per year

ENVIRONMENTAL OPERATION RANGE:

14°F to 140°F (-10°C to 60°C)

STORAGE TEMPERATURE:

-40 to 203°F (-40 to 95°C)

OVERPRESSURE:

Proof: 27.68" W.C. (1 PSI), Burst: 41.52" W.C. (1.5 PSI)

WIRING:

Removable terminal block (14 to 24 AWG)*
2 wires (4 to 20mA Current loop)*
3 wires (AC or DC powered, Voltage out)*

HUMIDITY:

0 to 95% RH, non-condensing

PORT CONNECTION:

1/4" tubing (1/8" to 3/16" I.D.)

ENCLOSURE MATERIAL:

ABS Plastic, UL94, V-0

MOUNTING:

DIN Rail, Snaptrack or Surface Mountable

ACCURACY FOR STANDARD PRESSURE RANGES AT 72°F:

$\pm 0.25\%$ of range

ACCURACY FOR LOW PRESSURE RANGES AT 72°F:

$\pm 0.5\%$ of range for the three lowest unidirectional and bidirectional ranges
 $\pm 0.25\%$ of range all other ranges

TEMPERATURE ERROR FOR STANDARD RANGES:

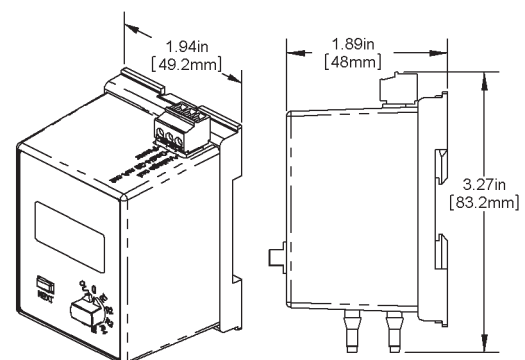
0.01% FS/°F (0.02% FS/°C) (± 5.0 " W.C. @ 14 to 140°F [-10 to 60°C])

TEMPERATURE ERROR FOR LOW RANGES:

0.04% FS/°F (0.07% FS/°C) (± 1.0 " W.C. @ 14 to 140°F [-10 to 60°C])

NOTES:

*BAPI recommends that you do not run wiring for sensors in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils. Also, these units are not designed for line voltage applications.



ZONE PRESSURE MULTI SENSOR (ZPM)

Standard, Low and High Ranges

- 10 pressure ranges & 5 output options — all field selectable
- Standard, low and high range units
- Ranges and outputs can be set without power

BAPI's Zone Pressure Multi-Sensor is the most flexible pressure sensor on the market. Output, range, units, directionality, and response time are quickly set in the field with no tools, no power and no small components.

The optional LCD display helps with troubleshooting because it displays the actual differential pressure over the entire operational range regardless of which individual pressure range is selected for output to the system controller. Three LEDs on the face of the unit indicate when the pressure is "Out of Range Low", "In Range" or "Out of Range High".



SPECIFICATIONS

POWER:

7 to 40 VDC (4 to 20 mA Output)
7 to 40 VDC or 18 to 32 VAC (0 to 5 or 1 to 5 V Output)
13 to 40 VDC or 18 to 32 VAC (0 to 10 or 2 to 10 V Output)

POWER CONSUMPTION:

20 mA max, DC only at 4 to 20 mA Output
4.9 mA max DC at 0 to 5 VDC or 0 to 10 VDC Output
0.12 VA max AC at 0 to 5 VDC or 0 to 10 VDC Output

LOAD RESISTANCE:

4 to 20 mA Output 850 Ω Maximum @ 24 VDC
0 to 5 V or 0 to 10 V output 6K to 10K Ω minimum

STABILITY:

$\pm 0.25\%$ F.S. per year

ENVIRONMENTAL OPERATION RANGE:

-4 to 140°F (-20 to 60°C)

STORAGE TEMPERATURE:

-40 to 203°F (-40 to 95°C)

OVERPRESSURE:

Proof: 300.1 WC (10.83 PSI) Burst: 512.6 WC (18.5 PSI)

WIRING:

2 wires (4 to 20mA Current loop)*
3 wires (AC or DC powered, Voltage out)*

HUMIDITY:

0 to 95% RH, non-condensing

PORT SIZE:

1/4" tubing (1/8" to 3/16" I.D.)

ENCLOSURE MATERIAL:

UV-resistant Polycarb., UL94, V-0

ENCLOSURE RATING:

IP44, NEMA 2

ACCURACY FOR STANDARD PRESSURE RANGES AT 72°F:

$\pm 0.25\%$ of range

ACCURACY FOR LOW PRESSURE RANGES AT 72°F:

$\pm 0.5\%$ of range for the three lowest unidirectional and bidirectional ranges
 $\pm 0.25\%$ of range all other ranges

ACCURACY FOR HIGH PRESSURE RANGES AT 72°F:

$\pm 0.25\%$ on all ranges

TEMPERATURE ERROR LOW RANGE:

0.04% FS/°F (0.07% FS/°C) ($\pm 1.0"$ W.C @ -4 to 140°F (-20 to 60°C)

TEMPERATURE ERROR STANDARD RANGE:

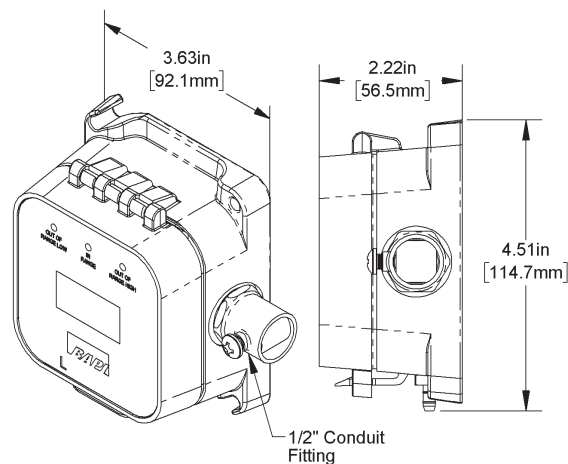
0.01% FS/°F (0.02% FS/°C) ($\pm 5.0"$ W.C @ -4 to 140°F (-20 to 60°C)

TEMPERATURE ERROR HIGH RANGE:

0.015% FS/°F (0.025% FS/°C) (0 to 30" W.C @ -4 to 140°F (-20 to 60°C)

NOTES:

*BAPI recommends that you do not run wiring for sensors in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils. Also, these units are not designed for line voltage applications.



FIXED RANGE PRESSURE SENSOR (FRP)

Zone Pressure Sensor

- Single pressure range and single output range
- Multiple color LED pressure indication
- Simple auto-zero process

BAPI's Fixed Range Pressure Sensor (FRP) is an economical solution for any cost-conscious application. The FRP features one factory-set pressure range and one factory-set output range. A single button is used to auto-zero the unit, and a 5-color LED indicates the pressure status.



PRESSURE

SPECIFICATIONS

POWER:

18 to 28 VAC, 0.4 VA max
9 to 32 VDC with 0 to 5V output, 10 mA max
13 to 32 VDC with a 0 to 10V out, 10mA max

ACCURACY AT 72°F:

±1% for pressures < 0.25" WC (62.5 Pa)
±0.5% for pressures > 0.25" WC (62.5 Pa)

TEMPERATURE ERROR:

0.01% FS/°F (0.02% FS/°C)
(±5.0 in WC [1,250 Pa] @ 14 to 140°F [-10 to 60°C])
0.04% FS/°F (0.07% FS/°C)
(±1.0 in WC [250 Pa] @ 14 to 140°F [-10 to 60°C])

ENVIRONMENTAL OPERATION RANGE:

14 to 140°F (-10 to 60°C)

STORAGE TEMPERATURE:

-40 to 203°F (-40 to 95°C)

STABILITY:

0.15% FS per year

OVERPRESSURE:

Proof: 27.68 in W.C. (1 PSI)
Burst: 41.52 in W.C. (1.5 PSI)

WIRING*:

3-wires, AC or DC powered, Voltage out

HUMIDITY:

0 to 95% RH, non-condensing

PORT CONNECTION:

1/4" tubing (1/8" to 3/16" I.D.)

ENCLOSURE MATERIAL:

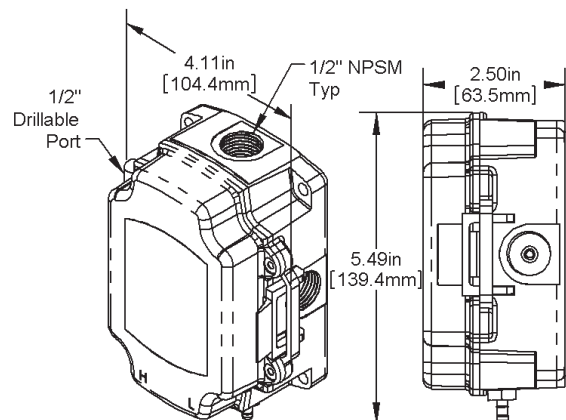
UV-resistant Polycarbonate, UL94, V-0

ENCLOSURE RATING:

IP66, NEMA 4

NOTES:

*BAPI recommends that you do not run wiring for sensors in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils. Also, these units are not designed for line voltage applications.



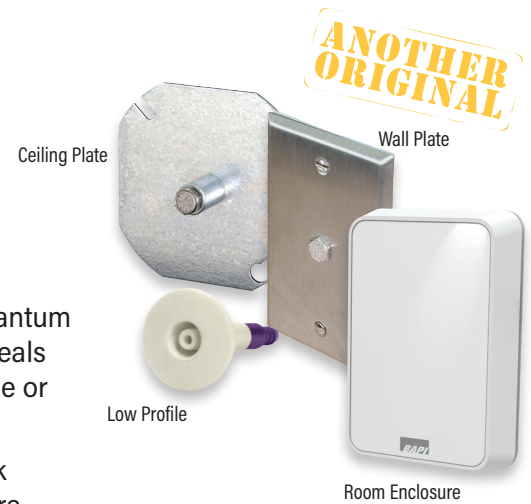
ZONE PRESSURE PICKUP PORTS

Pressure Ports

- Economical and easy to install
- Includes 80 micron filter
- Accommodates 1/8" I.D. To 5/32" I.D. tubing

Room pressure pickup ports are available as a Wall Plate or a BAPI-Stat Quantum enclosure, both sized to fit a common 2" x 4" electrical box. A foam gasket seals the plate or enclosure to the wall. These units are available as a pickup alone or with a temperature sensor.

BAPI also offers a Ceiling Mount Square Cover that fits a standard 3/4" thick suspended ceiling tile, and a Low Profile Port that is ideal for locations where aesthetics are as important as the pressure measurement. The only visible portion is a flush 7/8" dot on the wall.



SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Wall & Ceiling Plates

Temp: 32 to 122°F (0 to 50°C)

Humidity: 0% to 95% RH, non-condensing

Low Profile Port

Temp: -40 to 185°F (-40 to 85°C)

Humidity: 0% to 100% RH, non-condensing

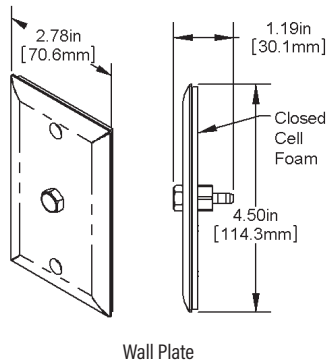
MATERIAL:

Delta Style & Low Profile:

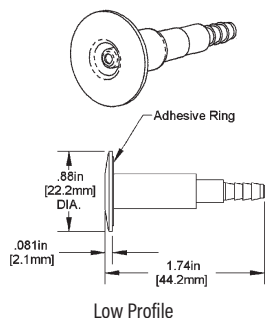
ABS Plastic, UL 94, V-0

Wall & Ceiling Plates:

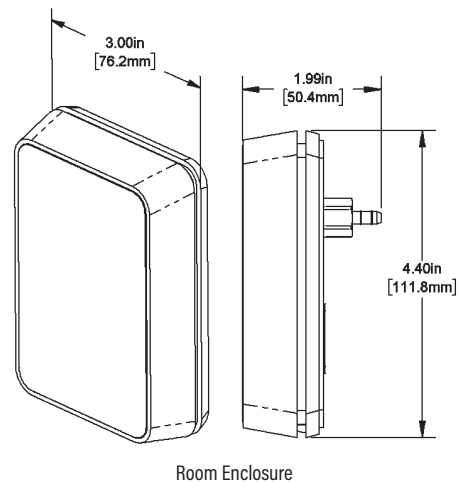
Stainless Steel



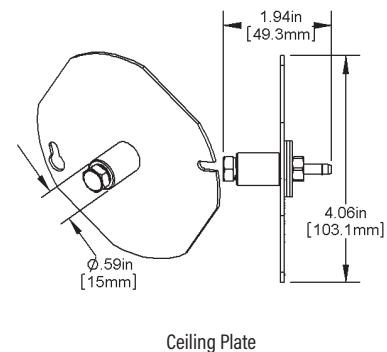
Wall Plate



Low Profile



Room Enclosure



Ceiling Plate

OUTSIDE AIR PRESSURE PICKUP PORT

Pressure Ports

- Rooftop, wall and vertical mount
- Helps stabilize readings by reducing fluctuations from wind gusts
- Rugged UV-resistant and flame retardant enclosure

BAPI's Outside Air Pressure Pickup Port is an easy, economical and attractive way of measuring outdoor static pressure. The pickup port also helps stabilize readings because it significantly reduces the pressure fluctuations caused by wind gusts.

The unit is also very rugged with a UV-resistant and flame-retardant housing to perform and last under harsh conditions. It is available in Rooftop or Wall Mount or Vertical Mount for building soffits or ceilings.

ANOTHER
ORIGINAL



PRESSURE

5
YEAR
WARRANTY

SPECIFICATIONS

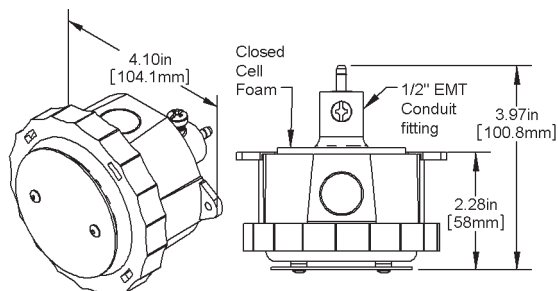
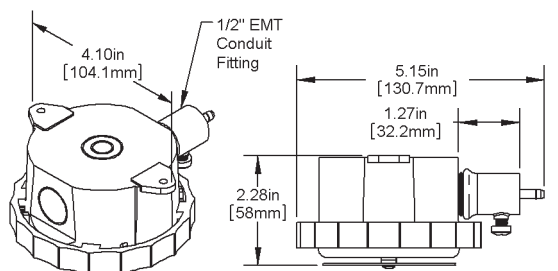
ENVIRONMENTAL OPERATION RANGE:

Temperature: -40 to 212°F (-40 to 100°C)

Humidity: 0% to 100% RH, condensing

MATERIAL:

UV-resistant plastic



Rooftop mount or wall mount
(Conduit and tubing not included)



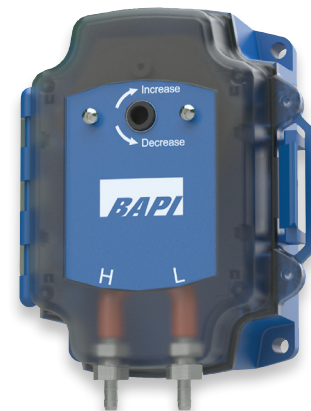
DIFFERENTIAL PRESSURE SWITCH

Pressure Switch

- Easy to access field adjustable setpoint from 0.1" to 35" W.C.
- UL 353 listing so the unit can be used for safety controls
- 5 Amp silver contacts

The BAPI Differential Pressure Switch is ideal for air filter monitoring, static pressure proving, airflow proving or auxiliary fan actuation. Because of its UL 353 Limit Control Listing, the BAPI Switch can be used in safety circuits to protect heating appliances, heating systems, processing systems and HVAC/R systems.

The setpoint is field adjustable from 0.1" to 35" W.C, and the unit can measure positive pressure, vacuum or true differential pressure. The seven pressure ranges are field selectable by changing a color-coded spring. The spring for the range that you order is preinstalled, and the other six springs are shipped with the unit so that you can change ranges in the field if you choose.



SPECIFICATIONS

MEASUREMENT MEDIA:

Air, Combustion Gases

OPERATING TEMPERATURE:

-40 to 185°F (-40 to 85°C)

OPERATING HUMIDITY:

5 to 95% RH non-condensing

CONTACT RATINGS:

28 VA pilot duty, 24 VAC
1/10 HP, 120-277 VAC
125 VA Pilot Duty, 125 VAC
2.5 A Inductive, 125 VAC
5 A Resistive, 125 VAC
0.1 A, 30 VDC

PROOF PRESSURE:

100" W.C. (3.6 PSI, 24,900 Pa)

PRESSURE PORTS:

1/4" Barbed Fittings

SWITCH TYPE:

SPDT (Silver Contacts)

LIMIT CONTROLS:

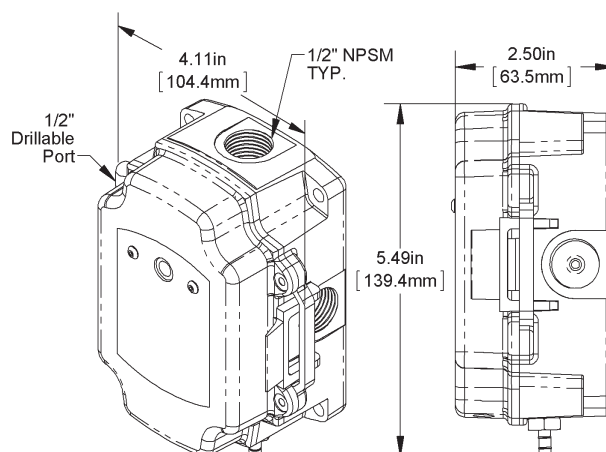
UL 353 Listed

REPEATABILITY:

<10% of Setting

HYSTERESIS:

0.07 to 0.09 Inch W.C. For All Ranges





AIR QUALITY

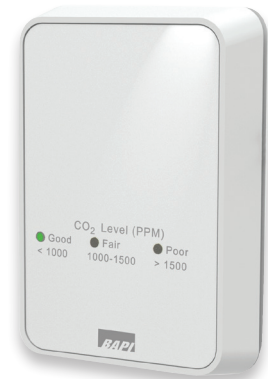
BAPI-STAT QUANTUM CO₂ ROOM SENSOR

Air Quality Sensor

- Automatic barometric pressure and temperature compensation
- Models for periodically unoccupied or continuously occupied areas
- Local LED indication

The BAPI-Stat Quantum CO₂ Sensor is an accurate and reliable way of incorporating demand controlled ventilation into a building's HVAC strategy. It measures the CO₂ in ranges of 0 to 2,000, 0 to 5,000, 0 to 10,000 or 0 to 50,000 PPM with a field selectable output of 0 to 5 or 0 to 10 VDC.

The Single Beam (ACD) unit has been optimized for periodically unoccupied areas and features automatic background calibration over a long time period to reduce drift. The Dual Channel (DCD) "24/7" unit has been optimized for continuously occupied areas and features a three-point calibration process for enhanced stability, accuracy and reliability.



ANOTHER ORIGINAL

5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

12 to 24 VDC, 240 mA
18 to 24 VAC, 12 VA Peak

SENSING ELEMENTS:

ACD Unit CO₂: Single Beam Non-Dispersive Infrared (NDIR)
DCD Unit CO₂: Dual Channel Non-Dispersive Infrared (NDIR)

FIELD SELECTABLE VOLTAGE OUTPUT:

0 to 5 or 0 to 10 VDC

TERMINATION:

3 Terminals, 16 to 22 AWG

ENVIRONMENTAL OPERATION RANGE:

32 to 122°F (0 to 50°C)
0 to 95%RH non-condensing

ENCLOSURE MATERIAL:

ABS Plastic, Material Rated UL94V-0

CO₂ DETECTION RANGE:

0 to 2,000 PPM, 0 to 5,000 PPM, 0 to 10,000 PPM and 0 to 50,000 PPM

START UP TIME:

Less than 2 minutes

RESPONSE TIME:

Less Than 2 Minutes (after Start-Up Time) for 90% step change typical

MOUNTING:

2"x4" J-Box or drywall – screws provided

CO₂ ACCURACY (SINGLE BEAM ACD UNITS):

400 to 1,250 ppm: ±30ppm or 3% of reading, whichever is greater
1,250 to 2,000 ppm: ±5% of reading + 30ppm

CO₂ ACCURACY (DUAL CHANNEL DCD "24/7" UNITS):

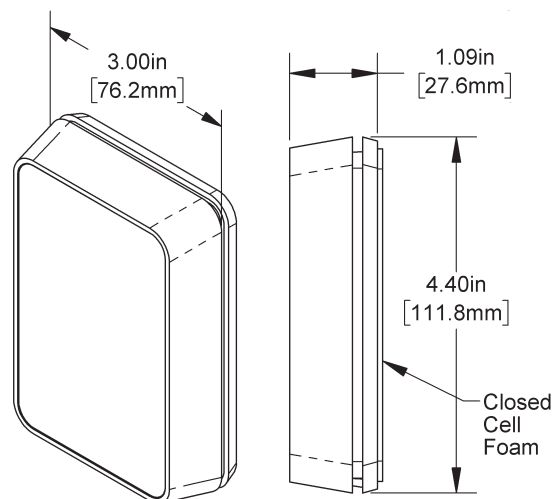
75ppm or 10% of reading (whichever is greater)

CO₂ DRIFT STABILITY (DUAL CHANNEL DCD "24/7" UNITS):

<5% of full scale over life of product.

LED CO₂ LEVEL INDICATOR (FOR 0 TO 2,000 PPM UNITS ONLY):

Good, Green < 1,000 PPM
Fair, Yellow = 1,000 to 1,500 PPM
Poor, Red > 1,500 PPM



ALSO AVAILABLE:

BAPI-Guard

Made from a durable polycarbonate the BAPI-Guard protects thermostats from damage and unauthorized adjustment.

See page 45 to learn more.



BAPI-STAT QUANTUM PRIME CO₂ ROOM SENSOR

Air Quality Sensor

- Automatic barometric pressure and temperature compensation
- Optional temperature, setpoint override and humidity
- Models for periodically unoccupied or continuously occupied areas

The BAPI-Stat Quantum Prime CO₂ Sensor is an accurate and reliable way of incorporating demand controlled ventilation into a building's HVAC strategy. It measures the CO₂ in a range of 0 to 2,000 PPM with a field selectable output of 0 to 5 or 0 to 10 VDC.

The Single Beam (ACD) unit has been optimized for periodically unoccupied areas and features automatic background calibration over a long time period to reduce drift. The Dual Channel (DCD) "24/7" unit has been optimized for continuously occupied areas and features a three-point calibration process for enhanced stability, accuracy and reliability.



ANOTHER
ORIGINAL



AIR QUALITY

SPECIFICATIONS

POWER FOR 0 TO 5 VDC OUTPUTS:

9 to 35 VDC @ 240 mA (9 to 24 VDC recommended)

POWER FOR 0 TO 10 VDC OUTPUTS:

15 to 35 VDC @ 240 mA (15 to 24 VDC recommended)

SENSING ELEMENTS:

ACD Unit CO₂: Single Beam Non-Dispersive Infrared (NDIR)
DCD Unit CO₂: Dual Channel Non-Dispersive Infrared (NDIR)
Humidity: Capacitive Polymer ±2% RH Accuracy

TEMPERATURE SENSOR:

Thermistor or RTD

ENVIRONMENTAL OPERATING RANGE:

32 to 122°F (0 to 50°C) • 0 to 95%RH non-condensing

MATERIAL:

ABS Plastic, Material Rated UL94V-0

CO₂ DETECTION RANGE:

0 to 2,000 PPM

START-UP TIME:

Less than 2 minutes

RESPONSE TIME:

Less Than 2 Minutes (after Start-Up Time) for 90% step change typical

CO₂ ACCURACY (SINGLE BEAM ACD UNITS):

400 to 1,250 ppm: ±30ppm or 3% of reading, whichever is greater
1,250 to 2,000 ppm: ±5% of reading + 30ppm

CO₂ ACCURACY (DUAL CHANNEL DCD "24/7" UNITS):

75ppm or 10% of reading (whichever is greater)

CO₂ DRIFT STABILITY (DUAL CHANNEL DCD "24/7" UNITS):

<5% of full scale over life of product

MOUNTING:

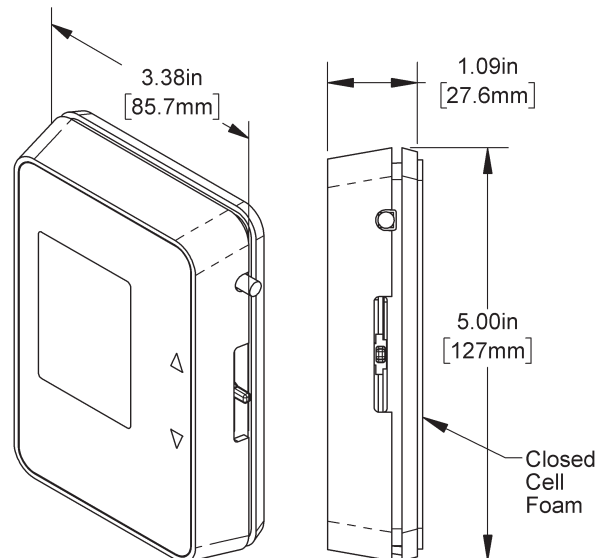
2"x4" J-Box or drywall – screws provided

LED CO₂ LEVEL INDICATOR (FOR 0 TO 2,000 PPM UNITS ONLY):

Good, Green < 1,000 PPM

Fair, Yellow = 1,000 to 1,500 PPM

Poor, Red > 1,500 PPM



CO₂ DUCT AND ROUGH SERVICE SENSOR

Air Quality Sensor

ANOTHER ORIGINAL

- Automatic barometric pressure and temperature compensation
- Duct aspiration tube or rough service ventilated BAPI-Box
- Models for periodically unoccupied or continuously occupied areas

The CO₂ Duct Sensor is an accurate and reliable way of incorporating demand controlled ventilation. It measures CO₂ in ranges of 0 to 2,000, 0 to 5,000, 0 to 10,000 or 0 to 50,000 PPM with a field selectable output of 0 to 5 or 0 to 10 VDC.

The Duct unit samples duct air using an aspiration tube. The Rough Service unit features a ventilated BAPI-Box and is ideal for areas such as outdoor air plenums, equipment rooms, green houses and warehouses. For 0 to 2,000 PPM units, the CO₂ level is indicated as "Good, Fair or Poor" by three LED's on the front of the unit. If it reaches the top of the PPM range, the red LED will begin to flash.



5 YEAR WARRANTY

SPECIFICATIONS

POWER:

12 to 24 VDC, 240 mA
18 to 24 VAC, 12 VA Peak

FIELD SELECTABLE VOLTAGE OUTPUT:

0 to 5 or 0 to 10 VDC

TERMINATION:

3 Terminals, 16 to 22 AWG

ENVIRONMENTAL OPERATION RANGE:

32 to 122°F (0 to 50°C)
0 to 95%RH non-condensing

ENCLOSURE RATING:

Unventilated BAPI-Box: NEMA 4, IP66

ENCLOSURE MATERIAL:

Polycarbonate, UL94 V-0

CO₂ DETECTION PPM RANGE:

0 to 2,000 PPM, 0 to 5,000 PPM, 0 to 10,000 PPM and 0 to 50,000 PPM

START-UP TIME:

2 Minutes

RESPONSE TIME:

Less Than 2 Minutes (after Start-Up) for 90% step change typical

CO₂ SENSING ELEMENTS:

ACD: Single Beam Non-Dispersive Infrared
DCD: Dual Channel Non-Dispersive Infrared

CO₂ DRIFT STABILITY (DCD "24/7" Units):

<5% of full scale over life of product

CO₂ ACCURACY (DCD Units):

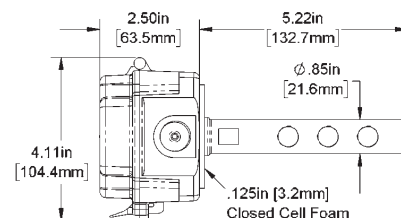
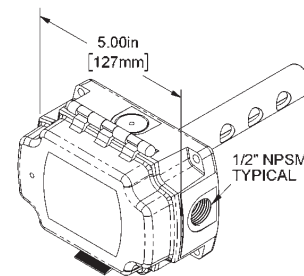
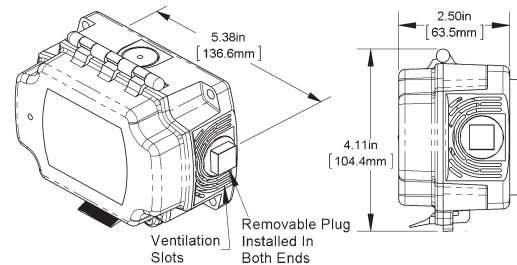
75ppm or 10% of reading (whichever is greater)

CO₂ ACCURACY (ACD Units):

400 to 1,250 ppm: ±30ppm or 3% of reading, whichever is greater
1,250 to 2,000 ppm: ±5% of reading + 30ppm

LED CO₂ LEVEL INDICATOR (0 to 2,000 PPM units only):

Good, Green < 1,000 PPM
Fair, Yellow = 1,000 to 1,500 PPM
Poor, Red > 1,500 PPM



BAPI-STAT QUANTUM VOC ROOM SENSOR

Air Quality Sensor

- Achieves true indoor air quality, not just CO₂ dilution
- LEDs on the cover indicate VOC level
- 0 to 5 VDC or 0 to 10 VDC output

Humans respire Volatile Organic Compounds (VOCs) as well as CO₂. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO₂ sensor. The advantage of the VOC sensor is that it measures air contaminants from other sources besides respiration, such as building materials, cleaners, perfumes and furniture and carpet off-gassing.

The BAPI-Stat Quantum VOC Room Sensor features 0 to 5 VDC or 0 to 10 VDC output. The VOC level is indicated as "Good, Fair or Poor" by three discrete green, yellow and red LED's on the front of the unit. If the output reaches 2,000 PPM, the red LED will begin to flash because it has hit its maximum output.



ANOTHER
ORIGINAL

5
YEAR
WARRANTY

AIR QUALITY

SPECIFICATIONS

POWER:

12 to 24 VDC, 35 mA Peak
18 to 24 VAC, 4 VA Peak

MEASUREMENT RANGE:

0 to 2,000 PPM CO₂ Equivalent

SELECTABLE OUTPUT:

0 to 5 or 0 to 10 VDC > 4KΩ impedance

SENSING ELEMENT:

Micro-machined Metal Oxide

TERMINATION:

3 Terminals, 16 to 22 AWG

WIRING:

2 Pair

ENVIRONMENTAL OPERATION RANGE:

32 to 122°F (0 to 50°C)
5 to 95%RH non-condensing

ENCLOSURE MATERIAL:

ABS Plastic, Material Rated UL94V-0

VOC DETECTION RANGE:

0 to 2,000 ppm CO₂ Equivalent

START-UP TIME:

15 Minutes

RESPONSE TIME:

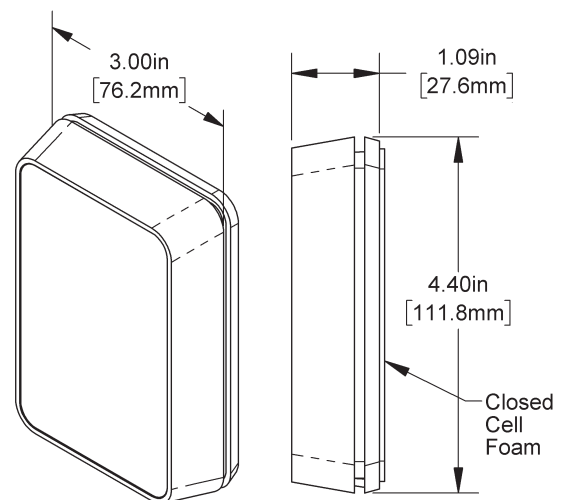
Less Than 60 seconds (after Start-Up Time)

MOUNTING:

2"x4" J-Box or drywall – screws provided

LED VOC LEVEL INDICATOR:

Good, Green < 1,000 PPM
Fair, Yellow = 1,000 to 1,500 PPM
Poor, Red > 1,500 PPM



APPLICATION NOTE:

Common VOCs Detected By BAPI's VOC Sensor

Learn more about Volatile Organic Compounds and what can be detected by our VOC sensors.



Visit www.bapihvac.com/resource-library to learn more.

BAPI-STAT QUANTUM PRIME VOC ROOM SENSOR

Air Quality Sensor

- Achieves true indoor air quality, not just CO₂ dilution
- LEDs on the cover indicate VOC level
- VOC alone or temperature and humidity combination

Humans respire Volatile Organic Compounds (VOCs) as well as CO₂. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO₂ sensor. The advantage of the VOC sensor is that it measures air contaminants from other sources besides respiration, such as building materials, cleaners, perfumes, furniture and carpet off-gassing.

The BAPI-Stat Quantum Prime VOC Room Sensor features 0 to 5 VDC or 0 to 10 VDC output. The VOC level is indicated as "Good, Fair or Poor" by three discrete green, yellow and red LED's on the front of the unit. If the output reaches 2,000 PPM, the red LED will begin to flash because it has hit its maximum output.



ANOTHER
ORIGINAL



SPECIFICATIONS

POWER: (No AC Power)

0 to 5 VDC Output Units:
9 to 35 VDC @ 50 mA Max (9 to 15 VDC recommended)
0 to 10 VDC Output Units:
15 to 35 VDC @ 50mA Max (15 VDC recommended)

SENSING ELEMENTS:

Humidity: Capacitive Polymer, ±2% RH Accuracy
VOCs: Micro-machined Metal Oxide
Temperature Sensor: Thermistor or RTD

MOUNTING:

2"x4" J-Box or drywall mount – screws provided

VOC DETECTION RANGE:

0 to 2,000 CO₂ PPM equivalent

RESPONSE TIME:

Less Than 60 Sec. (after Start-Up Time)

START-UP TIME:

15 minutes

ENVIRONMENTAL OPERATION RANGE:

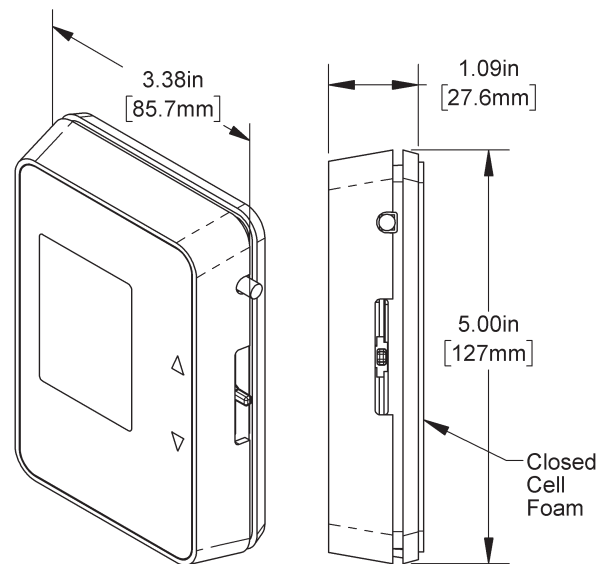
32 to 122°F (0 to 50°C)
0 to 95% RH non-condensing

MATERIAL:

ABS Plastic, Material Rated UL94V-0

LED VOC LEVEL INDICATOR:

Good, Green < 1,000 PPM
Fair, Yellow = 1,000 to 1,500 PPM
Poor, Red > 1,500 PPM



VOC DUCT & ROUGH SERVICE SENSOR

Air Quality Sensor

- Corresponds to ASHRAE's CO₂-based DVC algorithm
- Duct aspiration tube or rough service ventilated BAPI-Box
- 0 to 5 VDC or 0 to 10 VDC output

Humans respire Volatile Organic Compounds (VOCs) as well as CO₂. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO₂ sensor. The advantage of the VOC sensor is that it measures air contaminants from other sources besides respiration, such as building materials, cleaners, perfumes and furniture and carpet off-gassing.

The Duct unit samples duct air using an aspiration tube. The Rough Service unit features a ventilated BAPI-Box and is ideal for rough service areas such as outdoor air plenums, equipment rooms, attics, green houses and warehouses. The VOC level is indicated as "Good, Fair or Poor" by three discrete green, yellow and red LED's on the front of the unit. If the output reaches 2,000 PPM, the red LED will begin to flash because it has hit its maximum output.



AIR QUALITY

SPECIFICATIONS

POWER:

12 to 24 VDC, 35 mA Peak
18 to 24 VAC, 4 VA Peak

ANALOG OUTPUTS:

0 to 5VDC or 0 to 10VDC, >10KΩ impedance
VOC Contaminants: 0 to 2,000 PPM CO₂ Equivalent

VOC SENSING ELEMENT:

Micro-machined Metal Oxide

VOC DETECTION RANGE:

0 to 2,000 ppm CO₂ Equivalent

RESPONSE TIME:

Less Than 60 Seconds (after start-up time)

START-UP TIME:

15 minutes

OPERATING ENVIRONMENT:

32 to 122°F (0 to 50°C)
0 to 95%RH non-condensing

ENCLOSURE RATING:

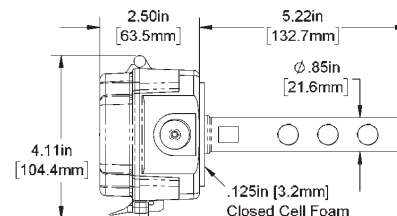
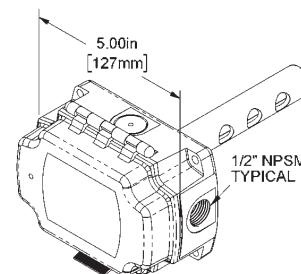
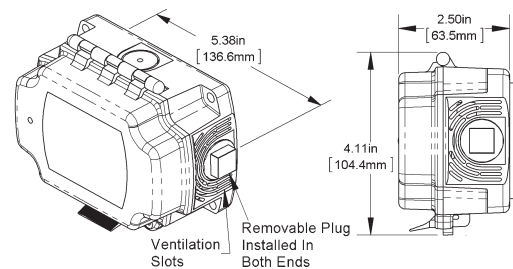
Unventilated BAPI-Box: NEMA 4, IP66

ENCLOSURE MATERIAL:

Polycarbonate, UL94 V-0

LED VOC LEVEL INDICATOR:

Good, Green < 1,000 PPM
Fair, Yellow = 1,000 to 1,500 PPM
Poor, Red > 1,500 PPM



CARBON MONOXIDE DUCT & ROUGH SERVICE SENSOR

Air Quality Sensor

- Field replaceable electrochemical sensor with self-test
- Field selectable ranges and outputs
- Large display and two independent alarm contacts

BAPI's Carbon Monoxide Sensor offers enhanced electrochemical sensing with outstanding accuracy at low concentrations. The Duct unit samples duct air using an aspiration tube. The Rough Service unit features a ventilated BAPI-Box and is ideal for parking ramps, equipment rooms and warehouses.

The sensor has field selectable CO ranges of 0 to 100, 0 to 200, 0 to 300 and 0 to 500 ppm. It also has field selectable outputs of 0 to 5, 1 to 5, 0 to 10, 2 to 10 VDC and 3-wire 4 to 20 mA output. Two independent SPDT alarm contacts switch at field selectable CO concentrations of 25, 35, 50, 100 and 200 ppm. The field replaceable sensor element lasts approximately 7 years and is self tested daily.



SPECIFICATIONS

POWER:

18 to 28 VAC, 7.2 VA Max
18 to 40 VDC, 180 mA Max

FIELD SELECTABLE RANGES:

0 to 100, 0 to 200, 0 to 300 & 0 to 500 PPM

ALARM RELAYS:

2 Independent, Dry SPDT (Form C)
2 Amps at 24 VAC/DC, Resistive
140 VA Inrush, 48 VA Holding at 24 VAC

FIELD WIRING TERMINALS:

Pluggable Screw Terminals, 14 to 24 AWG

RESPONSE TIME:

<80 seconds from 10% to 90% of range

ALARM RELAY SETPOINTS:

25, 35, 50, 100 or 200 PPM

ALARM TIMER:

0, 1, 5 & 10 minutes

SENSOR ELEMENT LIFE:

7 Years Typical

FIELD SELECTABLE OUTPUTS:

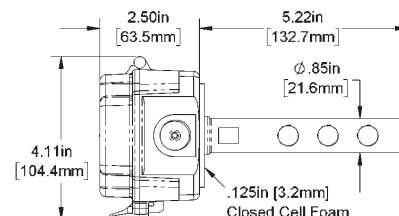
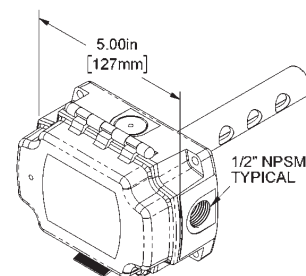
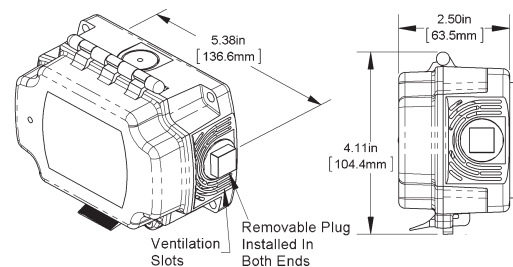
3-wire 4 to 20 mA
0 to 5, 1 to 5, 0 to 10, 2 to 10 VDC

ACCURACY:

<200ppm = $\pm 3\%$ FS, 32 to 122°F (0 to 50°C)
201 to 500 ppm = $\pm 5\%$ FS, 50 to 122°F (10 to 50°C)

ENVIRONMENTAL OPERATION RANGE:

14 to 122°F (-10 to 50°C)
5 to 95%RH Noncondensing



NITROGEN DIOXIDE DUCT & ROUGH SERVICE SENSOR

Air Quality Sensor

- Field replaceable electrochemical sensor
- Two independent alarm contacts
- Field selectable NO₂ ranges and outputs

BAPI's Nitrogen Dioxide Sensor offers enhanced electrochemical sensing with outstanding accuracy at low concentrations. The Duct unit samples duct air using an aspiration tube. The Rough Service unit features a ventilated BAPI-Box and is ideal for parking ramps, equipment rooms and warehouses.

The sensor has field selectable NO₂ ranges of 0 to 2.5, 0 to 5, 0 to 7.5 and 0 to 10 ppm. It also has field selectable outputs of 0 to 5, 1 to 5, 0 to 10 and 2 to 10 VDC as well as a 3-wire 4 to 20 mA output. Two independent SPDT alarm contacts switch at field selectable NO₂ concentrations of 1.0, 2.5, 5.0, 7.5 and 10.0 ppm. Sensor elements last approximately 7 years and the sensor module is field replaceable.



AIR QUALITY

SPECIFICATIONS

POWER:

18 to 28 VAC, 7.2 VA Max
18 to 40 VDC, 180 mA Max

FIELD SELECTABLE RANGES:

0 to 2.5 ppm • 0 to 5.0 PPM
0 to 7.5 ppm • 0 to 10.0 PPM

ACCURACY:

±5.0% of full scale

ALARM RELAYS:

2 Independent, Dry SPDT (Form C)
2 Amps at 24 VAC/DC, Resistive
140 VA Inrush, 48 VA Holding at 24 VAC

FIELD WIRING TERMINALS:

Pluggable Screw Terminals, 14 to 24 AWG

RESPONSE TIME:

<80 seconds from 10% to 90% of range

ALARM RELAY SETPOINTS:

1.0, 2.5, 5.0, 7.5 or 10 ppm

ALARM TIMER:

0, 1, 5 & 10 minutes

FIELD SELECTABLE ANALOG OUTPUTS:

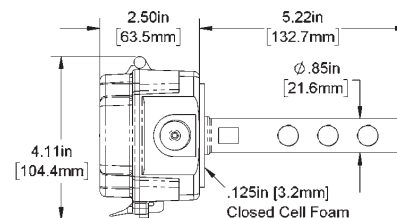
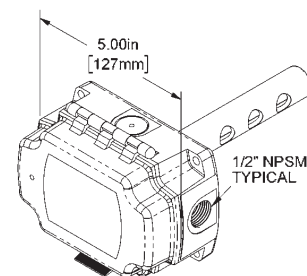
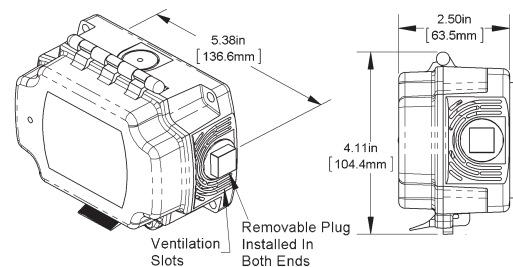
3-wire 4 to 20 mA
0 to 5 VDC, 1 to 5 VDC
0 to 10 VDC, 2 to 10 VDC

ENVIRONMENTAL OPERATION RANGE:

14 to 122°F (-10 to 50°C)
5 to 95% RH Noncondensing

LIFETIME:

7 Years Typical



ACCESSORIES



Blü-Test

Test Instrument Suite

- Handheld Bluetooth probes with local LED display
- Temperature, humidity, pressure and air quality sensors
- Communicates with your smart device

Blü-Test is a suite of handheld testing probes that connect to your smart device. Each probe comes with a National Institute of Standards and Technology (NIST) traceable certificate of calibration.

Blü-Test is very simple to use. Just start up the app and select the probe you want to measure. Multiple points can be logged, graphed and emailed.

Blü-Test can take readings and store the data in its internal memory when the smart phone or tablet is out of range. The data is then uploaded to the App when the phone or tablet is back in range.



SPECIFICATIONS

POWER:

3.7V, 2,000 mAh Rechargeable Battery

PROBE ENVIRONMENTAL RANGE:

Temperature Probe:-40 to 185°F (-40 to 85°C)

Base Unit:-22 to 158°F (-30 to 70°C)

%RH Probe:5 to 95% Non-condensing

Differential Pressure Probe: ...-4 to 158°F (-20 to 70°C)

PROBE MEASUREMENT RANGE:

Temperature:-40 to 185°F (-40 to 85°C)

%RH:10 to 90% Non-condensing

Differential Pressure Probe: ...-1 to +1" WC or -5 to +5" WC

TYPICAL ACCURACY:

Temperature:±0.54°F@77°F (±0.3°C@25°C)

%RH:±2%RH@77°F (25°C)

Differential Pressure Probe ... ±2% of FS Span for -1 to 1" WC
±1% of FS Span for -5 to 5" WC

SPECIFIC ACCURACY:

See the provided NIST certificate

COMMUNICATION:

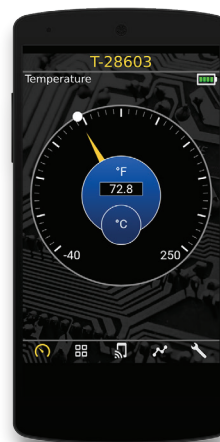
Bluetooth® Class 2

DATA TRANSFER:

Updates to display every 15 sec

FCC ID:

2AA9B04



Blü-Test App



Blü-Test Temperature Probe

ACCESSORIES

VC350A EZ VOLTAGE CONVERTER

Accessories for HVAC/R

- Self-resetting thermal fuse
- Operation & fault LED indicators
- Output protected against overload and accidental shorting

BAPI's VC350A-EZ is a cost-effective way of converting 24 VAC or VDC to 5, 12, 15 or 24 VDC for use on peripheral devices that require DC voltage. The converter is available with a 350 mA output. The revolutionary mounting system allows for 2.75" snaptrack, DIN rail or surface mounting.

Although most BAPI room units can run on 24 VAC power, converting to DC power eliminates the AC power "noise" which can affect the room sensor readings. Do not mount the converter at the sensor end of the wire, the AC will still couple into the sensor signal if you do. All fixed outputs of 5, 10, 12 or 15 VDC are adjustable $\pm 10\%$. The adjustable model (-ADJ) has an output of 5 to 24 VDC.

ANOTHER ORIGINAL



5
YEAR
WARRANTY

SPECIFICATIONS

OUTPUT VOLTAGE:

5 to 24 VDC @ 350 mA

RECOMMENDED INPUT VOLTAGE:

18 to 28 VAC, 24 VDC (15 VA)

ENVIRONMENTAL OPERATION RANGE:

0 to 95% RH non-condensing
 -40 to 149°F (-40 to 65°C) 350 mA @ any output voltage
 -40 to 158°F (-40 to 70°C) 350 mA @ 5 VDC
 330 mA @ 10 VDC
 280 mA @ 12 VDC
 224 mA @ 15 VDC
 140 mA @ 24 VDC

ENVIRONMENTAL STORAGE RANGE:

-40 to 176°F (-40 to 80°C)

WIRING:

4 wires, 16 to 22 gauge

RECTIFICATION:

Half-Wave Rectified

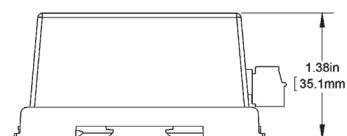
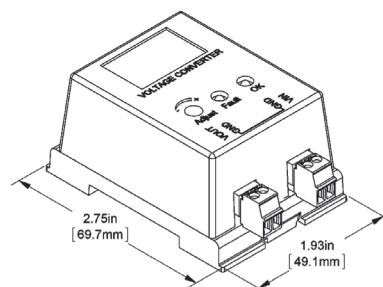
GROUNDING:

AC & DC Ground are Common

INPUT VOLTAGE LIMITS:

Model Of Unit	Minimum (VAC/VDC)	Maximum (VAC/VDC)	Input Current@ Min Input Volts (AC/DC)
5V	5.0/9.0	28.0/35.0	5.2 VA/305 mA
10V	10.0/14.7	28.0/35.0	8.3 VA/315 mA
12V	12.0/16.9	28.0/35.0	9.5 VA/318 mA
15V	15.0/20.5	28.0/35.0	11.2 VA/320 mA
ADJ(24V)	24.0/31.0*	28.0/35.0	16.7 VA/325 mA

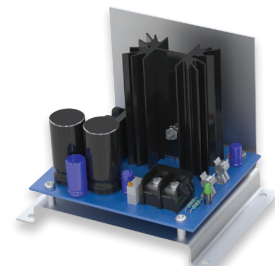
*Depends on output voltage



APPLICATION NOTE:

Why use DC instead of AC power?

Most modern HVAC control systems have 24 VAC available, and most of BAPI's products can run on 24VAC, yet BAPI recommends powering them with DC voltage. Why? Read our app note to find out.



Visit www.bapihvac.com/resource-library to learn more.

VC2000 VOLTAGE CONVERTER

Accessories for HVAC/R

- Compact and cost-effective
- Regulated and adjustable 1.2 VDC to 24 VDC output
- Output protected against overload and accidental short circuit

BAPI's VC2000 Voltage Converters are accurate, rugged and reliable power sources designed for commercial energy management applications.

The 2 Amp Voltage Converter accepts a 24 VAC input which can be field adjusted to a regulated output of 1.2 VDC to 24 VDC (factory set for 24 VDC). The input can be field configured for full or half wave rectification. The unit includes an output fuse to protect against overload and short circuits, a power indication LED, and is available with or without a backplate on the steel mounting bracket. Self-resetting or cartridge fuses may be specified at the time of order.



SPECIFICATIONS

INPUT VOLTAGE RANGE:

24 VAC (100 VA)

FUSE PROTECTION:

4 Amp, output side

OUTPUT VOLTAGE RANGE:

1.2 VDC to 24 VDC

MAXIMUM OUTPUT CURRENT:

2.0 Amps

OPERATING RANGE:

-40 to 158°F (-40 to 70°C)

RECTIFICATION:

Field Selectable as Full or Half Wave

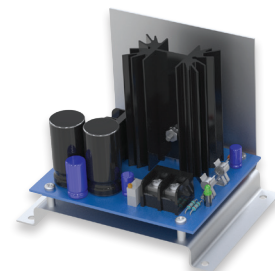
WIRING:

16 to 22 AWG

APPLICATION NOTE:

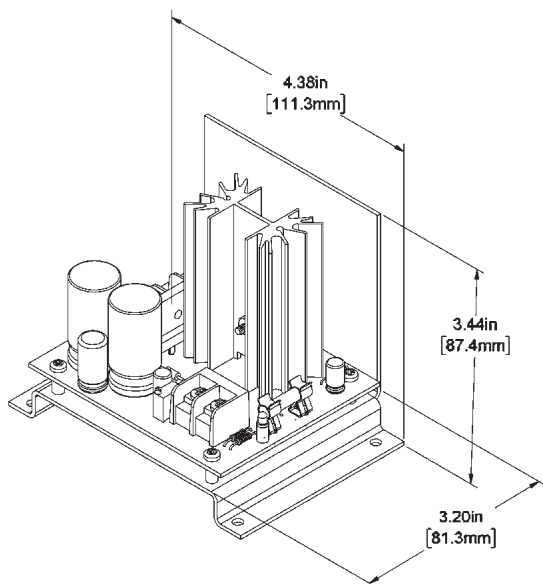
Why use DC instead of AC power?

Most modern HVAC control systems have 24 VAC available, and most of BAPI's products can run on 24VAC, yet BAPI recommends powering them with DC voltage. Why? Read our app note to find out.



Visit www.bapihvac.com/resource-library to learn more.

ACCESSORIES



WATER LEAK DETECTOR

Accessories for HVAC/R

- Detection within 5 seconds with local LED alarm indication
- 5 amp or 0.5 amp relays @ 30VAC/DC
- One piece, rope or remote sensor design

The Water Leak Detector is designed to sense the presence of water and alert a central monitoring system of the potentially destructive situation. Upon water detection, the alarm relays change state, and a local red LED illuminates. The transmitter can be set for latching or non-latching alarm, and normally energized or normally de-energized operation.



SPECIFICATIONS

POWER:

24VAC/VDC +/- 10%
 5 Amp Relays: 4 Watt/ 4 VA max
 0.5 Amp Relays: 2 Watt/ 2 VA max (not intended to switch a load)

WIRING:

Flex Connector or Liquid Tight Fitting
 Relays: Up to 6 wires for Alarm Contacts
 Transmitter: 2 wires for Power

SENSOR:

Attached: SS probe w/ adjustable depth screw from 0.063 to 0.84"
 Remote: Sensor w/ adjustable depth from 0.062 to 0.5", Mounts to pan with industrial adhesive tape or 0.172" mounting holes
 Rope: Long Line Wire Sensor, Plenum Rated.
 Detects 1/8" of water over the full length.

ALARM CONTACTS:

LDT1:One SPST, 0.5A relay output, 10W max.
 LDT2:Two SPST, 0.5A relay outputs, 10W max.
 LDT3:One SPDT, 5A relay output
 LDT4:Two SPDT, 5A relay outputs

INDICATION:

1 Green Power LED, 1 Red Alarm LED

RESET ACTION:

If latching, local pushbutton or power interrupt

TERMINATION:

Terminal Strip, 12 to 24 AWG

ENCLOSURE RATINGS:

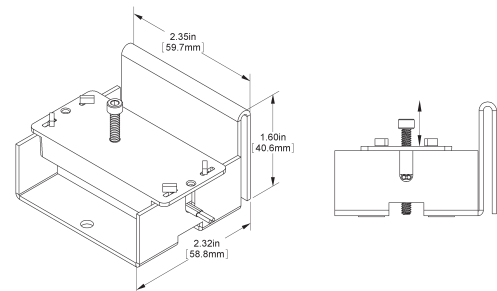
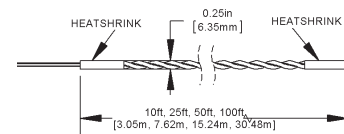
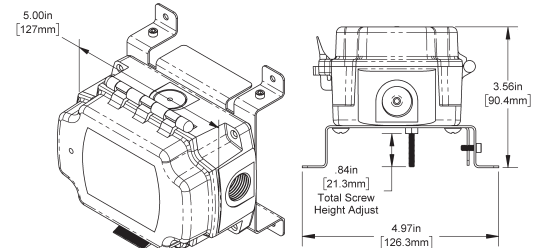
Remote Sensor: FEP plenum-rated, waterproof cable
 Detector: BAPI-Box, NEMA 4 Polycarbonate Enclosure

AMBIENT:

Remote Sensor: -40 to 185°F (-40 to 85°C), 0 to 100%RH, Condensing
 Rope Sensor: 32 to 167°F (0 to 75°C), 0 to 95%RH, Non-condensing
 Detector (BB): -40 to 185°F (-40 to 85°C), 0 to 95%RH, Non-condensing

ENCLOSURE MATERIAL:

EUL94V-0, UV-rated in Enclosure



BAPI-GUARD

Accessories for HVAC/R

- Prevents tampering, damage and unauthorized adjustment
- Exceptional airflow for proper thermostat operation
- Low profile design with two sizes to fit most thermostats

The BAPI-Guard prevents tampering, physical damage and unauthorized adjustment of thermostats. The attractive design is available in two sizes to fit most thermostats. It is made of thick, durable polycarbonate and features exceptional airflow, key lock protection, horizontal or vertical mounting and easy installation with hardware included.

ANOTHER
ORIGINAL



5
YEAR
WARRANTY

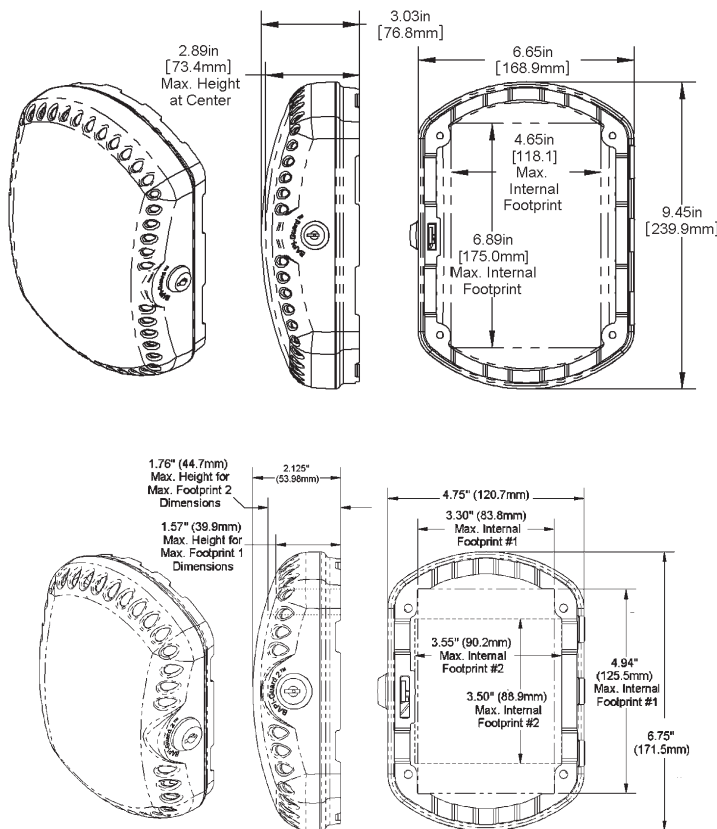
SPECIFICATIONS

MATERIAL:

Polycarbonate

MATERIAL RATING:

UL 94, V-0



ACCESSORIES

OUTDOOR LIGHT LEVEL SENSOR

Accessories for HVAC/R

- Available with foot candle or lux ranges
- Extremely sensitive, even in dim lighting (<10 foot candle or 108 lux)
- Rugged and watertight enclosure

The BAPI Outdoor Light Level Sensor conserves energy by allowing lights to be shut off when the ambient light level exceeds a specified level. The sensor can also help ensure safety by allowing lights to be turned on when the ambient light falls below a specified level.

The unit comes in a rugged and watertight UV-resistant polycarbonate enclosure with an IP66, NEMA 4 rating. The light level range is available as Foot Candle and Lux with 0 to 5V, 0 to 10V or 4 to 20 mA output. Custom ranges are also available.



ANOTHER
ORIGINAL



SPECIFICATIONS

POWER SUPPLY:

10 to 35 VDC, 22mA max (for 0 to 5 VDC or 4 to 20 mA Outputs)
15 to 35 VDC, 6 mA max (for 0 to 10 VDC Output)
12 to 27 VAC, 0.53 VA max (for 0 to 5 VDC Output)
15 to 27 VAC, 0.14 VA max (for 0 to 10 VDC Output)

FACTORY SELECTABLE OUTPUTS:

0 to 5V, 0 to 10V and 4 to 20 mA

ACCURACY:

10 Lux $\pm 10\%$ of reading

ENVIRONMENTAL OPERATION RANGE:

Temperature: -40 to 185°F (-40 to 85°C)
Humidity: 0 to 100%, non-condensing

ENCLOSURE MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

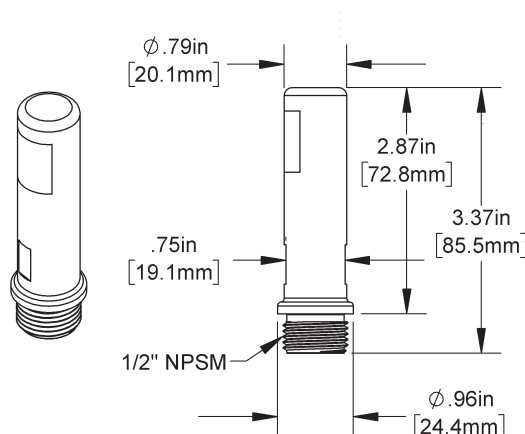
UL 94, V-0

ENCLOSURE RATING:

IP66, NEMA 4



Light level sensor mounted in a parking lot facing north.



WEATHER SHADE

Accessories for HVAC/R

- Improves accuracy by blocking solar heat gain
- Simple and sturdy mounting method
- UV-stabilized plastic prevents yellowing

External temperature, humidity and air quality sensors can be affected by solar heat gain. The BAPI Weather Shade effectively reduces the solar heat gain, improving the accuracy of the sensor.

The Weather Shade is constructed of UV-resistant plastic to prevent yellowing. The material also has a high reflectivity rating (87%) and low emissivity rating (0.90) to reduce the radiant heat created from solar gain. Besides reducing solar heat gain, the shade also protects the probe filter from precipitation and grit, extending the life of the filter.

ANOTHER
ORIGINAL



5
YEAR
WARRANTY

SPECIFICATIONS

SHADE MATERIAL:

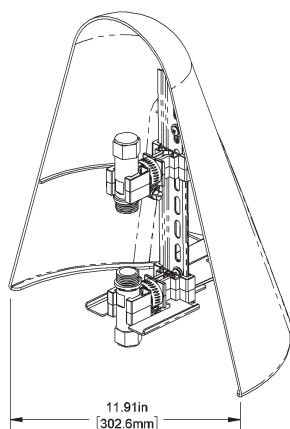
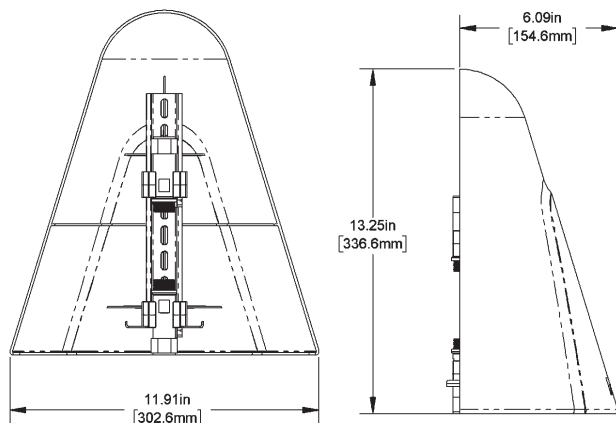
UV-stabilized Polycarbonate

SHADE MATERIAL RATINGS:

Flammability: UL 94

Reflectivity: 87%

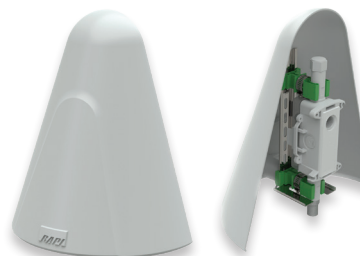
Emissivity: 0.90



APPLICATION NOTE:

MINIMIZING SOLAR HEAT GAIN

Learn how you can minimize solar heat gain on outdoor temperature sensors using BAPI's Weather Shade.



Visit www.bapihvac.com/resource-library to learn more.

ACCESSORIES



WIRELESS

BAPI-STAT QUANTUM TEMPERATURE SENSOR

900 MHz Wireless

- Up to 275 foot in-building range
- Optional temperature setpoint and occupant override
- Multiple communication options to the BAS via gateway

The BAPI-Stat “Quantum” Transceiver measures the room temperature and transmits the data via 900MHz RF to a Gateway up to 275 feet away. It is available with optional setpoint and override.

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The unit can also be ordered with wired power rather than battery power. The transmitted temperature is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.

ANOTHER
ORIGINAL



SPECIFICATIONS

POWER FOR BATTERY POWERED UNITS:

Two 3.6V Lith. batteries, 2,600 mAh, ~5 year battery life**

POWER FOR WIRED POWER UNITS:

9 to 30 VDC, 50 mA max • 15 to 28 VAC, 50 mA max

TEMPERATURE ACCURACY:

±0.36°F (±0.2°C) from built in thermistor

TRANSMITTED TEMPERATURE RANGE:

-40 to 185°F (-40 to 85°C)

TRANSMISSION DISTANCE:

Up to 275 feet*

ENVIRONMENTAL OPERATION RANGE:

Temperature: 32 to 140°F (0 to 60°C)

Humidity: 5% to 95% RH non-condensing

ENCLOSURE MATERIAL:

ABS Plastic

ENCLOSURE RATING:

UL94 V-0

FREQUENCY:

900 MHz (4 Channel, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

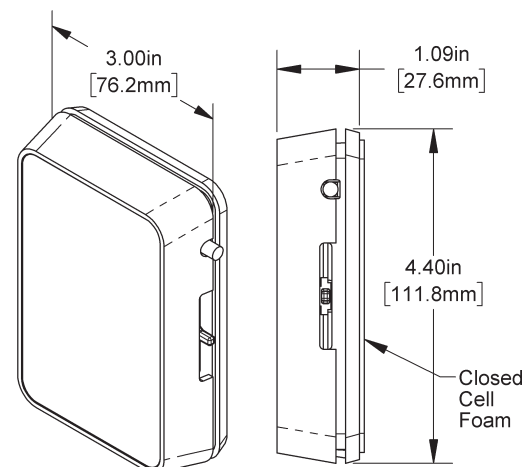
RECEIVER SENSITIVITY:

-101 dBm

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

BAPI-STAT QUANTUM TEMP & HUMIDITY SENSOR

900 MHz Wireless

ANOTHER
ORIGINAL

- Up to 275 foot in-building range*
- Optional temperature setpoint and occupant override
- Multiple communication options to the BAS via gateway

The BAPI-Stat "Quantum" Transceiver measures the room temperature and transmits the data via 900MHz RF to a Gateway up to 275 feet away. It is available with optional setpoint and override.

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted temperature is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.



SPECIFICATIONS

POWER FOR BATTERY POWERED UNITS:

Two 3.6V Lith. batteries, 2,600 mAh, ~5 year battery life**

POWER FOR WIRED POWER UNITS:

9 to 30 VDC, 50 mA max • 15 to 28 VAC, 50 mA max

SENSING ELEMENTS:

Temp - Semiconductor Band Gap, $\pm 0.3^{\circ}\text{C}$ ($\pm 0.54^{\circ}\text{F}$) @ 20 to 40°C (68 to 104°F)

Humidity - Capacitive Polymer, $\pm 2\%\text{RH}$ @ 25°C (77°F), 20 to $80\%\text{RH}$

TRANSMITTED TEMPERATURE RANGE:

-40 to 185°F (-40 to 85°C)

TRANSMISSION DISTANCE:

Up to 275 feet*

ENVIRONMENTAL OPERATION RANGE:

Temp: 32 to 140°F (0 to 60°C)

HUMIDITY:

5% to $95\%\text{RH}$ non-condensing

ENCLOSURE MATERIAL:

ABS Plastic

ENCLOSURE RATING:

UL94 V-0

FREQUENCY:

900 MHz (4 Channel, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

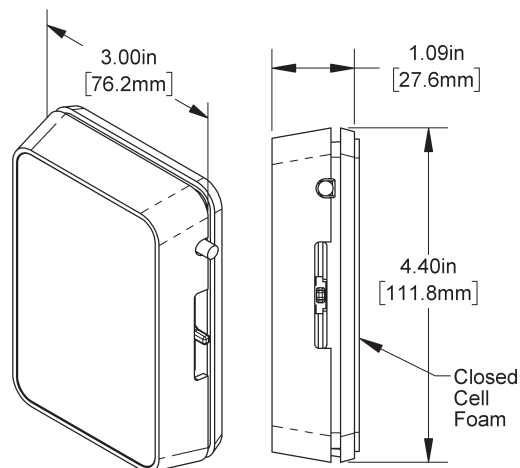
RECEIVER SENSITIVITY:

-101 dBm

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting



WIRELESS

DUCT TEMPERATURE SENSOR

900 MHz Wireless

ANOTHER
ORIGINAL

- Up to 275 foot in-building range*
- Available as temperature only or temperature/humidity combination
- Multiple communication options to the BAS via gateway

BAPI's Wireless Duct Temperature Transceiver features a rugged IP66-rated BAPI-Box enclosure and stainless steel probe with standard probe lengths from 4" to 18".

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted temperature is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.



5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

Two 3.6V Lithium batteries, 2,600 mAh, ~5 year battery life**

TEMPERATURE SENSOR ACCURACY:

$\pm 0.45^{\circ}\text{F}$ ($\pm 0.25^{\circ}\text{C}$), 32 to 158°F (0 to 70°C)

BAROMETRIC PRESSURE SENSOR ACCURACY:

± 2 mbar @ 25°C (0.40" H₂O)

TRANSMITTED TEMPERATURE RANGE:

-40 to 185°F (-40 to 85°C)

TRANSMISSION DISTANCE:

Up to 275 feet*

ENVIRONMENTAL OPERATION RANGE:

Temperature: -40 to 185°F (-40 to 85°C)
Humidity: 0 to 100% RH, non-condensing

ENCLOSURE RATING:

IP66

MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

UL94 V-0

FREQUENCY:

900 MHz (4 Channel, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

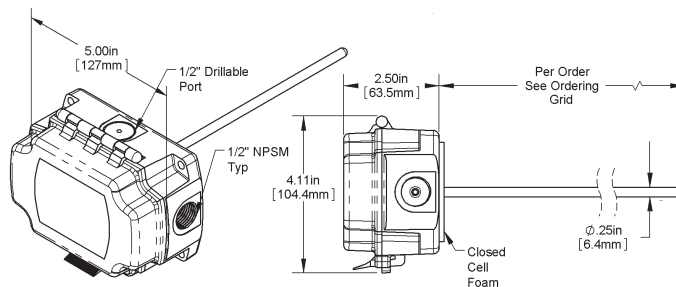
RECEIVER SENSITIVITY:

-101 dBm

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

DUCT TEMPERATURE & HUMIDITY SENSOR

900 MHz Wireless

ANOTHER
ORIGINAL

- Up to 275 foot in-building range*
- Available as temperature only or temperature/humidity combination
- Multiple communication options to the BAS via gateway

BAPI's Wireless Duct Temperature and Humidity 900 MHz Sensor features a rugged IP66-rated BAPI-Box enclosure. The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted temp, humidity and barometric pressure is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption. Transmissions can also be triggered by a temperature change with a user-adjustable threshold. The 900 MHz signal is "frequency agile" for maximum reliability.



5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

Two 3.6V Lithium batteries, 2,600 mAh, ~5 year battery life**

TEMPERATURE SENSOR:

Semiconductor Band Gap, $\pm 0.3^{\circ}\text{C}$ ($\pm 0.54^{\circ}\text{F}$) @ 20 to 40°C (68 to 104°F)

HUMIDITY SENSOR:

Capacitive Polymer, $\pm 2\%\text{RH}$ @ 25°C (77°F), 20 to $80\%\text{RH}$

BAROMETRIC PRESSURE SENSOR:

MEMS Technology, ± 2 mbar @ 25°C ($0.40''\text{H}_2\text{O}$)

TRANSMITTED TEMPERATURE RANGE:

-40 to 185°F (-40 to 85°C)

TRANSMISSION DISTANCE:

Up to 275 feet*

ENVIRONMENTAL OPERATION RANGE:

Temperature: -40 to 185°F (-40 to 85°C)

Humidity: 0 to $100\%\text{RH}$, non-condensing

ENCLOSURE RATING:

IP66

MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

UL94 V-0

FREQUENCY:

900 MHz (4 Channel, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

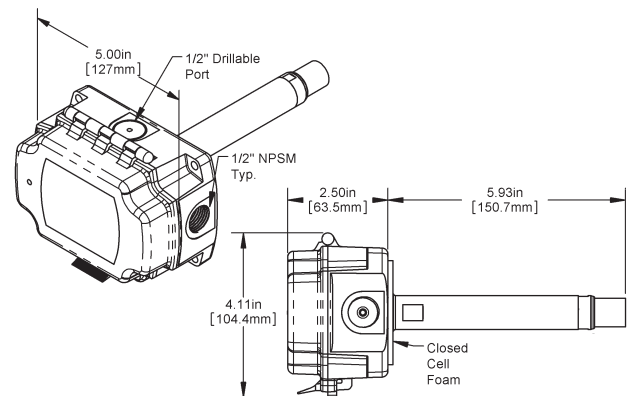
RECEIVER SENSITIVITY:

-101 dBm

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

IMMERSION TEMPERATURE SENSOR

900 MHz Wireless

ANOTHER
ORIGINAL

- Up to 275 foot in-building range*
- Available as temperature only or temperature/humidity combination
- Multiple communication options to the BAS via gateway

BAPI's Wireless Immersion Temperature 900 MHz Sensor features a rugged IP66-rated BAPI-Box enclosure with 2", 4" and 8" probe lengths. The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted temperature and barometric pressure is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption. Transmissions can also be triggered by a temperature change with a user-adjustable threshold. The 900 MHz signal is "frequency agile" for maximum reliability.



5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

Two 3.6V Lithium batteries, 2,600 mAh, ~5 year battery life**

TEMPERATURE SENSOR ACCURACY:

±0.45°F (±0.25°C), 32 to 158°F (0 to 70°C)

BAROMETRIC PRESSURE SENSOR ACCURACY:

±2 mbar @ 25°C (0.40" H₂O)

TRANSMITTED TEMPERATURE RANGE:

-40 to 185°F (-40 to 85°C)

TRANSMISSION DISTANCE:

Up to 275 feet*

ENVIRONMENTAL OPERATION RANGE:

Temperature: -40 to 185°F (-40 to 85°C)
Humidity: 0 to 100% RH, non-condensing

ENCLOSURE RATING:

IP66

MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

UL94 V-0

FREQUENCY:

900 MHz (4 Channel, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

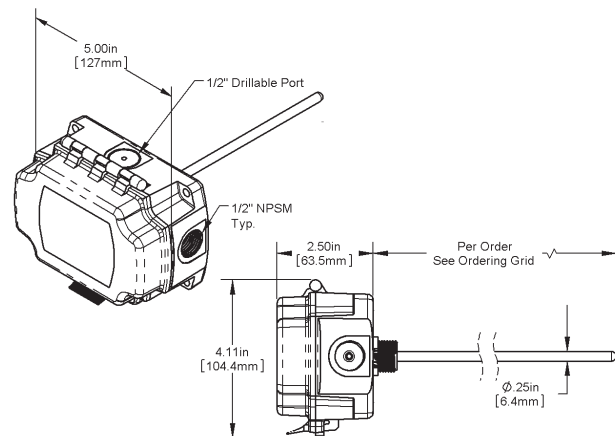
RECEIVER SENSITIVITY:

-101 dBm

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

REMOTE PROBE TEMPERATURE SENSOR

900 MHz Wireless

- Up to 275 foot in-building range*
- User-adjustable transmission rate**
- Multiple communication options to the BAS via gateway

BAPI's Wireless Remote Temperature Transceiver feature a 1.75" long SS probe with either Plenum-Rated Cable or FEP-Jacketed Cable. Standard lead lengths are 18", 5', 10', 15', 20' and 25'.

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted temperature is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.



ANOTHER
ORIGINAL

5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

Two 3.6V Lithium batteries, 2,600 mAh, ~5 year battery life**

TEMPERATURE SENSOR ACCURACY:

±0.45°F (±0.25°C), 32 to 158°F (0 to 70°C)

BAROMETRIC PRESSURE SENSOR ACCURACY:

±2 mbar @ 25°C (0.40" H₂O)

TRANSMITTED TEMPERATURE RANGE:

-40 to 185°F (-40 to 85°C)

TRANSMISSION DISTANCE:

Up to 275 feet*

ENVIRONMENTAL OPERATION RANGE:

Temperature: -40 to 185°F (-40 to 85°C)
Humidity: 0 to 100% RH, non-condensing

ENCLOSURE RATING:

IP66

MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

UL94 V-0

FREQUENCY:

900 MHz (4 Channel, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

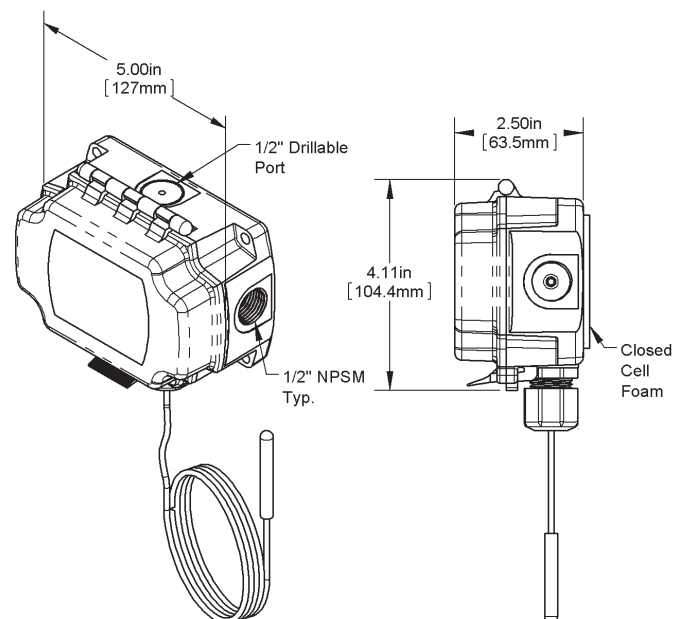
RECEIVER SENSITIVITY:

-101 dBm

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

OUTSIDE AIR TEMPERATURE SENSOR

900 MHz Wireless

ANOTHER
ORIGINAL

- Up to 275 foot in-building range*
- Barometric pressure and optional light level sensing
- Multiple communication options to the BAS via gateway

BAPI's Wireless Outside Air Temperature Transceiver features a UV-resistant plastic shield that keeps the sensor out of the sunlight and allows for excellent air circulation.

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted temperature is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.



5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

Two 3.6V Lith. batteries, 2,600 mAh, ~5 year battery life**

TEMPERATURE SENSOR ACCURACY:

$\pm 0.45^{\circ}\text{F}$ ($\pm 0.25^{\circ}\text{C}$), 32 to 158 $^{\circ}\text{F}$ (0 to 70 $^{\circ}\text{C}$)

TEMPERATURE TRANSMISSION RANGE:

-40 to 185 $^{\circ}\text{F}$ (-40 to 85 $^{\circ}\text{C}$)

BAROMETRIC PRESSURE SENSOR ACCURACY:

± 2 mbar @ 25 $^{\circ}\text{C}$ (0.40" H₂O)

BAROMETRIC PRESSURE OPERATIONAL RANGE:

30 to 120 Kpa

LIGHT LEVEL SENSING ACCURACY:

10 Lux \pm 10% of reading

LIGHT LEVEL SENSING RANGE:

0 to 64,000 lux

TRANSMISSION DISTANCE:

Up to 275 feet*

FREQUENCY:

900 MHz (4 Channel, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

RECEIVER SENSITIVITY:

-101 dBm

ENCLOSURE RATING:

IP66

MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

UL94 V-0

ENVIRONMENTAL OPERATION RANGE:

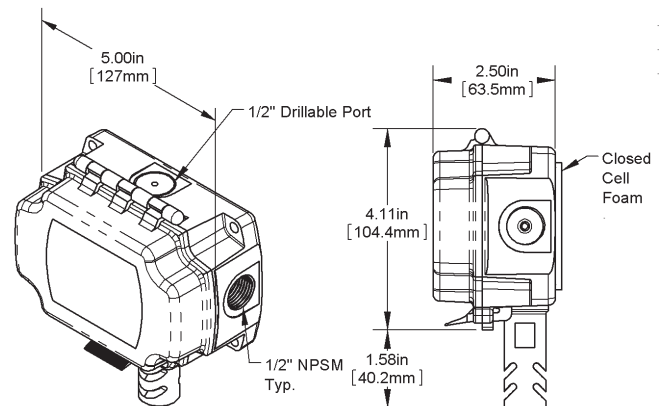
Temperature: -40 to 185 $^{\circ}\text{F}$ (-40 to 85 $^{\circ}\text{C}$)

Humidity: 0 to 100% RH

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

OUTSIDE AIR TEMPERATURE & HUMIDITY SENSOR

900 MHz Wireless

- Up to 275 foot in-building range*
- User-adjustable transmission rate**
- Multiple communication options to the BAS via gateway

BAPI's Wireless Outside Air Temp/Humidity Transceiver features a UV-resistant plastic shield and stainless steel replaceable filter.

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted temperature is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The unit is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.



SPECIFICATIONS

POWER:

Two 3.6V Lith. batteries, 2,600 mAh, ~5 year battery life**

TEMPERATURE SENSOR:

Semiconductor Band Gap, $\pm 0.3^{\circ}\text{C}$ ($\pm 0.54^{\circ}\text{F}$) @ 20 to 40°C (68 to 104°F)

TEMPERATURE TRANSMISSION RANGE:

-40 to 185°F (-40 to 85°C)

HUMIDITY SENSOR:

Capacitive Polymer, $\pm 2\%\text{RH}$ @ 25°C (77°F), 20 to 80%RH

HUMIDITY TRANSMISSION RANGE:

0 to 100%RH

BAROMETRIC PRESSURE SENSOR:

MEMS Technology, ± 2 mbar @ 25°C (0.40"H2O)

BAROMETRIC PRESSURE OPERATIONAL RANGE:

30 to 120 Kpa

LIGHT LEVEL SENSING ACCURACY:

10 Lux $\pm 10\%$ of reading.

LIGHT LEVEL SENSING RANGE:

0 to 64,000 lux

TRANSMISSION DISTANCE:

Up to 275 feet*

FREQUENCY:

900 MHz (4 Channels, 7 MHz Spacing)

TRANSMISSION POWER:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

RECEIVER SENSITIVITY:

-101 dBm

ENCLOSURE RATING:

IP66

MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

UL94 V-0

ENVIRONMENTAL OPERATION RANGE:

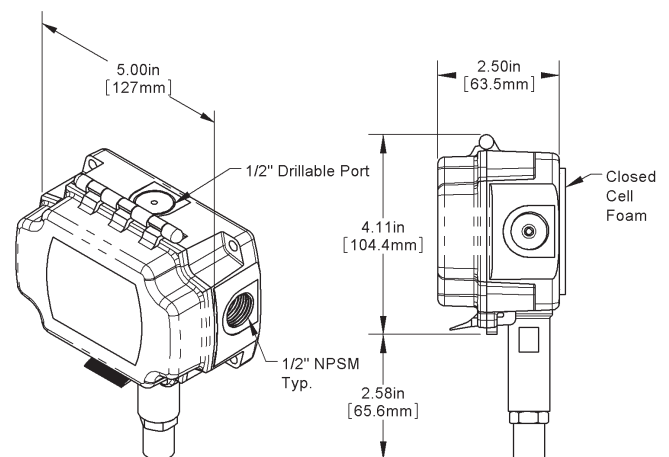
Temperature: -40 to 185°F (-40 to 85°C)

Humidity: 0 to 100% RH

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



THERMOBUFFER SENSOR

900 MHz Wireless

- Up to 275 foot in-building range*
- User-adjustable transmission rate**
- Multiple communication options to the BAS via gateway

The Thermobuffer features a 2" or 4" buffer chamber or 1" hanging bracket which is filled with food grade glycol. This allows it to track the temperature of the contents of the freezer, not just the air.

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted values are picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The transceiver is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.



ANOTHER ORIGINAL

5
YEAR
WARRANTY

SPECIFICATIONS

POWER:

Two 3.6V Lithium batteries, 2,600 mAh, ~5 year battery life**

TEMPERATURE ACCURACY:

From 32 to 158°F (0 to 70°C): $\pm 0.45^\circ\text{F}$ ($\pm 0.25^\circ\text{C}$)

From -40 to 32°F (-40 to 0°C): $\pm 1.0^\circ\text{F}$ ($\pm 0.55^\circ\text{C}$)

TEMPERATURE TRANSMISSION RANGE:

-40°F to 185°F (-40°C to 85°C)

BAROMETRIC PRESSURE SENSOR ACCURACY:

± 2 mbar @ 25°C (0.40"H2O)

TRANSMISSION DISTANCE:

Up to 275 feet*

FREQUENCY:

900 MHz (4 Channels, 7 MHz Spacing)

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMIT POWER:

0 dBm default, +5 dBm max

RECEIVER SENSITIVITY:

-101 dBm

ENVIRONMENTAL OPERATION RANGE:

Temperature: -22°F to 158°F (-30°C to 70°C)

Humidity: 0% to 100% RH, Non-condensing

ENCLOSURE RATING:

IP66

MATERIAL:

UV-Resistant Polycarbonate

MATERIAL RATING:

UL94 V-0

BUFFER CHAMBER:

1", 2" or 4", 304 Stainless Steel

CHAMBER FLUID:

(Customer supplied)

Glycol mix..... Food grade required

1" Chamber..... ~7 ml of fluid

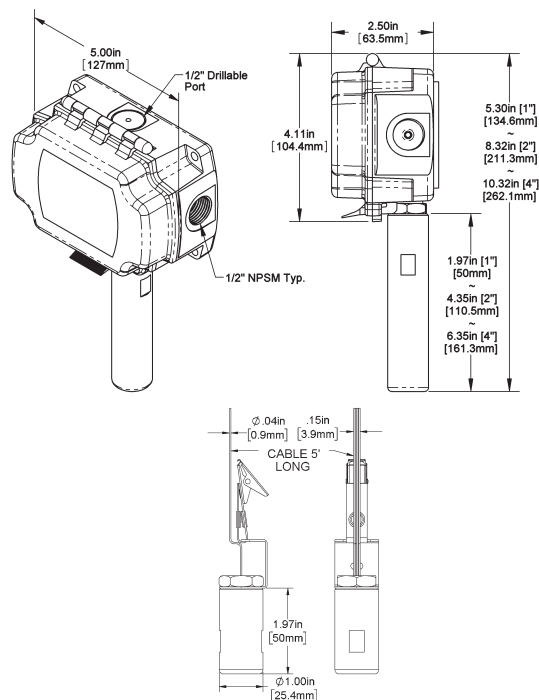
2" Chamber..... ~24 ml of fluid

4" Chamber..... ~32 ml of fluid

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

WIRELESS FOOD PROBE

900 MHz Wireless

- Up to 175 foot in-building range*
- Waterproof construction for food service use
- NSF certified with food and dishwasher safe materials

BAPI's Wireless Food Temperature Probes remain in the food trays to measure and transmit the temperature to a receiver up to 175 feet away. The transmitted temperature is picked up by a Receiver/Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The food probes eliminate the need for an employee to hand record the temperatures with a thermometer for HACCP compliance. Bin clips are available to fit most food bins. The probe is designed for dishwasher or hand washing.



SPECIFICATIONS

SUPPLY POWER:

One 3.6V Lithium 1/2 AA Battery, 900 mAh

BATTERY LIFE:

One year @ default 5 minute transmit interval**

MEASUREMENT RANGE:

-20 to 110°C (-4 to 230°F)

ACCURACY:

±0.25°C (±0.5°F) from -20 to 70°C

±0.5°C (±1°F) from 70 to 110°C

ENVIRONMENTAL OPERATING RANGE:

Probe Only:-40 to 110°C (-40 to 230°F)

Entire Unit:-15 to 85°C (5 to 185°F)

Washing Spike Temperature:TBD (up to 100°C)

Humidity:0 to 100% RH Condensing

CASE MATERIAL:

Food Safe Plastic

PROBE MATERIAL:

304 SS, 1/8" diameter

FREQUENCY:

900 MHz (4 Channels, 7 MHz Spacing)

TRANSMIT POWER:

0 dBm default, +5 dBm max

RECEIVER SENSITIVITY:

-101 dBm

TRANSMITTER INTERVAL:

Field Adjustable (5 min default)

TRANSMISSION RANGE:

Up to 175 feet*

CLEANING:

Dishwasher or Sanitizing Wipe

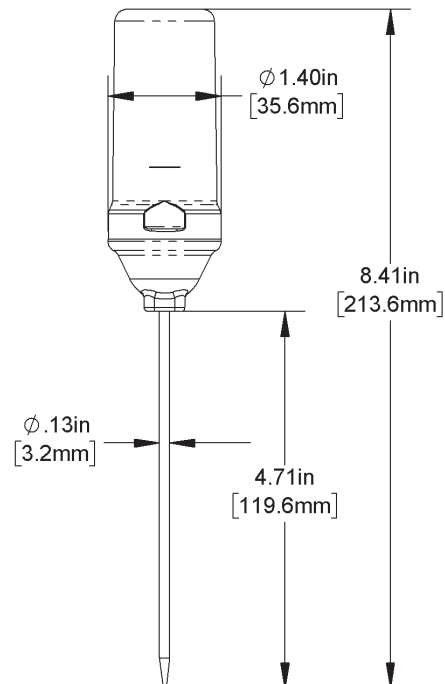
AGENCY:

NSF Certified

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



BAPI-STAT QUANTUM SLIM SENSOR

900 MHz Wireless

- Up to 275 foot in-building range*
- Built-in or remote temperature sensor
- User-adjustable transmission rate

The BAPI-Stat "Quantum Slim" Wireless Temperature Transceiver is designed to monitor temperature inside refrigerator and freezer cases.

The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes.** The transmitted values are picked up by a gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP).

The transceiver is capable of storing all data in memory until it receives a successful reception signal from the gateway, so that no data is lost during a communication interruption.



SPECIFICATIONS

POWER FOR BATTERY POWERED UNITS:

Two 3.6V Lithium batteries, 2,600 mAh,
~5 year life with 5 min transmission interval**

POWER FOR WIRED POWER UNITS:

9 to 30 VDC; 50 mA max • 15 to 28 VAC; 50 mA max

LED:

Transmit LED Inside Cover

SENSOR:

10K-2 Thermistor

Internal: Located at Bottom of Case

External: 1.75" SS Sensor with FEP Cable

1" Thermobuffer with FEP Cable

TEMPERATURE MEASUREMENT RANGE:

-40 to 185°F (-40 to 85°C)

ACCURACY:

±0.5°F (±0.28°C) from -40 to 185°F (-40 to 85°C)

ENVIRONMENTAL OPERATION RANGE:

Temperature:-22 to 122°F (-30 to 50°C)

Humidity:0 to 95% RH non-condensing

ENCLOSURE MATERIAL:

ABS Plastic

MATERIAL RATING:

UL94 V-0

TRANSMITTER MOUNTING:

Keyhole Screw Mounts (Screws not included)

EXTERNAL PROBE MATERIAL:

304 Stainless Steel

SENSOR MOUNTING:

Remote Probe: ...Plastic Holder (BA/FPB)

Thermobuffer: ...Hanging Rack Clip (Included)

FREQUENCY:

900 MHz (4 Channels, 7 MHz Spacing)

TRANSMIT POWER:

0 dBm default, +5 dBm max

RECEIVER SENSITIVITY:

-101 dBm

TRANSMITTER INTERVAL:

Factory selectable from 10 seconds to 10 minutes in 5 second intervals
(5 minute default)

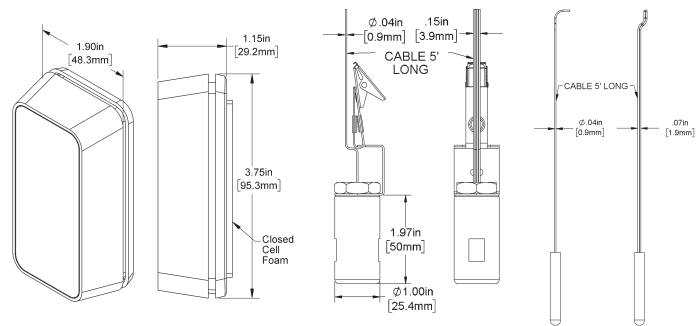
TRANSMISSION DISTANCE:

Up to 275 Feet*

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

BAPI-STAT QUANTUM SLIM TEMP & HUMIDITY SENSOR

900 MHz Wireless

ANOTHER
ORIGINAL

- Up to 275 foot in-building range*
- Built-in temperature & humidity sensor
- User-adjustable transmission rate

The BAPI-Stat "Quantum Slim" Wireless Temp/Humidity 900 MHz sensor features a sleek, low profile room enclosure. The temperature and humidity values are transmitted to the receiver with a measurement range of -40 to 185°F (-40 to 85°C). The unit has an estimated battery life of 5 years with the default transmit rate of once every 5 minutes** for battery powered units. The unit can also be ordered with wired power rather than battery power.

The transmitted temperature is picked up by a Gateway and supplied directly to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP). The sensor is capable of storing all data in memory until it receives a successful reception signal from the Gateway, so that no data is lost during a communication interruption.



SPECIFICATIONS

POWER FOR BATTERY POWERED UNITS:

Two 3.6V Lithium batteries, 2,600 mAh,
~5 year life with 5 min transmission interval**

POWER FOR WIRED POWER UNITS:

9 to 30 VDC; 50 mA max
15 to 28 VAC; 50 mA max

TEMPERATURE SENSOR:

Semiconductor Band Gap, $\pm 0.54^\circ\text{F}$ ($\pm 0.3^\circ\text{C}$) @ 20 to 40°C (68 to 104°F)

TEMPERATURE MEASUREMENT RANGE:

-40 to 185°F (-40 to 85°C)

HUMIDITY SENSOR:

Capacitive Polymer, $\pm 2\%\text{RH}$ @ 25°C (77°F), 20 to 80%RH

TRANSMITTER ENVIRONMENTAL OPERATION RANGE:

Temperature:-22 to 122°F (-30 to 50°C)
Humidity:0 to 95% RH non-condensing

ENCLOSURE MATERIAL:

ABS Plastic

MATERIAL RATING:

UL94 V-0

FREQUENCY:

900 MHz (4 Ch., 7 MHz Spacing)

MOUNTING:

Keyhole Screw Mounts (Screws not included)

TRANSMIT POWER:

0 dBm default, +5 dBm max

RECEIVER SENSITIVITY:

-101 dBm

TRANSMITTER INTERVAL:

Field selectable from 30 seconds to one day in defined intervals
(5 minute default)

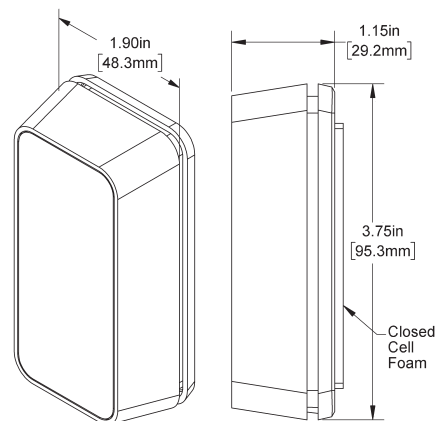
Transmission Distance:

Up to 275 Feet*

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.



WIRELESS

WIRELESS GATEWAY

900 MHz Wireless

- Multiple communication options including TCP/IP, JSON & BACnet IP
- Each gateway supports up to 200 BACnet objects and 50 transceivers
- Shows sensor readings, battery and signal levels via web page

The Gateway receives the data from one or more transceivers up to 275 feet* away, and provides the data to the BAS via multiple communication options (TCP/IP, JSON, BACnet IP). Each Gateway supports up to 200 BACnet objects. Sensor devices can be configured remotely via the Gateway.

The Gateway sends a confirmation signal to each transceiver upon a successful reception of data, allowing the transceiver to transmit the data it has stored in memory, so no data is lost during a communication interruption.



SPECIFICATIONS

SUPPLY POWER:

5 Volts @ 2.4 Amps, Micro-USB Plug (included)

CABLE:

5' Ethernet cable with standard RJ45 connectors (included)

COMMUNICATION PORTS:

RJ45 Ethernet: TCP/IP used for WEB Browser interface, Built in HTML webpage server, DHCP or static IP addressing

USB (4): Future growth

CAPACITY/UNIT:

Up to 50 sensors

ANTENNA:

Thread-on Whip Antenna, 900 MHz, 3.0 dBi, 6.6" Long

AMBIENT:

32 to 150°F (0 to 70°C), 0 to 95% RH non-condensing

TYPICAL INDOOR TRANSCIEVER TO RECEIVER RECEPTION DISTANCE:

Up to 275 feet

FREQUENCY:

900 MHz (4 Channels, 7 MHz Spacing)

TRANSMIT POWER:

-5 dBm

RECEIVER SENSITIVITY:

-101 dBm

SECURITY:

128 bit AES encryption of wireless data. Configuration settings and device readings are user/password protected.

DEFAULT ADDRESS:

IP: DHCP or Static Configured

Net Mask: 255.255.255.0

Port: 1000 (user configurable)

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

**Actual battery life will vary depending upon transmission interval setting and transmission power setting.

WANT TO GO WIRELESS? WE CAN HELP

BAPI has been building wireless solutions for over a decade. Our wireless experts can answer your questions and help you decide if wireless is right for your application.



Visit www.bapihvac.com to learn more.

900 MHz FIELD VERIFIER KIT

900 MHz Wireless

The 900 MHz Field Verifier Kit is designed to measure how far the BAPI Wireless 900 MHz signal will travel in a specific installation. Location of sensors and Gateways can be identified with a single site visit prior to submitting on a project.

The kit includes three sensors, a Gateway receiver and a wireless router so you can connect the Gateway wirelessly to a laptop computer. The kit also includes a spectrum analyzer to check the RF background noise on the frequency channels used by the BAPI system. The Gateway software provides a dBm signal strength value for the sensors so that ideal locations for the sensors can be identified. The 900 MHz Field Verifier is available as 30 day loaner kit and includes a carrying case.



SPECIFICATIONS

POWER:

Two 3.6V Lithium batteries, 2,600 mAh
(One 3.6V Lithium batteries for Food Probe)

TEMPERATURE MEASUREMENT RANGE:

BAPI-Slim & BAPI-Stat Quantum: -40 to 185°F (-40 to 85°C)
Food Probe: -20° to 110°C (-4° to 230°F)

ENVIRONMENTAL OPERATING RANGE:

BAPI-Slim & BAPI-Stat Quantum: 32 to 140°F (0 to 60°C),
5% to 95% RH non-condensing
Food Probe: -15 to 85°C (5 to 185°F)
0 to 100% RH Condensing

FREQUENCY:

900 MHz (4 Channels, 7 MHz Spacing)

TRANSMIT POWER:

0 dBm default, +5 dBm max

RECEIVER SENSITIVITY:

-101 dBm

TRANSMISSION INTERVAL:

5 minute default, user adjustable

TRANSMISSION DISTANCE:

BAPI-Slim & BAPI-Stat Quantum: Up to 275 Feet*
Food Probe: Up to 175 feet*

NOTES:

*Actual in-building transmission distances will vary depending upon building construction, transmission power setting and other factors.

SUPPLY POWER:

5 Volts @ 2.4 Amps, Micro-USB Plug (included)

CABLE:

5' Ethernet cable (included)

CAPACITY/UNIT:

Up to 200 BACnet objects

AMBIENT:

32 to 150°F (0 to 70°C), 0 to 95%RH non-condensing

TYPICAL INDOOR COMMUNICATION DISTANCE:

Up to 275 feet*

FREQUENCY:

900 MHz (4 Channels, 7 MHz Spacing)

TRANSMIT POWER:

-5 dBm

RECEIVER SENSITIVITY:

-101 dBm

SENSOR CERTIFICATIONS

CE Certified & RoHS Compliant

CE Certified & RoHS Compliant - BAPI holds itself to a higher standard with CE certification across models of temperature, humidity and pressure sensors. BAPI is also committed to environmentally responsible manufacturing practices and complies with the European Union's RoHS directive, which restricts the use of certain hazardous substances such as lead and mercury.



Certificates of Calibration

BAPI is committed to providing accurate, high quality sensors. All of our sensors are calibrated using certified equipment. We provide a certificate of calibration free of charge on all of our pressure sensors and our Blü-Test test instrument suite. Certificates are available for temperature, humidity and pressure products. For more information, please contact us.



Application Notes

In addition to the Application Notes mentioned in this catalog, BAPI also has many Application Notes available online at our website at www.bapihvac.com/resource-library. Some of the other topics covered are:

Ground Loops

Understanding Grounds Loops and Avoiding Ground Loops

Current Loops

4 to 20 mA Configurations

Understanding 4 to 20 mA Current Loops

Designing 4 to 20 mA Current Loops

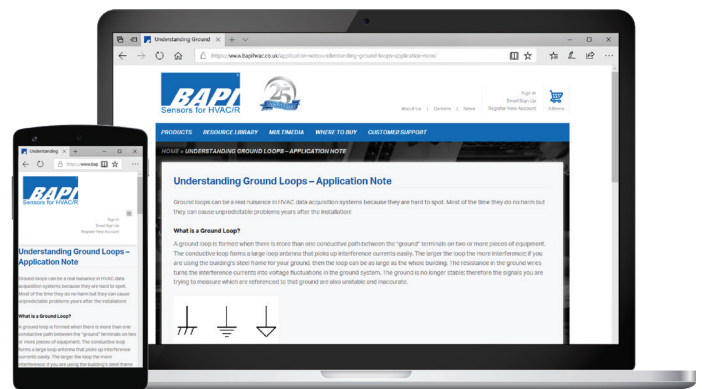
Other Application Notes

Understanding Full Wave and Half Wave Power Supplies

Determining Air Flow in Cubic Feet per Minute (CFM)

Understanding Noise from AC Power

Thermobuffer Temperature Sensing



Contact Us

Building Automation Products, Inc.

750 North Royal Avenue
Gays Mills, WI 54631
United States

+1-608-735-4800
sales@bapihvac.com
www.bapihvac.com



...it's in the details

© 2018 Building Automation Products, Inc. All rights reserved. 344_18

