BUILDING AUTOMATION PRODUCTS INC. UK LTD.

PRODUCT RANGE

TEMPERATURE | HUMIDITY | PRESSURE | AIR QUALITY | ACCESSORIES

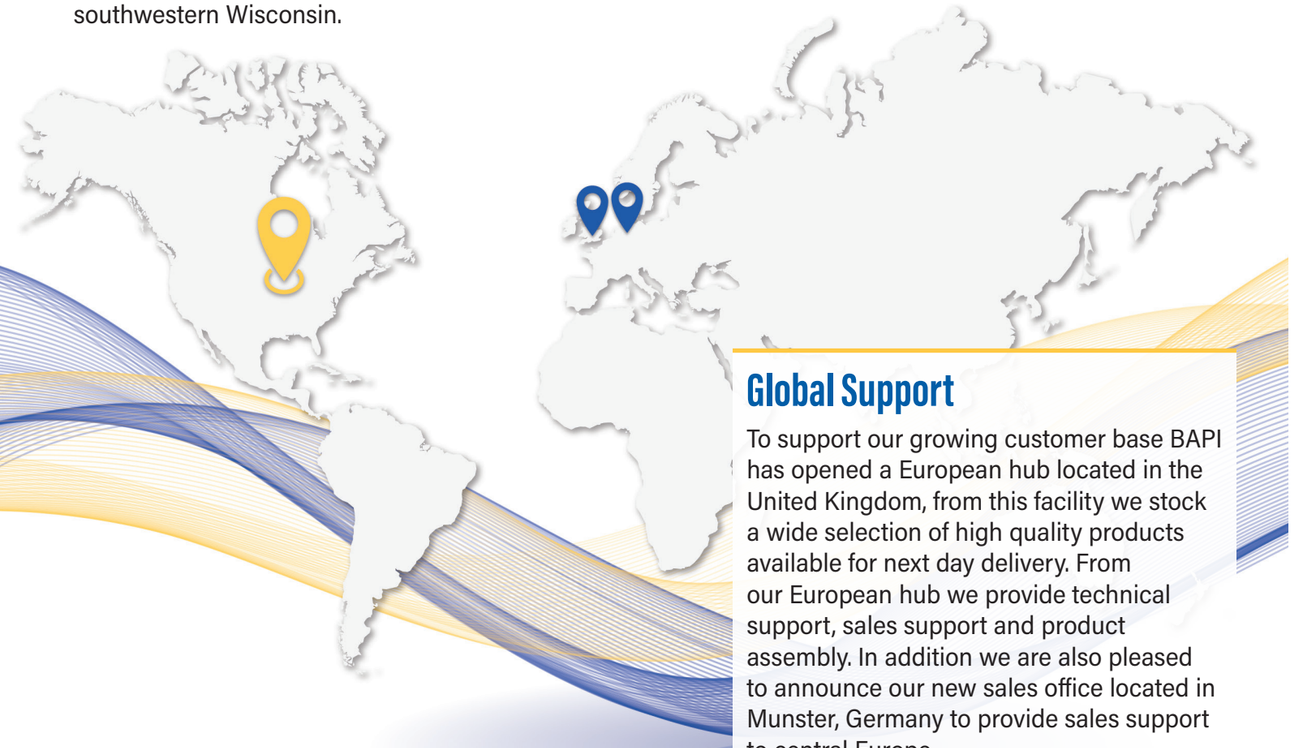
Changing the way you think about sensors...

BAPI®
Sensors for HVAC/R

25TH ANNIVERSARY

THE BAPI DIFFERENCE

Building Automation Products, Inc. (BAPI) is a premier sensor manufacturer for the HVAC/R industry. BAPI specialises in sensors for temperature, humidity, pressure and air quality. Originating in Cross Plains, WI, U.S.A., in 1993, BAPI's first facility was literally conducted out of a small two-car garage. Today, BAPI serves customers in more than 40 countries around the globe from its 50,000 square foot facility based in rural southwestern Wisconsin.



Global Support

To support our growing customer base BAPI has opened a European hub located in the United Kingdom, from this facility we stock a wide selection of high quality products available for next day delivery. From our European hub we provide technical support, sales support and product assembly. In addition we are also pleased to announce our new sales office located in Munster, Germany to provide sales support to central Europe.

...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.

Computer Aided Workstations

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

On-Site, Multi-Step Testing

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

99.94% Manufacturing Efficiency Rate

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

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.*

5 YEAR WARRANTY

LIFETIME LIMITED WARRANTY

BAPI-Backed

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 labour cost to do so.*

BAPI BACKED

BAPI Original

BAPI Originals are made up of quality vendors, talented employees, and committed 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.

ANOTHER ORIGINAL BAPI

0% Restock Fee on Stock Products

We do not charge a restock fee for any stock products returned within 30 days.*

Terms and conditions apply, see www.bapihvac.co.uk for details.

TABLE OF CONTENTS

Temperature Sensors — Page 5

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

Humidity Sensors — Page 22

Room • Outside Air • Duct

Pressure Sensors — Page 27

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

Air Quality Sensors — Page 36

CO_2 Room & Non-room • VOC Room & Non-room • CO • NO_2

Accessories — Page 48

Test Instruments • Power • Water Leak • Light Level

Specifications — Page 59

Thermistor • RTD • Transmitters • Pressure • Enclosures

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 new BAPI-Stat "Quantum" room temperature sensors feature a modern enclosure style with pushbutton setpoint adjustment and optional override. The LCD 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, 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 air handling units.

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 CONSUMPTION:
7mA max DC; .17 VA max AC

SENSING ELEMENT:
Multiple options available, see sensor specifications section

WIRING:
2 to 4 pair of 16 to 22AWG*

MOUNTING:
50mm x 100mm Junction-box or surface mount (screws provided)

ENVIRONMENTAL OPERATION RANGE:
Temperature: 0 to 50°C
Humidity: 0 to 95%, non-condensing

MATERIAL:
ABS Plastic

*BAPI recommends that you do not run wiring for room units 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:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/TQC-B-2-C10-J	10K-2 Thermistor, BAPI-Stat Quantum with Display, 0-10V Pushbutton Setpoint 10 to 32°C, Override	£100.00
BA/TQC-C-2-C10-J	10K-3 Thermistor, BAPI-Stat Quantum with Display, 0-10V Pushbutton Setpoint 10 to 32°C, Override	£100.00
BA/TQC-V-2-C10-J	10K-4 Thermistor, BAPI-Stat Quantum with Display, 0-10V Pushbutton Setpoint 10 to 32°C, Override	£100.00
BA/TQC-B-2-A10-J	10K-2 Thermistor, BAPI-Stat Quantum with Display, 0-10V Pushbutton Setpoint -3 to +3°, Override	£100.00
BA/TQC-C-2-A10-J	10K-3 Thermistor, BAPI-Stat Quantum with Display, 0-10V Pushbutton Setpoint -3 to +3°, Override	£100.00
BA/TQC-V-2-A10-J	10K-4 Thermistor, BAPI-Stat Quantum with Display, 0-10V Pushbutton Setpoint -3 to +3°, Override	£100.00

Additional sensor options available, please contact us for more information.

BAPI-STAT QUANTUM WITHOUT DISPLAY

Room Temperature Sensor

- Modern enclosure design
- Optional setpoint, override and communication jack
- Wide selection of sensing elements available.

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 3.5mm phono plug style jack. A pressure pickup port is also available for the enclosure, see the pressure section for more information.

ANOTHER ORIGINAL

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

SENSING ELEMENT:
Multiple options available, see sensor specifications section

WIRING:
One pair of 22 AWG wires

MOUNTING:
50mm x 100mm **ENVIRONMENTAL OPERATION RANGE:**
Temperature: 0 to 50°C
Humidity: 0 to 95%, non-condensing

MATERIAL:
ABS Plastic

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

BAPI-Guard

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

See page 54 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-BQ80L8-J-CG	10K-2 Thermistor, BAPI-Stat Quantum Non-Display, 0-20K Slider Setpoint Adjustment, Override	£28.80
BA/10K-3-BQ80L8-J-CG	10K-3 Thermistor, BAPI-Stat Quantum Non-Display, 0-20K Slider Setpoint Adjustment, Override	£28.80
BA/10K-4-BQ80L8-J-CG	10K-4 Thermistor, BAPI-Stat Quantum Non-Display, 0-20K Slider Setpoint Adjustment, Override	£28.80

Additional sensor options available, please contact us for more information.

BAPI-STAT QUANTUM SLIM

Room Temperature Sensor

- Sleek and compact BAPI-Stat Quantum Slim enclosure
- 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 and compact room enclosure. Available with thermistor and RTD elements. Ideal for locations where aesthetics are as important as the temperature measurement.

ANOTHER ORIGINAL

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

SENSING ELEMENT:
Multiple options available, see sensor specifications section

WIRING:
One pair of 22 AWG wires

MOUNTING:
25mm x 100mm Junction-box or surface mount (screws provided)

ENVIRONMENTAL OPERATION RANGE:
Temperature: 0 to 50°C
Humidity: 0 to 95%, non-condensing

MATERIAL:
ABS Plastic

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/QS-W-B	10K-2 Thermistor, White BAPI-Stat Quantum Slim Non-Display	£20.00
BA/QS-W-C	10K-3 Thermistor, White BAPI-Stat Quantum Slim Non-Display	£20.00
BA/QS-W-V	10K-4 Thermistor, White BAPI-Stat Quantum Slim Non-Display	£20.00
BA/QS-B-B	10K-2 Thermistor, Black BAPI-Stat Quantum Slim Non-Display	£24.00
BA/QS-B-C	10K-3 Thermistor, Black BAPI-Stat Quantum Slim Non-Display	£24.00
BA/QS-B-V	10K-4 Thermistor, Black BAPI-Stat Quantum Slim Non-Display	£24.00

Additional sensor options available, please contact us for more information.

LOW PROFILE BUTTON SENSOR

Low Profile Temperature Sensor

- Small, flush-mounted room temperature sensor
- 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 12mm hole and secured with a peel off tape strip. The only visible portion is a flush 22mm dot on the wall.

The Low Profile "Button" Sensor is available in white with a wide range of sensing elements.

ANOTHER ORIGINAL

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

SENSING ELEMENT:
Multiple options available, see sensor specifications section

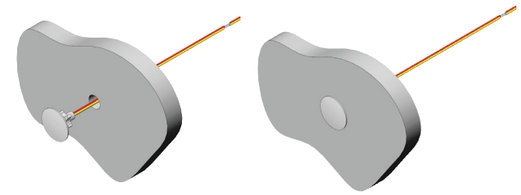
WIRING:
One pair of 22 AWG wires

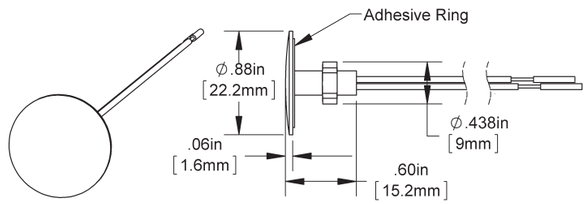
WIRE INSULATION:
Etched Teflon, Plenum Rated

MOUNTING:
12mm hole, push in plastic sheath with peel off tape strip

MATERIAL & RATING:
ABS Plastic

AMBIENT:
0 to 100% RH, Non-condensing
-40 to 85°C





ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-LPW	10K-2 Thermistor, White Low Profile Button Sensor	£20.00
BA/10K-3-LPW	10K-3 Thermistor, White Low Profile Button Sensor	£20.00
BA/10K-4-LPW	10K-4 Thermistor, White Low Profile Button Sensor	£20.00

Additional sensor options available, please contact us for more information.

REMOTE SENSOR

Temperature Sensors

- Etched teflon leads on remote sensors
- Plenum cable or FEP cable on remote probes
- Double encapsulated sensors on remote probes

BAPI Remote Sensors feature a 20mm long encapsulation shell and etched Teflon leads in lengths of 1.2m, 2.0m, 5.0m, and 10.0m. Remote Sensors are perfect for tight locations. Additional cable options, lead lengths and probe styles are available.

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 105°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:
Multiple options available, see sensor specifications section

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-PP-1.2m	10K-2 Thermistor, 1.2m Cable	£12.55
BA/10K-2-PP-2.0m	10K-2 Thermistor, 2.0m Cable	£13.45
BA/10K-2-PP-5.0m	10K-2 Thermistor, 5.0m Cable	£16.65
BA/10K-2-PP-10.0m	10K-2 Thermistor, 10.0m Cable	£21.45
BA/10K-3-PP-1.2m	10K-3 Thermistor, 1.2m Cable	£12.55
BA/10K-3-PP-2.0m	10K-3 Thermistor, 2.0m Cable	£13.45
BA/10K-3-PP-5.0m	10K-3 Thermistor, 5.0m Cable	£16.65
BA/10K-3-PP-10.0m	10K-3 Thermistor, 10.0m Cable	£21.45
BA/10K-4-PP-1.2m	10K-4 Thermistor, 1.2m Cable	£12.55
BA/10K-4-PP-2.0m	10K-4 Thermistor, 2.0m Cable	£13.45
BA/10K-4-PP-5.0m	10K-4 Thermistor, 5.0m Cable	£16.65
BA/10K-4-PP-10.0m	10K-4 Thermistor, 10.0m Cable	£21.45

Additional sensor options available, please contact us for more information.

Termination Box

PART NUMBER:	DESCRIPTION:	PRICE:
BA/BBX-RP-LTF	BAPI-Box Crossover Enclosure with Wiring Gland	£8.00

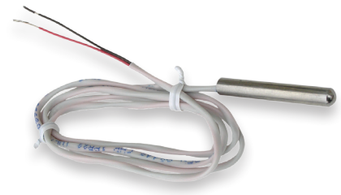
REMOTE PROBE

Temperature Sensors

- Waterproof, double encapsulated sensor
- Plenum-rated cable
- Multiple cable lengths available

Remote Temperature Probes feature a 45mm long stainless steel probe with plenum-rated cable leads in lengths of 1.2m, 2.0m, 5.0m and 10.0m.

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.



LIFETIME LIMITED WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 105°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:
Multiple options available, see sensor specifications section

PROBE MATERIAL:
Stainless Steel

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-RPP-1.2m	10K-2 Thermistor, 1.2m Cable, Stainless Steel Probe	£15.70
BA/10K-2-RPP-2.0m	10K-2 Thermistor, 2.0m Cable, Stainless Steel Probe	£16.65
BA/10K-2-RPP-5.0m	10K-2 Thermistor, 5.0m Cable, Stainless Steel Probe	£19.85
BA/10K-2-RPP-10.0m	10K-2 Thermistor, 10.0m Cable, Stainless Steel Probe	£24.65
BA/10K-3-RPP-1.2m	10K-3 Thermistor, 1.2m Cable, Stainless Steel Probe	£15.70
BA/10K-3-RPP-2.0m	10K-3 Thermistor, 2.0m Cable, Stainless Steel Probe	£16.65
BA/10K-3-RPP-5.0m	10K-3 Thermistor, 5.0m Cable, Stainless Steel Probe	£19.85
BA/10K-3-RPP-10.0m	10K-3 Thermistor, 10.0m Cable, Stainless Steel Probe	£24.65
BA/10K-4-RPP-1.2m	10K-4 Thermistor, 1.2m Cable, Stainless Steel Probe	£15.70
BA/10K-4-RPP-2.0m	10K-4 Thermistor, 2.0m Cable, Stainless Steel Probe	£16.65
BA/10K-4-RPP-5.0m	10K-4 Thermistor, 5.0m Cable, Stainless Steel Probe	£19.85
BA/10K-4-RPP-10.0m	10K-4 Thermistor, 10.0m Cable, Stainless Steel Probe	£24.65

Additional sensor options available, please contact us for more information.

Termination Box

PART NUMBER:	DESCRIPTION:	PRICE:
BA/BBX-RP-LTF	BAPI-Box Crossover Enclosure with Wiring Gland	£8.00

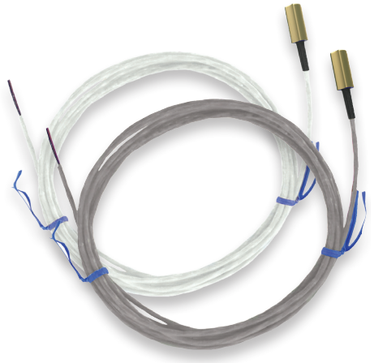
CONCAVE PROBE

Temperature Sensors

- Waterproof, double encapsulated sensor
- 20mm long concave brass probe
- FEP-jacketed cable in multiple lengths

The Remote Concave Probes feature a 20mm long brass encapsulation shell with a concave indention so that they fit on the outside of pipes such as condenser lines.

They come with CPP-plenum or FEP-jacketed cable in 1.2m and 2.0m lead lengths.



ANOTHER ORIGINAL

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 105°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:
Multiple options available, see sensor specifications section

PROBE MATERIAL:
Brass

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-CPP-1.2m	10K-2 Thermistor, Concave Brass Probe,1.2m Cable	£18.90
BA/10K-2-CPP-2.0m	10K-2 Thermistor, Concave Brass Probe, 2.0m Cable	£19.85
BA/10K-2-CPFEP-1.2m	10K-2 Thermistor, Concave Brass Probe,1.2m FEP Cable	£20.80
BA/10K-2-CPFEP-2.0m	10K-2 Thermistor, Concave Brass Probe, 2.0m FEP Cable	£22.10
BA/10K-3-CPP-1.2m	10K-3 Thermistor, Concave Brass Probe, 1.2m Cable	£18.90
BA/10K-3-CPP-2.0m	10K-3 Thermistor, Concave Brass Probe, 2.0m Cable	£19.85
BA/10K-3-CPFEP-1.2m	10K-3 Thermistor, Concave Brass Probe, 1.2m FEP Cable	£20.80
BA/10K-3-CPFEP-2.0m	10K-3 Thermistor, Concave Brass Probe, 2.0m FEP Cable	£22.10
BA/10K-4-CPP-1.2m	10K-4 Thermistor, Concave Brass Probe, 1.2m Cable	£18.90
BA/10K-4-CPP-2.0m	10K-4 Thermistor, Concave Brass Probe, 2.0m Cable	£19.85
BA/10K-4-CPFEP-1.2m	10K-4 Thermistor, Concave Brass Probe, 1.2m FEP Cable	£20.80
BA/10K-4-CPFEP-2.0m	10K-4 Thermistor, Concave Brass Probe, 2.0m FEP Cable	£22.10

Additional sensor options available, please contact us for more information.

Mounting Clamp

PART NUMBER:	DESCRIPTION:	PRICE:
BA/25-150-QR-CLAMP	Quick Release Mounting Clamp, 25-150mm	£4.15

Termination Box

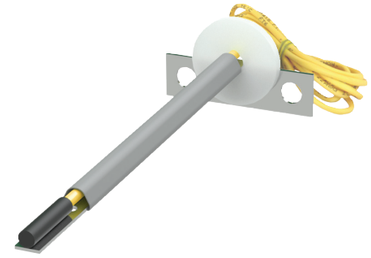
PART NUMBER:	DESCRIPTION:	PRICE:
BA/BBX-RP-LTF	BAPI-Box Crossover Enclosure with Wiring Gland	£8.00

T-STIK

Temperature Sensor

- Mounting tabs for easy installation
- 125mm probe length
- 2.0m plenum-rated cable leads

All T-Stik Mounting Bracket Sensors Units are packaged to withstand high humidity and condensation. The foam backing provides a tight seal for the probe insertion hole and absorbs vibration. It also includes mounting tabs for easy installation. T-Stiks are a great solution for measuring air temperature direct in an airflow source as it has universal mounting bracket.



LIFETIME LIMITED WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature Sensor: -40 to 100°C

MOUNTING:
Extension tabs

DUCT GASKET:
6.5mm Closed cell foam (impervious to mold)

CABLE LEADS:
2.0m plenum-rated cable leads

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-TK-2.0m	10K-2 Thermistor, Mounting Bracket, 2.0m Cable	£16.00
BA/10K-3-TK-2.0m	10K-3 Thermistor, Mounting Bracket, 2.0m Cable	£16.00
BA/10K-4-TK-2.0m	10K-4 Thermistor, Mounting Bracket, 2.0m Cable	£16.00

Additional sensor options available, please contact us for more information.

DUCT SENSOR FLANGE MOUNT

Temperature Sensor

- Stainless steel probes: 100, 200 and 300mm
- Double encapsulated sensors & etched teflon leads
- Wide selection of temperature sensing elements

Single Point Duct Units feature foam backing that provides a tight seal for the probe insertion hole and absorbs vibration. Mounting tabs allow for easy installation directly to the wall of the duct.

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 100 to 300mm.

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 85°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:
Multiple options available, see sensor specifications section

PROBE MATERIAL:
Series 304 Stainless Steel, 6.5mm diameter

ENCLOSURE MATERIAL:
UV-resistant polycarbonate

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-D-100mm-NB-2.0m	10K-2 Thermistor, 100mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-2-D-200mm-NB-2.0m	10K-2 Thermistor, 200mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-2-D-300mm-NB-2.0m	10K-2 Thermistor, 300mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-3-D-100mm-NB-2.0m	10K-3 Thermistor, 100mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-3-D-200mm-NB-2.0m	10K-3 Thermistor, 200mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-3-D-300mm-NB-2.0m	10K-3 Thermistor, 300mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-4-D-100mm-NB-2.0m	10K-4 Thermistor, 100mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-4-D-200mm-NB-2.0m	10K-4 Thermistor, 200mm Probe, Flange Mounted, 2.0m Cable	£20.00
BA/10K-4-D-300mm-NB-2.0m	10K-4 Thermistor, 300mm Probe, Flange Mounted, 2.0m Cable	£20.00

Additional sensor options available, please contact us for more information.

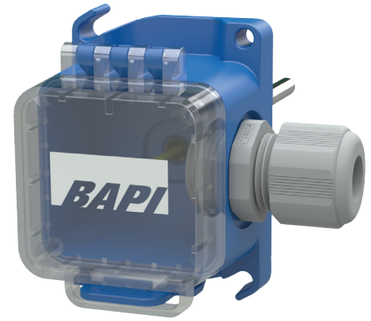
DUCT SENSOR

BAPI Box Crossover Enclosure

- Stainless steel probes: 100, 200, 300 and 450mm
- Double encapsulated sensors & etched teflon leads
- Limited Lifetime Warranty

Duct Units with a BAPI-Box Crossover come with a polycarbonate enclosure. The foam backing provides a tight seal for the probe insertion hole and absorbs vibration. Mounting tabs allow for easy installation directly to the wall of the duct.

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 100 to 450mm to accommodate most duct shapes and sizes and are available with a wide selection of sensing elements.



ANOTHER ORIGINAL

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

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

SENSING ELEMENT:
Multiple options available, see sensor specifications section

PROBE MATERIAL:
Stainless Steel, 6.5mm diameter

ENCLOSURE MATERIAL:
UV-resistant polycarbonate

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-D-100mm-BBX	10K-2 Thermistor, 100mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-2-D-200mm-BBX	10K-2 Thermistor, 200mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-2-D-300mm-BBX	10K-2 Thermistor, 300mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-2-D-450mm-BBX	10K-2 Thermistor, 450mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-3-D-100mm-BBX	10K-3 Thermistor, 100mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-3-D-200mm-BBX	10K-3 Thermistor, 200mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-3-D-300mm-BBX	10K-3 Thermistor, 300mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-3-D-450mm-BBX	10K-3 Thermistor, 450mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-4-D-100mm-BBX	10K-4 Thermistor, 100mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-4-D-200mm-BBX	10K-4 Thermistor, 200mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-4-D-300mm-BBX	10K-4 Thermistor, 300mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-4-D-450mm-BBX	10K-4 Thermistor, 450mm Probe, BAPI-Box Crossover Enclosure	£20.00

Additional sensor options available, please contact us for more information.

DUCT AVERAGING SENSOR

BAPI-Box Crossover

- Averaging lengths: 2.5, 3.5 & 7.5m
- Flexible aluminium tubing
- Accurate measurement along the entire length

BAPI Duct Averaging Units feature foam backing that provides a tight seal for the probe insertion hole and absorbs 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 aluminium tubing and measure temperature along their entire length. Nylon tie straps are provided for mounting.

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:
Multiple options available, see sensor specifications section

PROBE MATERIAL:
Bendable Aluminium, 5mm diameter

ENCLOSURE MATERIAL:
UV-resistant polycarbonate

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 3mm, 6.5mm and 9.5mm.

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.

See page 57 to learn more.

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-A-2.5m-BBX	10K-2 Thermistor, BAPI-Box Crossover Enclosure with 2.5m Flexible Probe	£84.00
BA/10K-2-A-3.5m-BBX	10K-2 Thermistor, BAPI-Box Crossover Enclosure with 3.5m Flexible Probe	£88.00
BA/10K-2-A-7.5m-BBX	10K-2 Thermistor, BAPI-Box Crossover Enclosure with 7.5m Flexible Probe	£107.20
BA/10K-3-A-2.5m-BBX	10K-3 Thermistor, BAPI-Box Crossover Enclosure with 2.5m Flexible Probe	£84.00
BA/10K-3-A-3.5m-BBX	10K-3 Thermistor, BAPI-Box Crossover Enclosure with 3.5m Flexible Probe	£88.00
BA/10K-3-A-7.5m-BBX	10K-3 Thermistor, BAPI-Box Crossover Enclosure with 7.5m Flexible Probe	£107.20
BA/10K-4-A-2.5m-BBX	10K-4 Thermistor, BAPI-Box Crossover Enclosure with 2.5m Flexible Probe	£84.00
BA/10K-4-A-3.5m-BBX	10K-4 Thermistor, BAPI-Box Crossover Enclosure with 3.5m Flexible Probe	£88.00
BA/10K-4-A-7.5m-BBX	10K-4 Thermistor, BAPI-Box Crossover Enclosure with 7.5m Flexible Probe	£107.20

Additional sensor options available, please contact us for more information.

RIGID AVERAGING SENSOR

BAPI-Box Crossover

- Averaging lengths: 300mm and 600mm
- Durable BAPI-Box Crossover enclosure
- Hinged cover for easy termination

Rigid Averaging Units feature foam backing that provides a tight seal for the probe insertion hole and absorbs vibration. It also comes with etched Teflon lead wires and double 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. Rigid averaging probes are made of stainless steel and measure temperature along their entire length.

ANOTHER ORIGINAL

5 YEAR WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 85°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:
Multiple options available, see sensor specifications section

PROBE MATERIAL:
Stainless Steel, 6.5mm diameter

ENCLOSURE MATERIAL:
UV-resistant polycarbonate

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-RA-300mm-BBX	10K-2 Thermistor, BAPI-Box Crossover Enclosure with 300mm Rigid Probe	£68.80
BA/10K-2-RA-600mm-BBX	10K-2 Thermistor, BAPI-Box Crossover Enclosure with 600mm Rigid Probe	£68.80
BA/10K-3-RA-300mm-BBX	10K-3 Thermistor, BAPI-Box Crossover Enclosure with 300mm Rigid Probe	£68.80
BA/10K-3-RA-600mm-BBX	10K-3 Thermistor, BAPI-Box Crossover Enclosure with 600mm Rigid Probe	£68.80
BA/10K-4-RA-300mm-BBX	10K-4 Thermistor, BAPI-Box Crossover Enclosure with 300mm Rigid Probe	£68.80
BA/10K-4-RA-600mm-BBX	10K-4 Thermistor, BAPI-Box Crossover Enclosure with 600mm Rigid Probe	£68.80

Additional sensor options available, please contact us for more information.

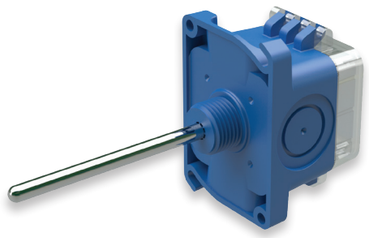
IMMERSION SENSOR

BAPI-Box Crossover with Nylon Fitting

- 50mm, 100mm and 200mm probe lengths
- Series 304 stainless steel probes
- Double encapsulated sensors and etched teflon leadwires

Immersion Units feature the BAPI-Box Crossover enclosure with hinged cover for easy field access.

Immersion Units are available in 50mm, 100mm and 200mm probe lengths. The sensor is potted inside a 6.5mm stainless steel probe with thermally conductive compound.



ANOTHER ORIGINAL

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 85°C
Humidity: 0 to 100%, non-condensing

SENSING ELEMENT:
Multiple options available, see sensor specifications section

PROBE MATERIAL:
Stainless Steel, 6.5mm diameter

ENCLOSURE MATERIAL:
UV-resistant polycarbonate

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-I-50mm-BBX	10K-2 Thermistor, 50mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-2-I-100mm-BBX	10K-2 Thermistor, 100mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-2-I-200mm-BBX	10K-2 Thermistor, 200mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-3-I-50mm-BBX	10K-3 Thermistor, 50mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-3-I-100mm-BBX	10K-3 Thermistor, 100mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-3-I-200mm-BBX	10K-3 Thermistor, 200mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-4-I-50mm-BBX	10K-4 Thermistor, 50mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-4-I-100mm-BBX	10K-4 Thermistor, 100mm Probe, BAPI-Box Crossover Enclosure	£20.00
BA/10K-4-I-200mm-BBX	10K-4 Thermistor, 200mm Probe, BAPI-Box Crossover Enclosure	£20.00

Additional sensor options available, please contact us for more information.

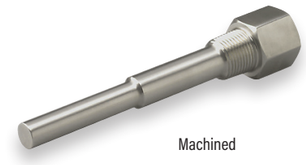
THERMOWELLS

For Immersion Sensors

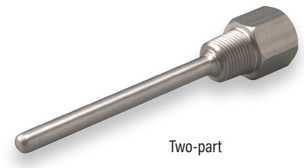
- Three lengths: 50mm, 100mm, 200mm (Fit standard immersion unit lengths)
- 304 Stainless steel
- One part machined construction or two part welded

BAPI's machined Thermowells come in 304 stainless steel material. These Thermowells are offered in 50mm, 100mm and 200mm lengths with BSPT and NPT external threads available.

The machined stainless steel wells come with a mirror polish for maximum corrosion resistance.



Machined



Two-part

ANOTHER ORIGINAL

5 YEAR WARRANTY

SPECIFICATIONS

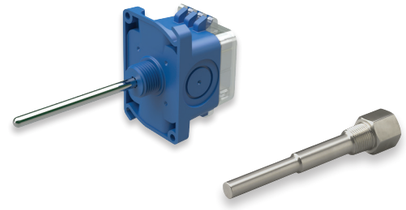
MATERIAL:
304 Stainless Steel

EXTERNAL THREAD:
BSPT or NPT

APPLICATION NOTE:

Using Thermal Grease in Thermowells

Thermal grease is not required when using a BAPI Thermowell and Immersion temperature sensor combination. Read our application note to learn more.



Visit www.bapihvac.co.uk/resource-library to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/50mm-1/4OT	Thermowell Two Part (Welded) 304 Stainless Steel 50mm, 1/4" BSPT Outer Threads	£17.60
BA/100mm-1/4OT	Thermowell Two Part (Welded) 304 Stainless Steel 100mm, 1/4" BSPT Outer Threads	£19.20
BA/100mm	Thermowell Two Part (Welded) 304 Stainless Steel 100mm, 1/2" BSPT Outer Threads	£19.20
BA/200mm	Thermowell Two Part (Welded) 304 Stainless Steel 200mm, 1/2" BSPT Outer Threads	£22.40
BA/100mm304	Thermowell Machined 304 Stainless Steel 100mm, 1/2" BSPT Outer Threads	£35.20
BA/200mm304	Thermowell Machined 304 Stainless Steel 200mm, 1/2" BSPT Outer Threads	£52.00

Additional sensor options available, please contact us for more information.

OUTSIDE AIR SENSOR

BAPI-Box 2

- Quick-response sensor
- 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 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.

ANOTHER ORIGINAL

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:
Multiple options available, see sensor specifications section

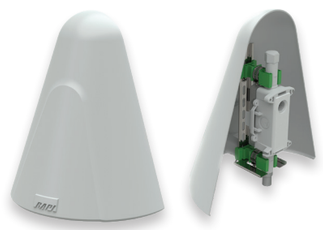
ENCLOSURE RATING:
IP66

ENCLOSURE MATERIAL:
UV-resistant polycarbonate

ALSO AVAILABLE:

Weather Shade

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



See page 56 to learn more.

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-O-BB2	10K-2 Thermistor, BAPI-Box 2 Enclosure	£24.00
BA/10K-3-O-BB2	10K-3 Thermistor, BAPI-Box 2 Enclosure	£24.00
BA/10K-4-O-BB2	10K-4 Thermistor, BAPI-Box 2 Enclosure	£24.00

Additional sensor options available, please contact us for more information.

THERMOBUFFER SENSOR

BAPI-Box Crossover

- Fluid-filled chamber tracks temperature of freezer or fridge contents
- BAPI-Box Crossover enclosure
- Stainless steel chamber

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 two buffer sizes 25mm and 100mm 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 and accommodates a variety of temperature sensors or transmitters to interface with all BMS systems.

BBX with 25mm Cylinder

ANOTHER ORIGINAL

LIFETIME LIMITED WARRANTY

SPECIFICATIONS

SENSOR:
Multiple options available, see sensor specifications section

PROBE:
Stainless steel

WIRE:
22 awg stranded, 2 or 3 wires

BUFFER CHAMBER CONSTRUCTION:
304 Stainless Steel

CHAMBER FLUID:
(Customer supplied)

Glycol Mix	Food Grade Required
25mm Chamber	~7 ml of fluid
51mm Chamber	~24 ml of fluid
102mm Chamber	~32 ml of fluid

ENVIRONMENTAL OPERATING RANGE:

Temp. Sensor	-40 to 85ºC
Temp. Transmitter	-20 to 70ºC
Humidity	0-100%RH, Condensing

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-TB-M304-1-BBX	10K-2 Thermistor, BAPI-Box Crossover Enclosure with 25mm Thermobuffer	£78.40
BA/10K-2-TB-M304-4-BBX	10K-2 Thermistor, BAPI-Box Crossover Enclosure with 100mm Thermobuffer	£168.00
BA/10K-3-TB-M304-1-BBX	10K-3 Thermistor, BAPI-Box Crossover Enclosure with 25mm Thermobuffer	£78.40
BA/10K-3-TB-M304-4-BBX	10K-3 Thermistor, BAPI-Box Crossover Enclosure with 100mm Thermobuffer	£168.00
BA/10K-4-TB-M304-1-BBX	10K-4 Thermistor, BAPI-Box Crossover Enclosure with 25mm Thermobuffer	£78.40
BA/10K-4-TB-M304-4-BBX	10K-4 Thermistor, BAPI-Box Crossover Enclosure with 100mm Thermobuffer	£168.00

Additional sensor options available, please contact us for more information.

HUMIDITY

BAPI-STAT QUANTUM HUMIDITY SENSOR

Room Temperature & Humidity Sensor

- 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, RJ11 or RJ22 Communication Jack can be mounted in the base to provide direct access to the network.

ANOTHER ORIGINAL

5 YEAR WARRANTY

SPECIFICATIONS

POWER:
10 to 35 VDC for 4 to 20 mA or 0 to 5 VDC Output
15 to 35 VDC for 0 to 10 VDC Output
12 to 24 VAC for 0 to 5 VDC Output
15 to 28 VAC for 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: ±2%RH @ 25°C, 20 to 80%RH
Temp: Semi-conductor Band Gap: ±0.3°C @ 20 to 40°C

FIELD CALIBRATION ADJUSTMENT:
±5% in 0.1% increments (Factory Calibrated)

WIRING:
2 to 6 pair of 16 to 22 AWG*

MOUNTING:
50mm x 100mm Junction-box or surface mount (screws provided)

ENVIRONMENTAL OPERATION RANGE:
Temperature: 0 to 50°C
Humidity: 0 to 95%, non-condensing

MATERIAL & RATING:
ABS Plastic

*BAPI recommends that you do not run wiring for room units 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:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/HQC-B-C-1-C10-J	Display, ±2%RH 20-80% 0-10V, Temp 10K-2 Thermistor, 0-10V Slider Setpoint 10 to 32°C, Override	£259.20
BA/HQC-C-C-1-C10-J	Display, ±2%RH 20-80% 0-10V, Temp 10K-3 Thermistor, 0-10V Slider Setpoint 10 to 32°C, Override	£259.20
BA/HQC-V-C-1-C10-J	Display, ±2%RH 20-80% 0-10V, Temp 10K-4 Thermistor, 0-10V Slider Setpoint 10 to 32°C, Override	£259.20
BA/HQC-B-C-1-A10-J	Display, ±2%RH 20-80% 0-10V, Temp 10K-2 Thermistor, 0-10V Slider Setpoint -3 to +3°, Override	£259.20
BA/HQC-C-C-1-A10-J	Display, ±2%RH 20-80% 0-10V, Temp 10K-3 Thermistor, 0-10V Slider Setpoint -3 to +3°, Override	£259.20
BA/HQC-V-C-1-A10-J	Display, ±2%RH 20-80% 0-10V, Temp 10K-4 Thermistor, 0-10V Slider Setpoint -3 to +3°, Override	£259.20
BA/HQX-B-C-X-XX-Z	No Display, ±2%RH 20-80% 0-10V, Temp 10K-2 Thermistor	£222.40
BA/HQX-C-C-X-XX-Z	No Display, ±2%RH 20-80% 0-10V, Temp 10K-3 Thermistor	£222.40
BA/HQX-V-C-X-XX-Z	No Display, ±2%RH 20-80% 0-10V, Temp 10K-4 Thermistor	£222.40

Additional sensor options available, please contact us for more information.

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" Wipedown 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 °C or °F 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

5 YEAR WARRANTY

SPECIFICATIONS

POWER:
10 to 35 VDC for 4 to 20 mA or 0 to 5 VDC Outputs
15 to 35 VDC for 0 to 10 VDC Output
12 to 28 VAC for 0 to 5 VDC Output*
15 VAC to 28 VAC for 0 to 10 VDC Output*
Note: 15 to 24 VDC recommended for VDC unit.

POWER CONSUMPTION:
60 mA max. DC: 4 to 20 mA or 0 to 5 VDC Outputs
10 mA max. DC: 0 to 10 VDC Output
1.44 VA max. AC: 0 to 5 VDC Outputs
0.2 VA max. AC: 0 to 10 VDC Output

RH/TEMP SENSOR CONSTRUCTION:
Communicating Integrated Circuit
Humidity: Capacitive Polymer: ±2%RH @ 25°C, 20 to 80%RH
Temperature: Semi-conductor Band Gap: ±0.3°C @ 20 to 40°C

OPTIONAL DIRECT TEMP. SENSOR:
Multiple options available, see sensor specifications section

MOUNTING:
50mm x 100mm Junction-box or surface mount (screws provided)

ENVIRONMENTAL OPERATION RANGE:
Temperature: 0 to 50°C
Humidity: 0 to 95%, non-condensing

WIRING:
2 to 5 pair of 16 to 22 AWG**

MATERIAL & RATING:
ABS Plastic
*AC power requires a separate pair of shielded wires

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

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/HQPC2-7C-16M-X-60CG-B	Temp: 10K-2 Thermistor, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: N/A, Override	£318.40
BA/HQPC2-7C-16M-X-60CG-C	Temp: 10K-3 Thermistor, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: N/A, Override	£318.40
BA/HQPC2-7C-16M-X-60CG-V	Temp: 10K-4 Thermistor, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: N/A, Override	£318.40
BA/HQPC2-6C-16M-25C10CG-60CG-X	Temp: 0-10V 10 to 32°C, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: N/A, Override	£344.00
BA/HQPC2-8M-16M-25C10CG-60CG-B	Temp: 10K-2 Thermistor, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: 0-10V Pushbutton Setpoint 0 to 100%RH, Override	£358.40
BA/HQPC2-8M-16M-25C10CG-60CG-C	Temp: 10K-3 Thermistor, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: 0-10V Pushbutton Setpoint 0 to 100%RH, Override	£358.40
BA/HQPC2-8M-16M-25C10CG-60CG-V	Temp: 10K-4 Thermistor, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: 0-10V Pushbutton Setpoint 0 to 100%RH, Override	£358.40
BA/HQPC2-6C-16M-25C10CG-47M10CG-61CG-X	Temp: 0-10V 10 to 32°C, Temp Setpoint: 0-10V Pushbutton Setpoint 10 to 32°C Humidity: ±2%RH 20-80% 0-10V, Humidity Setpoint: 0-10V Pushbutton Setpoint 0 to 100%RH, Override	£384.00

Additional sensor options available, please contact us for more information.

OUTSIDE AIR TEMPERATURE AND HUMIDITY SENSOR

BAPI-Box 2

- 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.

ANOTHER ORIGINAL

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: Multiple options available, see sensor specifications section

ENCLOSURE RATING:
IP66

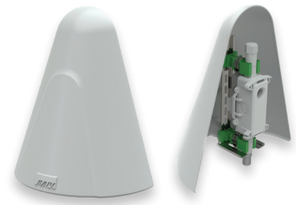
ENCLOSURE MATERIAL:
UV-resistant Polycarbonate

ENVIRONMENTAL OPERATION RANGE:
Temp: -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 blocks the solar heat gain, improving the accuracy of the sensor.



See page 56 to learn more.

ORDERING

Humidity Only

PART NUMBER:	DESCRIPTION:	PRICE:
BA/H200-O-BB2	4-20mA or 0-5V, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£201.60
BA/H210-O-BB2	0-10V, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£201.60

Temperature and Humidity Combination

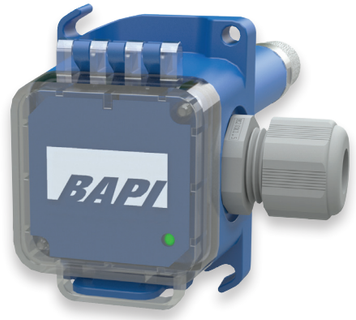
PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-H200-O-BB2	4-20mA or 0-5V, 10K-2 Thermistor, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£216.00
BA/10K-3-H200-O-BB2	4-20mA or 0-5V, 10K-3 Thermistor, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£216.00
BA/10K-4-H200-O-BB2	4-20mA or 0-5V, 10K-4 Thermistor, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£216.00
BA/10K-2-H210-O-BB2	0-10V, 10K-2 Thermistor, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£216.00
BA/10K-3-H210-O-BB2	0-10V, 10K-3 Thermistor, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£216.00
BA/10K-4-H210-O-BB2	0-10V, 10K-4 Thermistor, BAPI-Box 2 Enclosure with Stainless Steel Filter, 10-90%RH	£216.00

Additional sensor options available, please contact us for more information.

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 one of the most watertight enclosures available today. The BAPI-Box Crossover (BBX) enclosure is made of UV-resistant polycarbonate.

ANOTHER ORIGINAL

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: Multiple options available, see sensor specifications section

ENCLOSURE MATERIAL:

UV-resistant. polycarbonate

ENVIRONMENTAL OPERATION RANGE:

Temp: -40 to 70°C
Humidity: 0% to 100% RH
Fully Temperature Compensated

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 55 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

Humidity Only

PART NUMBER:	DESCRIPTION:	PRICE:
BA/H200-D-BBX	4-20mA or 0-5V, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£192.00
BA/H210-D-BBX	0-10V, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£192.00

Temperature and Humidity Combination

PART NUMBER:	DESCRIPTION:	PRICE:
BA/10K-2-H200-D-BBX	4-20mA or 0-5V, 10K-2 Thermistor, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£206.40
BA/10K-3-H200-D-BBX	4-20mA or 0-5V, 10K-3 Thermistor, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£206.40
BA/10K-4-H200-D-BBX	4-20mA or 0-5V, 10K-4 Thermistor, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£206.40
BA/10K-2-H210-D-BBX	0-10V, 10K-2 Thermistor, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£206.40
BA/10K-3-H210-D-BBX	0-10V, 10K-3 Thermistor, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£206.40
BA/10K-4-H210-D-BBX	0-10V, 10K-4 Thermistor, BAPI-Box Crossover Enclosure with Stainless Steel Filter, 10-90%RH	£206.40

Additional sensor options available, please contact us for more information.

PRESSURE

EZ PRESSURE SENSOR

Standard and Low Ranges

- 10 pressure ranges & 3 output options — all field selectable
- Standard or low range units
- 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 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

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 1KΩ minimum

STABILITY:
±0.25% F.S. per year

ENVIRONMENTAL OPERATION RANGE:
-10 to 60°C

STORAGE TEMPERATURE:
-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:
6mm tubing (3mm to 4mm I.D.)

ENCLOSURE MATERIAL:
ABS Plastic

MOUNTING:
DIN Rail or Surface Mount

ACCURACY FOR STANDARD PRESSURE RANGES AT 22°C:
±0.25% of range

ACCURACY FOR LOW PRESSURE RANGES AT 22°C:
±0.5% of range for the three lowest unidirectional and bidirectional ranges
±0.25% of range all other ranges

TEMPERATURE ERROR FOR STANDARD RANGES:
0.02% Full Span/°C (±1250 Pascals @ -10 to 60°C)

TEMPERATURE ERROR FOR LOW RANGES:
0.07% Full Span/°C (±250 Pascals. @ -10 to 60°C)

*BAPI recommends that you do not run wiring for room units 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.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-LR-EZ-ST-PA	Low Range, -250 to 250Pa with Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00
ZPS-SR-EZ-ST-PA	Standard Range, -1250 to 1250Pa with Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00

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, direction, 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".

ANOTHER ORIGINAL

5 YEAR WARRANTY

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 10KΩ minimum

STABILITY:
±0.25% Full Scale per year

ENVIRONMENTAL OPERATION RANGE:
-20 to 60°C

STORAGE TEMPERATURE:
-40 to 95°C

OVERPRESSURE:
Proof: 75 KPa, Burst: 128 KPa

HUMIDITY:
0 to 95% RH, non-condensing

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

PORT SIZE:
6mm tubing (3mm to 4mm I.D.)

ENCLOSURE MATERIAL:
UV-resistant Polycarbonate

ACCURACY FOR STANDARD PRESSURE RANGES AT 22°C:
±0.25% of range

ACCURACY FOR LOW PRESSURE RANGES AT 22°C:
±0.5% of range for the three lowest unidirectional and bidirectional ranges
±0.25% of range all other ranges

ACCURACY FOR HIGH PRESSURE RANGES AT 22°C:
±0.25% on all ranges

TEMPERATURE ERROR LOW RANGE:
0.07% Full Scale/°C (±250 Pascals @ -20 to 60°C)

TEMPERATURE ERROR STANDARD RANGE:
0.02% Full Scale/°C (±1250 Pascals @ -20 to 60°C)

TEMPERATURE ERROR HIGH RANGE:
0.025% Full Scale/°C (0 to 7500 Pascals @ -20 to 60°C)

*BAPI recommends that you do not run wiring for room units 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.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/ZPM-LR-ST-D	Low Range, -250 to 250Pa with Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-LR-AT-D	Low Range, -250 to 250Pa with Attached Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-SR-ST-D	Standard Range, -1250 to 1250Pa with Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-SR-AT-D	Standard Range, -1250 to 1250Pa with Attached Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-HR-ST-D	High Range, 0 to 7400Pa with Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-HR-AT-D	High Range, 0 to 7400Pa with Attached Static Pressure Tube, Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-LR-ST-ND	Low Range, -250 to 250Pa with Static Pressure Tube, No Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-SR-ST-ND	Standard Range, -1250 to 1250Pa with Static Pressure Tube, No Display, Field Selectable Ranges and Outputs	£256.00
BA/ZPM-HR-ST-ND	High Range, 0 to 7400Pa with Static Pressure Tube, No Display, Field Selectable Ranges and Outputs	£256.00

BECK ADJUSTABLE PRESSURE SWITCH

Pressure Switch

- Field adjustable
- Designed for monitoring overpressure, vaccum, and differential pressure
- Tubing and two total tubes included

The Beck Adjustable Pressure Switch is designed for monitoring overpressure, vacuum and differential pressure of air or other non-combustible, non-aggressive gases. A field-adjustable dial allows you to select any trip value within each pressure range. Tubing and two total tubes included.

Possible Applications:

- Monitoring air filters and fan status
- Monitoring industrial cooling-air circuits
- Monitoring flows in ventilation ducts
- Used as an air flow proving switch for heater control and frost prevention circuits

5 YEAR WARRANTY

SPECIFICATIONS

BURST PRESSURE:
40" WC (10 kPa) for all pressure ranges

MEDIUM:
Air, non-combustible and non-aggressive gases

OPERATING TEMPERATURE:
-4° to +185°F (-20 to +85°C)

STORAGE TEMPERATURE:
-40°F to +185°F (-40 to +85°C)

ACCURACY:
Deviation: ≤±15%, min. ±0.04" WC (±10 Pa) • Drift: ≤±15%

DIAPHRAGM MATERIAL:
Silicone, tempered at 392°F (200°C), free of gas emissions.

PRESSURE CONNECTIONS:
2 plastic pipe connection pieces, external dia. 0.24" (6mm)
Marked "+" to higher pressure, marked "-" to lower pressure

BODY AND COVER MATERIAL:
UV-resistant plastic

MECHANICAL WORKING LIFE:
Over 1,000,000 switching operations.

ELECTRICAL RATING:
0.4A Inductive, 250 VAC • 1.5A Resistive, 250 VAC
0.8A Inductive, 125 VAC • 3.0A Resistive, 125 VAC
0.4A, 30VDC • 0.1A, 24 VDC

ELECTRICAL CONNECTIONS
1/4" Spade Plug (AMP flat plug), 0.25" x 0.03" (6.3 x 0.8mm) in accordance with DIN 46244 or push-on screw terminals included.

PROTECTION CATEGORY:
IP54 with cover (protection against dust and splashing water)

CE CONFORMITY:
Each depending on technical specification
Low Voltage Directive 2006/95/EC
RoHS Directive 2011/65/EC
ANSI UL508
CSA

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/APSW1	Presssure Range: 20 to 300 Pa; Repeatability: ±5% / min. ±5 Pa	£20.00
BA/APSW2	Pressure Range: 50 to 500 Pa; Repeatability: ±2.5% / min. ±5 Pa	£20.00
BA/APSW3	Pressure Range: 200 to 1000 Pa; Repeatability: ±1% / min. ±5 Pa	£20.00

DIFFERENTIAL PRESSURE SWITCH

Pressure Switch

- Easy to access field adjustable setpoint from 30 to 8800 Pascals
- Approved 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 approved 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 30 to 8800 Pascals, and the unit can measure positive pressure, vacuum or true differential pressure. The seven pressure ranges are field selectable by changing a colour-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.

ANOTHER ORIGINAL

5 YEAR WARRANTY

SPECIFICATIONS

MEASUREMENT MEDIA:
Air, Combustion Gases

OPERATING TEMPERATURE:
-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:
24,900 Pascals

PRESSURE PORTS:
6.5mm Barbed Fittings

SWITCH TYPE:
SPDT (Silver Contacts)

REPEATABILITY:
<10% of Setting

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-SW1	Differential Pressure Switch 30 Pascals to 130 Pascals	£67.20

ZONE PRESSURE PICKUP PORTS

Pressure Ports

- Economical and easy to install
- Includes 80 micron filter
- Accommodates 3mm to 4mm I.D. tubing

Room pressure pickup ports are available as a Wall Plate or a BAPI-Stat "Quantum" enclosure. 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 19mm 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 22mm dot on the wall.

5 YEAR WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:

Wall & Ceiling Plates:
Temperature: 0 to 50°C
Humidity: 0% to 95% RH, non-condensing
Low Profile Port:
Temperature: -40 to 85°C
Humidity: 0% to 100% RH, non-condensing

MATERIAL:

Wall & Ceiling Plates:
Stainless Steel
Low Profile Port:
ABS Plastic

ORDERING

BAPI-Stat Quantum with Static Pickup

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC04	Zone Pressure Pickup Port: BAPI-Stat Quantum with Static Pickup	£12.00

Ceiling Mount Square Cover with Static Pickup

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC05	Zone Pressure Pickup Port: Ceiling Mount Square Cover with Static Pickup	£12.00

Low Profile Pickup Port

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC20	Zone Pressure Pickup Port: Low Profile Pickup Port	£24.00

OUTSIDE AIR PRESSURE PICKUP PORT

Pressure Ports

- Rooftop, wall and vertical mount
- Helps stabilise 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 stabilise 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

5 YEAR WARRANTY

SPECIFICATIONS

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 100°C
Humidity: 0% to 100% RH, condensing

MATERIAL:
UV-resistant plastic

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

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC10	Zone Pressure Pickup Port: Outside Air Pressure Pickup Port	£36.00

ZONE PRESSURE PROBES & ACCESSORIES

Pressure Ports

The Static Pressure Probe and Total Pressure Probe Assemblies connect to the BAPI Zone Pressure Sensor to provide duct static pressure or duct air velocity. The angled total probe faces into the airflow to sense the moving air's total pressure while the static probe senses static pressure.

Both probe assemblies include a tube and rubber hose with built in surge damper to smooth out variations in airflow for a more stable reading. The Static Pressure Probe is available individually while the Pitot Pressure Probe Assemby includes the total probe and the static probe assemblies.

5 YEAR WARRANTY

ORDERING

Static Pressure Probe

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC07	Static Pressure Probe Assembly, 150mm long	£22.40

Aluminum Static Tube Only (150mm) with Circular Foam

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC08	Aluminum Static Tube Only (150mm) w/ Circular Foam	£10.40

Rubber Hoses with Surge Damper

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC09	Rubber Hoses w/ Surge Damper (includes a bulk head fitting)	£12.00

Pitot Pressure Probe Assembly 89mm

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC11	Pitot Pressure Probe Assembly, 89mm long (includes the Static & Total Probe Assemblies)	£57.60

Pitot Pressure Probe Assembly 150mm

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC12	Pitot Pressure Probe Assembly, 150mm long (includes the Static & Total Probe Assemblies)	£57.60

Pitot Pressure Probe Assembly 150mm

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC13	Total Tube Only (89mm) with Circular Foam (doesn't include hoses & damper)	£11.20

Pitot Pressure Probe Assembly 150mm

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC14	Total Tube Only (150mm) with Circular Foam (doesn't include hoses & damper)	£11.20

Surge Damper

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC15	Surge Damper Only, 5 micron	£6.40

Static Tube with Circular Foam

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC17	Static Tube Only (12mm) with Circular Foam (doesn't include hoses & damper)	£8.40

2 Static Pressure Tube Assemblies

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC18	2 Static Pressure Tube Assemblies, 150mm Long	£44.80

Stainless Steel Static Tube Only 150mm

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC21	Stainless Steel Static Tube Only (150mm) with Circular Foam and Mounting Screws (doesn't include hoses & damper)	£24.00

Static Tube Only, Zero Length

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-ACC22	Static Tube Only, Zero Length, with Circular Foam and Mounting Screws	£6.00

SILICONE RUBBER TUBING

Air Quality Sensor

Made from a material that's used for green house glazing, this synthetic rubber tubing maintains its flexibility and resiliency over time.

SPECIFICATIONS

DIAMETER:
Internal: 3.2mm
External: 6.4mm

BEND RADIUS:
6.4mm

HARDNESS:
50 durometer

TENSILE STRENGTH:
1100 psi

APPLICATION TEMPERATURE:
-70 to 200°C

MATERIAL:
Silicone Rubber

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
ZPS-SIL-250-125-50	Silicone Rubber Tubing for Pressure Sensing, 15m long	£58.80

AIR QUALITY

BAPI-STAT QUANTUM CO_2 ROOM SENSOR

Air Quality Sensor

- Automatic barometric pressure and temperature compensation
- Can be fitted in any weather or altitude and is always accurate
- Local LED indication

The BAPI-Stat "Quantum" CO_2 Sensor is an accurate and reliable way of incorporating demand controlled ventilation into a building's HVAC strategy. It measures the CO_2 in ranges of 0 to 2,000 ppm with a field selectable output of 0 to 5 or 0 to 10 VDC.

The Dual Channel (DCD) "24/7" unit has been optimised for continuously occupied areas and features a three-point calibration process for enhanced stability, accuracy and reliability.

ANOTHER ORIGINAL

5 YEAR WARRANTY

AIR QUALITY

SPECIFICATIONS

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

SENSING ELEMENTS:
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:
0 to 50°C
0 to 95%RH non-condensing

ENCLOSURE MATERIAL:
ABS Plastic

CO_2 DETECTION RANGE:
0 to 2,000 PPM

START UP TIME:
Less than 2 minutes

RESPONSE TIME:
Less than 2 minutes for 90% step change typical (after start-up)

MOUNTING:
50mm x 100mm Junction-box or surface mount (screws provided)

CO_2 DRIFT STABILITY (DCD "24/7" Units):
<5% of full scale over life of product

CO_2 ACCURACY (DCD Units):
75ppm or 10% of reading (whichever is greater)

LED CO_2 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 unauthorised adjustment.

See page 54 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/AQX-D	BAPI-Stat Quantum Dual Channel CO_2, 0-10V, 0-2000ppm, LED Indication	£364.00

BAPI-STAT QUANTUM PRIME CO_2 ROOM SENSOR

Air Quality Sensor

- Automatic barometric pressure and temperature compensation
- Optional temperature, setpoint override and humidity
- Can be fitted in any weather or altitude and is always accurate

The BAPI CO_2 Sensor is an accurate and reliable way of incorporating demand controlled ventilation into a building's HVAC strategy. It measures the CO_2 in a range of 0 to 2,000 ppm with a field selectable output of 0 to 5 or 0 to 10 VDC.

The Dual Channel (DCD) "24/7" unit has been optimised for continuously occupied areas and features a three-point calibration process for enhanced stability, accuracy and reliability.

ANOTHER ORIGINAL

5 YEAR WARRANTY

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

TEMPERATURE SENSOR:
Multiple options available, see sensor specifications

ENVIRONMENTAL OPERATING RANGE:
0 to 50°C
0 to 95%RH non-condensing

MATERIAL:
ABS Plastic

CO_2 DETECTION RANGE:
0 to 2,000 ppm

START UP TIME:
Less than 2 minutes

RESPONSE TIME:
Less than 2 minutes for 90% step change typical (after start-up)

CO_2 DRIFT STABILITY (DCD "24/7" Units):
<5% of full scale over life of product

CO_2 ACCURACY (DCD Units):
75ppm or 10% of reading (whichever is greater)

MOUNTING:
50mm x 100mm Junction-box or surface mount (screws provided)

LED CO_2 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

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/AQPC-D-B-B-1-C10-J	Display, Dual Channel CO_2 0-10V, 0-2,000ppm, 10K-2 Thermistor, ±2%RH 0-100% 0-10V, Temp Slider Setpoint 0-10V, 10 to 32°C, Override	£519.20
BA/AQPC-D-C-B-1-C10-J	Display, Dual Channel CO_2 0-10V, 0-2,000ppm, 10K-3 Thermistor, ±2%RH 0-100% 0-10V, Temp Slider Setpoint 0-10V, 10 to 32°C, Override	£519.20
BA/AQPC-D-V-B-1-C10-J	Display, Dual Channel CO_2 0-10V, 0-2,000ppm, 10K-4 Thermistor, ±2%RH 0-100% 0-10V, Temp Slider Setpoint 0-10V, 10 to 32°C, Override	£519.20
BA/AQPX-D-B-B-X-XX-X	No Display, Dual Channel CO_2 0-10V, 0-2,000ppm, 10K-2 Thermistor, ±2%RH 0-100% 0-10V	£482.40
BA/AQPX-D-C-B-X-XX-X	No Display, Dual Channel CO_2 0-10V, 0-2,000ppm, 10K-3 Thermistor, ±2%RH 0-100% 0-10V	£482.40
BA/AQPX-D-V-B-X-XX-X	No Display, Dual Channel CO_2 0-10V, 0-2,000ppm, 10K-4 Thermistor, ±2%RH 0-100% 0-10V	£482.40

Additional sensor options available. Contact us for more information.

CO_2 DUCT AND HARSH ENVIRONMENT SENSOR

Air Quality Sensor

- Automatic barometric pressure and temperature compensation
- Can be fitted in any weather or altitude and is always accurate
- Models for periodically unoccupied or continuously occupied areas

The BAPI CO_2 Duct Sensor is an accurate and reliable way of incorporating demand controlled ventilation. It measures CO_2 in ranges of 0 to 2,000 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 Harsh Environment 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 CO_2 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.

ANOTHER ORIGINAL

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:
0 to 50°C
0 to 95%RH non-condensing

ENCLOSURE MATERIAL:
Polycarbonate

CO_2 DETECTION PPM RANGE:
0 to 2,000 PPM

START UP TIME:
Less than 2 minutes

RESPONSE TIME:
Less than 2 minutes for 90% step change typical (after start-up)

CO_2 DRIFT STABILITY (DCD "24/7" Units):
<5% of full scale over life of product

CO_2 ACCURACY (DCD Units):
75ppm or 10% of reading (whichever is greater)

LED CO_2 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

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/DCD10-D-BB	Duct Dual Channel 24/7 for Continuously Occupied Areas CO_2 Sensor with Aspiration Tube, 0-10V, 0 to 2,000ppm, BAPI-Box	£400.00
BA/DCD10-V-BB	Harsh Environment Dual Channel 24/7 for Continuously Occupied Areas CO_2 Sensor with Ventilated BAPI-Box, 0-10V, 0 to 2,000ppm	£464.00

Why use VOC ventilation instead of CO_2?

What is VOC and how is it measured?

VOCs or Volatile Organic Compounds, evaporate from substances, such as cleaning products, adhesives, paints, new carpets, copiers and printers to building materials and furnishings. VOCs are also emitted from humans and animals in their breath, sweat and directly from their skin.

BAPI's VOC sensor offers the best of both worlds. It allows for ventilation based on occupancy equivalent to a CO_2 sensor as well as air contaminants. The BAPI unit does this because it has been optimised for demand controlled ventilation. Using a calibration algorithm, the sensor value is converted to an output with a high correlation to a CO_2 level. This lets you use ASHRAE's more popular and straight forward occupancy-based VRP (Ventilation Rate Procedure) schedule.

VOCs are known to cause eye, nose and throat irritations, headache, drowsiness, dizziness, nausea, difficulty concentrating and fatigue; all summarised under the term SBS (Sick Building Syndrome). The importance of detecting the presence of VOCs in indoor air goes beyond these immediate health concerns. People judge the quality of the air not just by how it feels (temperature and humidity), but also by how it smells. If your building solely relies on a CO_2 sensor you are not achieving true air quality.

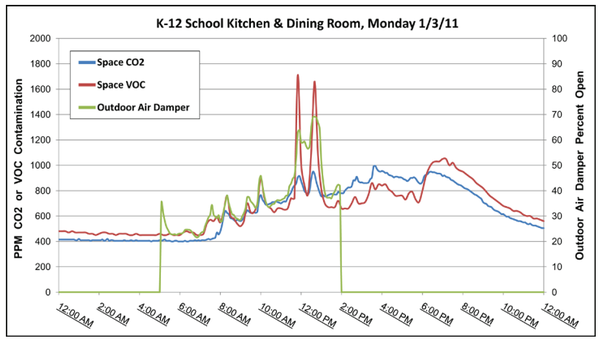
Case Study:

This research was taken in a kitchen and dining area of a public school in Wisconsin. This is a multi-purpose area with breakfast, lunch, and after school studies in the day, and athletic practices, exercise classes and meetings in the evenings.

The open percentage of the outdoor air damper is controlled by the VOC sensor output through a PID control loop from 5am to 2pm when the space is considered "occupied". The outside air damper is closed during the unoccupied period, and ventilation is accomplished by diffusion from the adjacent hallways. At 7am, the VOC sensor picks up the breakfast cooking aromas and activities. The CO_2 sensor climbs a shortly after as the students arrive to eat. The VOC sensor has slightly higher readings than the CO_2 sensor during breakfast and the morning breaks because the VOCs from the food are added to the VOCs generated by the people. This is also seen at lunch time when the food is being cooking and generates lots of VOCs which are added to the VOCs from the students and staff. The BAPI sensor will allow these additional VOCs to be ventilated away while the CO_2 sensor will not.

At 2:30pm, students arrive for "After School Studies" so the VOCs and CO_2 rise a little during this period. There is a community meeting at 6pm. Notice how the VOCs track slightly below the CO_2 during the "After School Study" period when it is mostly kids in the room. Then the VOCs track slightly above the CO_2 during the community meeting period when it is mostly adults in the room. This is because adults use more perfumes and colognes than kids, and therefore generate more VOCs.

Whether it's kids or adults in the room, and whether they're studying or eating, the chart proves that the VOC sensor output directly correlates to occupancy in the room and can easily be set up for Demand Controlled Ventilation.



To read the complete study visit www.bapihvac.co.uk/resource-library

Contact us to learn how you can achieve true air quality

BAPI-STAT QUANTUM VOC ROOM SENSOR

Air Quality Sensor

- Achieves true indoor air quality, not just CO_2 dilution
- LEDs on the cover indicate VOC level
- 0 to 5 VDC or 0 to 10 VDC output

Humans respirate Volatile Organic Compounds (VOCs) as well as CO_2. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO_2 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 CO_2 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:
0 to 50°C
5 to 95%RH non-condensing

ENCLOSURE MATERIAL:
ABS Plastic

VOC DETECTION RANGE:
0 to 2,000 ppm CO2 Equivalent

START-UP TIME:
15 Minutes

RESPONSE TIME:
Less Than 2 Minutes (after Start-Up Time)

MOUNTING:
50mm x 100mm Junction-box or surface mount (screws provided)

LED VOC LEVEL INDICATOR:
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 unauthorised adjustment.

See page 54 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/BQX-B	BAPI-Stat Quantum VOC, 0-10V, 0-2000ppm, LED Indication	£340.00

BAPI-STAT QUANTUM PRIME VOC ROOM SENSOR

Air Quality Sensor

- Achieves true indoor air quality, not just CO_2 dilution
- LEDs on the cover indicate VOC level
- VOC alone or temperature and humidity combination

Humans respirate Volatile Organic Compounds (VOCs) as well as CO_2. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO_2 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" 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

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
Temp Sensor: Thermistor or RTD

MOUNTING:
50mm x 100mm Junction-box or surface mount (screws provided)

VOC DETECTION RANGE:
0 to 2,000 CO_2 PPM equivalent

START-UP TIME:
15 Minutes

RESPONSE TIME:
Less Than 2 Minutes

ENVIRONMENTAL OPERATION RANGE:
0 to 50°C
0 to 95% RH non-condensing

MATERIAL:
ABS Plastic

LED VOC LEVEL INDICATOR:
Good, Green < 1,000 PPM
Fair, Yellow = 1,000 to 1,500 PPM
Poor, Red > 1,500 PPM

ALSO AVAILABLE:

Thermistors & RTDs Ranging from 1K to 100K

BAPI offers a wide range of high quality thermistors and RTDs to ensure an accurate and reliable product for your application.

See page 59 to learn more.

Sealant Filled Connectors

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation.

See page 57 to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/BQPC-B-B-B-1-C10-J	Display, VOC 0-10V, 0-2,000ppm, 10K-2 Thermistor, ±2%RH 0-100% 0-10V, Temp Slider Setpoint 0-10V, 10 to 32°C, Override	£495.20
BA/BQPC-B-C-B-1-C10-J	Display, VOC 0-10V, 0-2,000ppm, 10K-3 Thermistor, ±2%RH 0-100% 0-10V, Temp Slider Setpoint 0-10V, 10 to 32°C, Override	£495.20
BA/BQPC-B-V-B-1-C10-J	Display, VOC 0-10V, 0-2,000ppm, 10K-4 Thermistor, ±2%RH 0-100% 0-10V, Temp Slider Setpoint 0-10V, 10 to 32°C, Override	£495.20
BA/BQPX-B-B-B-X-XX-X	No Display, VOC 0-10V, 0-2,000ppm, 10K-2 Thermistor, ±2%RH 0-100% 0-10V	£458.40
BA/BQPX-B-C-B-X-XX-X	No Display, VOC 0-10V, 0-2,000ppm, 10K-3 Thermistor, ±2%RH 0-100% 0-10V	£458.40
BA/BQPX-B-V-B-X-XX-X	No Display, VOC 0-10V, 0-2,000ppm, 10K-4 Thermistor, ±2%RH 0-100% 0-10V	£458.40

Additional sensor options available. Contact us for more information.

VOC DUCT & HARSH ENVIRONMENT 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 respirate Volatile Organic Compounds (VOCs) as well as CO_2. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO_2 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

SPECIFICATIONS

POWER:
12 to 24 VDC, 200 mA Peak
18 to 24 VAC, 12 VA Peak

ANALOG OUTPUTS:
0 to 5VDC or 0 to 10VDC, >10KΩ impedance

VOC SENSING ELEMENT:
Micro-machined Metal Oxide

VOC DETECTION RANGE:
0 to 2,000 ppm CO_2 Equivalent

START-UP TIME:
15 Minutes

RESPONSE TIME:
Less Than 2 Minutes

OPERATING ENVIRONMENT:
0 to 50°C
0 to 95%RH non-condensing

ENCLOSURE MATERIAL:
Polycarbonate

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.co.uk/resource-library to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/VOC10-D-BB	Duct VOC Sensor with Aspiration Tube, 0-5V, 0 to 2000ppm, IP66 BAPI-Box	£389.60
BA/VOC10-V-BB	Harsh Environment VOC Sensor with Ventilated BAPI-Box, 0-5V, 0 to 2000ppm	£444.00

CARBON MONOXIDE DUCT & HARSH ENVIRONMENT 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 even at low concentrations. The Duct unit samples duct air using an aspiration tube. The Harsh Environment unit features a ventilated BAPI-Box and is ideal for car parks, 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.

ANOTHER ORIGINAL

5 YEAR WARRANTY

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 = ±3% FS, 0 to 50°C
201 to 500 ppm = ±5% FS, 10 to 50°C

ENVIRONMENTAL OPERATION RANGE:
-10 to 50°C
5 to 95%RH Noncondensing

APPLICATION NOTE:

Gas Sensor Coverage Area and Mounting

Learn how to properly place and mount BAPI's air quality sensors to ensure good coverage and operation.

Visit www.bapihvac.co.uk/resource-library to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/CO-D-BB	Duct CO Sensor with Aspiration Tube, Field Selectable Outputs and Ranges, IP66 BAPI-Box	£665.60
BA/CO-V-BB	Harsh Environment CO Sensor with Ventilated BAPI-Blue Box, Field Selectable Outputs and Ranges	£720.00
BA/COS	Factory Calibrated Replacement CO Module	£200.00

CARBON MONOXIDE ROOM SENSOR

Air Quality Sensor

- 0 to 40 ppm CO Measurement Range
- 30 ppm CO Relay Trip Level with Audible Alarm
- Field Selectable 0 to 5V, 0 to 10V or 4 to 20 mA Output

The BAPI Carbon Monoxide Room Sensor features a BAPI-Stat 4 Style Enclosure with Green/Red Status LED. It has a 0 to 40 ppm CO measurement range with a 30 ppm relay/audible alarm trip level. The relay is field selectable for normally closed or normally open, and the CO output level is field selectable for 0 to 5V, 0 to 10V or 4 to 20mA.

The Green/Red LED indicates unit status of Normal, Alarm, Trouble/Service or Test. The side pushbutton places the unit into Test status to verify audible alarm and LED operation. The sensing element has a typical life of 7 years.

5 YEAR WARRANTY

SPECIFICATIONS

POWER SUPPLY:
24 VAC/VDC, 1.0 VA Max

AUDIBLE ALARM:
75 dB at 10 feet

RELAY OUTPUT:
Form "C", 0.1A , 30VDC, Jumper selectable for Normally Closed or Normally Open

CO MEASUREMENT RANGE:
0 to 40 ppm

RELAY/ALARM TRIP LEVEL:
30 ppm CO

JUMPER SELECTABLE ANALOG OUTPUT:
0 to 5VDC, 0 to 10VDC or 4 to 20mA

CO SENSOR TECHNOLOGY:
Electrochemical

OPERATING/STORAGE TEMPERATURE:
4.4 to 37.8°C; 15 to 95% RH

SENSOR LIFE:
7 years typical

RESPONSE TIME:
5 seconds typical

SENSOR OVERLOAD LEVEL:
5,000 ppm CO

LED BEHAVIOR:

Normal Status
Green LED illuminated, Red LED flashes every 30 seconds indicating that the alarm is powered

Alarm Status
Green LED extinguished, flashing Red LED and audible alarm

Trouble/Service Status
Green LED illuminated, Red LED flashes twice and horn "beeps" once every 30 seconds

Test Status
Green LED illuminated, one chirp, then Red LED flashes 4 to 5 times followed by 2 alarm signals

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/CO-B4	0 to 40ppm, Status LED, Audible Alarm, 4-20mA, 0-5V, 0-10V	£268.00

AIR QUALITY

NITROGEN DIOXIDE DUCT & HARSH ENVIRONMENT SENSOR

Air Quality Sensor

- Field replaceable electrochemical sensor
- Two independent alarm contacts
- Field selectable NO_2 ranges and outputs

BAPI's Nitrogen Dioxide Rough Service Sensor offers enhanced electrochemical sensing with outstanding accuracy even at low concentrations. The unit features a ventilated BAPI-Box and is ideal for car parks, equipment rooms and warehouses.

The sensor has field selectable NO_2 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 NO_2 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.

ANOTHER ORIGINAL

5 YEAR WARRANTY

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:
-10 to 50°C
5 to 95% RH Noncondensing

LIFETIME:
7 Years Typical

APPLICATION NOTE:

Gas Sensor Coverage Area and Mounting

Learn how to properly place and mount BAPI's air quality sensors to ensure proper coverage and operation.

Visit www.bapihvac.co.uk/resource-library to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/NO2-V-BB	Harsh Environment NO_2 Sensor with Ventilated BAPI-Blue Box, Field Selectable Outputs and Ranges	£936.00
BA/NO2-D-BB	Duct NO_2 Sensor with Aspiration Tube, Field Selectable Outputs and Ranges, IP66 BAPI-Box	£880.00
BA/NO2S	Factory Calibrated Replacement NO_2 Module	£456.00

CO_2 CALIBRATION KIT

Air Quality Sensor

CO_2 Sensor Calibration Kit

BAPI's CO2 Sensor Calibration Kit verifies the proper operation and calibrates all of BAPI's room and duct CO_2 sensors.

Two calibration gas concentrations are required to perform a complete calibration*. Purchase the single point gas at a CO_2 concentration of 400 to 800 PPM, and the span gas at 1,000 to 1,200 PPM. Only one regulator is required because it can be swapped between gas cylinders.

BAPI's CO_2 Sensor Calibration Kit consists of the following:

- A software CD containing the test software and cable drivers
- A communications cable that connects a computer to the BAPI CO_2 sensor
- A funnel used as a gas shroud
- A length of tubing to connect the funnel to the test gases
- Rubber bands to secure the funnel to the BAPI CO_2 sensor
- Shunt jumpers to place the BAPI CO_2 sensor into test mode

*Note: A single point gas may not be required. If the ambient CO2 concentration is known, stays stable at ±10 PPM for at least 10 minutes and is in the range of 350 to 800 PPM, you may perform the single point accuracy check and calibration without any test gas.

CO_2 Sensor Calibration Kit with Optional Case (shown with customer supplied gas cylinders)

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/CO2-KIT	CO_2 Sensor Calibration Kit	£124.00
BA/CO2-KIT-C	CO_2 Sensor Calibration Kit with Case	£480.00
BA/CO2-C	Empty Case with Foam Cutouts	£264.00

VOC CALIBRATION KIT

Air Quality Sensor

The VOC Sensor Verification Kit allows a known VOC sample to be generated and applied to a BAPI room or duct VOC sensor. The sample tests the dynamic range of the sensor to see if the sensor element is working correctly.

The kit consists of a plastic bottle and a 60mL syringe and a comprehensive set of instructions. The customer has to supply 70% minimum Isopropyl Alcohol.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/VOC-KIT	VOC Sensor Verification Kit	£14.40

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 or range. The data is then uploaded to the App when the phone or tablet is back in range.

ANOTHER ORIGINAL

5 YEAR WARRANTY

SPECIFICATIONS

POWER:	
3.7V, 2,000 mAh Rechargeable Battery	
PROBE ENVIRONMENTAL RANGE:	
Temperature Probe:	-40 to 85°C
Base Unit:	-30 to 70°C
%RH Probe:	5 to 95% Non-condensing
Differential Pressure Probe:	-20 to 70°C
PROBE MEASUREMENT RANGE:	
Temperature:	-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:	±0.3°C@25°C
%RH:	±2%RH@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	
DATA TRANSFER:	
Updates to display every 10 sec	
FCC ID:	
2AA9B04	

Blü-Test App

Blü-Test Temperature & Humidity Probe

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BT-TP	Blü-Test Temperature Probe, 100mm Probe Length, 6.5mm dia. with Piercing Tip	£480.00
BT-TA	Blü-Test Temperature Probe, 150mm Probe Length, 6.5mm dia. with Rounded Tip	£480.00
BT-TB	Blü-Test Temperature Probe, 240mm Probe Length, 6.5mm dia. with Rounded Tip	£480.00
BT-TH	Blü-Test Temperature & Humidity Probe, 200mm Probe Length, 9.5mm dia.	£540.00
BT-DPLR	Blü-Test Differential Pressure, Low Range	£640.00
BT-DPSR	Blü-Test Differential Pressure, Standard Range	£640.00

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 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 ±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 65°C 350 mA @ any output voltage
-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 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.co.uk/resource-library to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/VC350A-EZ-ADJ	Adjustable Voltage Converter, DIN Rail Mount, Self-Resetting Thermal Fuse with Operation and Fault LED indicators, Fixed or Adjustable Outputs, Overload Protection	£26.40

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.

5 YEAR WARRANTY

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 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.co.uk/resource-library to learn more.

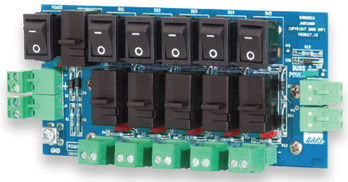
ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/VC2B-F	Backplate with Cartridge Fuse, Regulated and Adjustable Output 1.2V DC to 24V DC, Overload Protection	£96.00

POWER DISTRIBUTION MODULE

Accessories for HVAC/R

- 3 or 5 circuit power distribution
- 12 to 30V AC/DC operation
- Individual circuit power switches



The PDM - Power Distribution Module is a low voltage (12 to 30V AC/DC) power distribution module designed to take a single power source and distribute that power to multiple circuits. It comes in 3 or 5 circuit models which can be linked together to achieve multiple circuits with a minimum of panel space.

A common module On/Off switch and 10 amp breaker powers the distributed circuits. Each circuit has an individual On/Off switch and individual field connection terminals. The PDM has individual circuit protection with either a 3 amp fuse or 3 amp breaker with an individual power LED and fault LED per circuit.

5 YEAR WARRANTY

SPECIFICATIONS

SUPPLY VOLTAGE:
12 to 30V AC/DC 10 amps max

CIRCUIT DISTRIBUTION:
3 or 5 circuits

CIRCUIT PROTECTION:

Master Breaker	10 amp, push to reset
Individual Fused	3 amp, slow blow 20mm fuse
Individual Breaker	3 amp, push to reset

VISUAL INDICATORS:

Power	Green LED, master & individual
Fault	Red LED, master & individual

ON/OFF SWITCHING:

Master	Common rocker switch
Circuit	Individual rocker switch

CONNECTION:
Plug in terminal strip
Cage clamp, 28-12 AWG

MOUNTING:
70mm Snaptrack
Module to module close connection

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/PDM-5-B	Five Circuit Power Distribution Module, w/ Breaker	£291.20

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 energised or normally de-energised operation.

ANOTHER ORIGINAL

5 YEAR WARRANTY

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 1.6mm to 21mm
Remote:	Sensor w/ adjustable depth from 1.6mm to 13mm, Mounts to pan with industrial adhesive tape or 4mm mounting holes
Rope:	Long Line Wire Sensor, Plenum Rated. Detects 3.175mm 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

LATCHING AND SUPERVISED RELAY OPTIONS:

Latching:	Relay stays in alarm until manually reset or power is cycled
Non-Latching:	Relay automatically resets after water is removed (default)
Unsupervised:	Relay energises on water detection
Supervised:	Relay de-energises on water detection (default)

Note: Relay de-energises on loss of power

ENCLOSURE RATINGS:

Remote Sensor:	Submersible, with FEP plenum-rated, waterproof cable
Detector:	BAPI-Box, IP66 Polycarbonate Enclosure

AMBIENT:

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

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/LDT4-PS-BB	Transmitter with Two SPDT 5A Contacts, Probe Sensor Built into BAPI-Box	£139.20
BA/LDT4-RR25-BB	Transmitter with Two SPDT 5A Contacts, BAPI-Box, Remote Rope Sensor with 7.5m Cable	£452.00
BA/LDT4-RS25-BB	Transmitter with Two SPDT 5A Contacts, BAPI-Box, Remote Spot Sensor with 7.5m Cable	£158.40

BAPI-GUARD

Accessories for HVAC/R

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

The BAPI-Guard prevents tampering, physical damage and unauthorised 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.

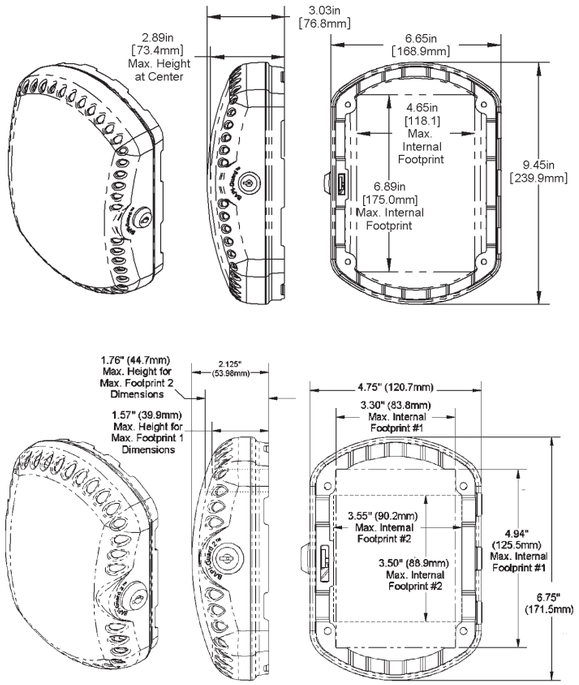
ANOTHER ORIGINAL

5 YEAR WARRANTY

SPECIFICATIONS

MATERIAL:
Polycarbonate

MATERIAL RATING:
UL 94, V-0



ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/BG	Large BAPI-Guard Thermostat Protector, Key Lock Proctected, Exceptional Airflow, Durable, Horizontal or Vertical Mounting	£36.00
BA/BG2	Small BAPI-Guard Thermostat Protector, Key Lock Proctected, Exceptional Airflow, Durable, Horizontal or Vertical Mounting	£28.00

OUTDOOR LIGHT LEVEL SENSOR

Accessories for HVAC/R

- Available with lux ranges
- Extremely sensitive, even in dim lighting (<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-inhibited polycarbonate enclosure with an IP66 rating. The light level range measures lux with a 0 to 10V output. Custom ranges are also available.

ANOTHER ORIGINAL

5 YEAR WARRANTY

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 ±10% of reading

ENVIRONMENTAL OPERATION RANGE:
Temperature: -40 to 85°C
Humidity: 0 to 100%, non-condensing

ENCLOSURE MATERIAL:
UV-Inhibited Polycarbonate

ENCLOSURE RATING:
IP66

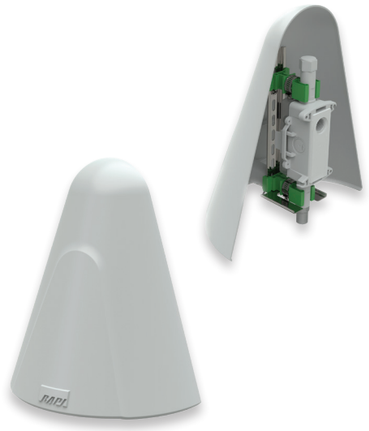
ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/LLV-10-LX[0 TO 2000]	Light Level Sensor with 0-10V output, 0 to 2,000 Lux Range	£220.00

WEATHER SHADE

Accessories for HVAC/R

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



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

The Weather Shade is constructed of UV-stabilised plastic to prevent yellowing. The material also has a high reflectivity rating (87%) and low emissivity rating (0.90) to minimise the radiant heat created from solar gain. Besides blocking 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

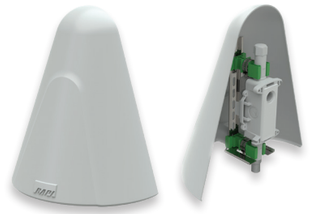
SHADE MATERIAL:
UV-stabilised Polycarbonate

SHADE MATERIAL RATINGS:
Reflectivity: 87%
Emissivity: 0.90

APPLICATION NOTE:

MINIMISING SOLAR HEAT GAIN

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



Visit www.bapihvac.co.uk/resource-library to learn more.

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/WSK	Weather Shade Improves the Accuracy of BAPI Outside Air Sensors by Blocking Radiant Heat	£120.00

FLEXIBLE PROBE BRACKET

Accessories

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 3mm, 6.5mm and 9.5mm.

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.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/FPB-50	Flexible Probe Bracket for Mounting Averaging Sensors Quckly, Eliminates Risk of Damaging the Probe, 50pcs	£125.60

ADAPTOR PLATES

Accessories

BAPI Adaptor Plates are designed to cover wall imperfections when installing wall sensors or thermostats. They are made in three different sizes and five different colors to match the sensor. The Adaptor Plates can be painted or wall papered in place if architecturally required.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/ADP-525-7-BW	Adaptor Plate 133mm x 178mm Bright White	£14.40
BA/ADP-53-53-BW	Adaptor Plate 134mm x 134mm Bright White	£14.40
BA/ADP-37-55-BW	Adaptor Plate 95mm x 140mm Bright White	£14.40
BA/ADP-37-55-BW-UK	Adaptor Plate Europe 60mm x 140mm Mount Bright White	£14.40
BA/ADP-37-55-WMW-UK	Adaptor Plate Europe 60mm x 140mm Mount Warm White	£14.40
BA/ADP-37-55-CPW-UK	Adaptor Plate Europe 60mm x 140mm Mount Copla White	£16.80

SEALANT FILLED CONNECTORS

Accessories

BAPI's Sealant Filled Connectors (SFC) contain a moisture-excluding sealant which encapsulates the electrical connection protecting it from moisture and oxidisation. This encapsulation also reduces the potential for fire, electrocution and flashover.

The SFC3000 accepts two wires of 19 to 26 AWG. It has a voltage rating of 50 volts with an operating temperature of -40 to 140°C, and it is compliant to RoHS 2011/65/EU.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/SFC3000-100	Crimp-On Style Sealant Filled Connectors, 20-27SWG, 100pcs	£16.00

BAPI-Box Crossover (BBX)

Termination Box

The BAPI-Box Crossover enclosure features a hinged cover with thumb latch for easy termination. Includes two wiring glands.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/BBX-RP-LTF	BAPI-Box Crossover Enclosure with Wiring Gland for Remote Probes and Concave Probes	£8.00

WIRING GLAND

Accessories

Wiring Glands are available for the open port in the BAPI-Box Crossover Enclosure. Includes the locknut.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/LTF-100	Wiring Gland, 100pcs	£125.00

RUBBER GROMMET

Accessories

Rubber Grommets are available for the open port in the BAPI-Box Crossover as well as the non-threaded ports in the BAPI-Box and BAPI-Box 2. The plugs will also work in panels with a metal thickness of 3mm or smaller.

The grommets are made of TPE (Thermoplastic Elastomer) and feature a pierceable center membrane for easy wire insertion. When used with the proper diameter cable, the plugs form an excellent cable seal after piercing.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/PKP-100	Rubber grommet for Enclosure Ports, 100pcs	£45.00

CLEAN-CUT TOOL

Accessories

The Clean-Cut hole cutter is designed to cut out the plastic plugs in the 13mm threaded ports of the BAPI-Box and BAPI-Box 2 polycarbonate enclosures.

A built-in stop prevents the tool from pushing through and possibly damaging sensitive electronics within the box, so there's no need to remove the items to drill the hole. The Stainless Steel construction keeps its edge and lasts for over 1,000 operations in both directions.

5 YEAR WARRANTY

ORDERING

PART NUMBER:	DESCRIPTION:	PRICE:
BA/CLN-CUT-50	Clean-Cut 13mm threaded knockout cutting tool for BAPI-Box and BAPI-Box2	£80.00

SPECIFICATIONS

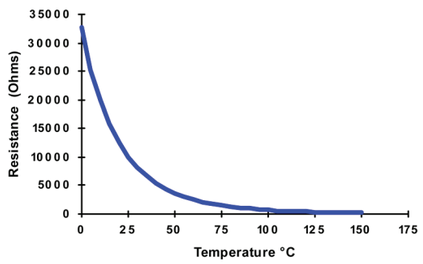
THERMISTOR OVERVIEW

Sensor Specifications

BAPI Thermistors are thermally sensitive resistors known for exhibiting a large change in resistance with only a small change in temperature. It is important to note that a thermistor's change in resistance is non-linear. It follows a pre-defined curve which is provided by the thermistor manufacturer. An example of a thermistor output curve can be seen in Figure 1.

Thermistors are manufactured to follow a specific curve with a high degree of accuracy. All BAPI thermistors have a standard accuracy of ± 0.2°C throughout the commercial temperature range of 0 to 70°C. BAPI also has available a higher accuracy sensor for meeting tougher specs. The extra precision [XP] line has an initial accuracy of ± 0.1°C throughout the commercial temperature range of 0 to 70°C. Please call for availability and pricing on [XP] line thermistors. Both accuracy levels allow BAPI thermistors to be interchanged without the extra expense of offsetting the controller.

Figure 1 - Typical Thermistor Output Curve 10K-2 Sensor



SPECIFICATIONS

Definition of Specification Terms

INTERCHANGEABILITY TOLERANCE (ACCURACY):
The maximum amount that thermistors following the same curve will differ from each other.

DISSIPATION CONSTANT:
The power needed to raise the thermistor's body temperature by 1°C. At the heart of all BAPI thermistor products is a sensor with a 2.7 mW/°C dissipation constant to ensure that selfheating stays at an absolute minimum.

STABILITY (DRIFT):
The amount that the resistance characteristics of a thermistor will change. BAPI uses only the highest quality, "pre-aged" thermistors with very small drift values. Over a ten year span, BAPI thermistors will not change more than 0.1°C.

OPERATING RANGE:
The operating range shown is for the thermistor only. The mounting package may further limit the operating range and is described on each mounting type specification. The thermal time constant will also be affected based on the added mass of the stainless steel probe and moisture protection encapsulation.

THERMAL TIME CONSTANT:
Bare sensors are typically measured and specified in still air and are timed at the statistical 63.2% of the step temperature change. A stirred liquid test will typically result in a much faster response time and is also timed at 63.2% of the step temperature change. The time constant is always the same whatever the temperature step change may be.

Thermistor Specifications

INTERCHANGEABILITY TOLERANCE (ACCURACY):
Standard Sensor: ± 0.2°C (0 to 70°C)
Wide Range Standard: ± 0.4°C (-55 to 150°C)

High Accuracy [XP] Sensor: ± 0.1°C (0 to 70°C)
Wide Range High Accuracy: ± 0.2°C (-55 to 150°C)

DISSIPATION CONSTANT:
2.7 mW/°C

STABILITY (DRIFT):
Less than 0.02°C / year

THERMAL TIME CONSTANT:
5 seconds (bead in still air)
.5 seconds (stirred liquid)

Sensor Type	Reference Resistance	Operating Range
1.8K	1.8 KΩ @ 25°C	-55 to 150°C
2.2K	2.2 KΩ @ 25°C	-55 to 150°C
3K**	3 KΩ @ 25°C	-55 to 150°C
3.3K	3.3 KΩ @ 25°C	-55 to 150°C
10K-2**	10 KΩ @ 25°C	-55 to 150°C
10K-3**	10 KΩ @ 25°C	-55 to 150°C
10K-3(11K)**	5.2 KΩ @ 25°C	-55 to 150°C
20K**	20 KΩ @ 25°C	-55 to 150°C
47K	47 KΩ @ 25°C	-55 to 150°C
50K	50 KΩ @ 25°C	-80 to 150°C
100K**	100 KΩ @ 25°C	-55 to 150°C

Other Thermistors are available. Contact BAPI for availability and specifications of additional thermistors.

**Available as an [XP] high accuracy sensor. Minimum quantities and long lead times may apply. 10K-2[XP] and 10K-3[XP] thermistors are typically stocked items

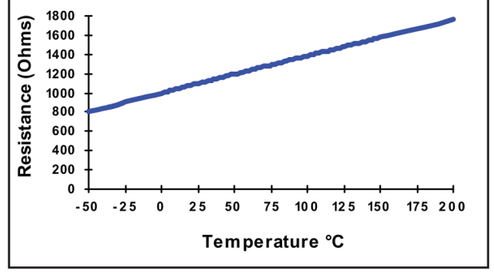
RTD OVERVIEW

Sensor Specifications

BAPI RTDs (Resistance Temperature Detectors) are thermally sensitive resistive elements that exhibit a small change in resistance per degree of temperature change. RTDs are especially recognised for excellent linearity throughout their temperature range with a high degree of accuracy and repeatability. An example of an RTD output curve can be seen in Figure 2.

RTDs supplied in BAPI products feature a standard interchangeability tolerance of ±0.3°C measured at 0°C. Higher accuracy sensors are also available. The Class A line [A] has an interchangeability tolerance of ± 0.15°C measured at 0°C. Please call for availability and pricing on Class A RTDs. Whether standard or Class A, BAPI RTDs have such a high accuracy that they can be interchanged without the expense of offsetting the controller. Most RTD sensing elements can be packaged to withstand an extremely broad temperature range (-200 to 600°C).

Figure 2 - Typical RTD Output Curve 1000 Ohm Sensor



SPECIFICATIONS

SPECIFICATIONS

Definition of Specification Terms

TOLERANCE OF RESISTANCE (ACCURACY):
The maximum amount any RTD will differ from the standard resistance curve.

STABILITY (DRIFT):
The amount that the resistance characteristics of a RTD will change over time under certain conditions.

OPERATING RANGE:
The operating range shown is for the RTD sensor only. The mounting package may further limit the operating range and is described on each mounting type specification.

For most purposes, the standard operating range should be sufficient, but we also have RTDs with a higher or lower operating temperature range. BAPI offers 1 kΩ Platinum RTDs with the ranges shown in the table at right.

RTD Specifications

TOLERANCE OF RESISTANCE (ACCURACY):

Single Point Standard:	0.12% at 0 °C
Single Point Class A:	0.06% at 0 °C
Averaging Standard:	0.2% at 0 °C

TOLERANCE IN °C:

Single Point Standard:	±(0.3 + 0.005T); T= Temp in °C
Single Point Class A:	±(0.15 + 0.002T); T= Temp in °C
Averaging Standard:	±(0.5 + 0.005(T-25)); T= Temp in °C

STABILITY (DRIFT):
0.14 °C with 6,000 continuous hours at 400°C

SENSITIVITY:
1KΩ: 3.85Ω/°C

SELF HEATING (1K RTD ONLY):
0.4°C/mW at 0°C

STANDARDIZATION:
DIN 43760-1980, IEC Pub 751-1983, JIS C1604-1989

Sensor Type	Reference Resistance	Temp. Coefficient	Operating Range
BA/1K[375]*	1 kΩ @ 0°C	3.75Ω/°C	-60 to 150°C
BA/1K[Ni]*	1 kΩ @21°C	5.68Ω/°C	-60 to 200°C
BA/1K*	1 kΩ @ 0°C	3.85Ω/°C	-60 to 150°C
BA/2K	2 kΩ @ 20°C	8Ω/°C	-60 to 150°C

*Available as an [A] high accuracy sensor.
Example: BA/1K[A]-I-2" (high accuracy immersion sensor)

STANDARD & EXTREME TEMP RANGES FOR THE 1KΩ PLATINUM RTD

Range	°C
Standard	-60 to 150
Low Temp [1]	-200 to 0
High Temp [2]	100 to 210
Very High Temp [3]	200 to 600

TEMPERATURE TRANSMITTER OVERVIEW

Sensor Specifications

BAPI temperature transmitters incorporate a 10KΩ thermistor or a 1KΩ RTD and a transducer. These devices provide an accurate two-wire, 4 to 20mA output over a specified range. They are specifically designed for temperature sensing and transmission over long distances without degradation of the 4 to 20mA signal. The thermistor transmitter also comes in a 0 to 5 VDC or 0 to 10 VDC output. The thermistor transmitter is microprocessor based and does not allow or require field calibration. The thermistor transmitter is first programmed for the specified range, and after connecting to the transducer, the output is verified at one temperature.

The RTD transmitters are first calibrated with simulated RTD resistances for the specified range. Then an RTD is connected to the transmitter and the output is verified at one temperature. RTD transmitters have non-interacting zero and span potentiometers that are used for factory adjustments.

BAPI offers a variety of standard and custom transmitter ranges Additionally, BAPI can provide matched 1K RTD-based units. Matched units utilise the tight tolerance of Class A RTDs to improve overall accuracy. The matched unit is tested in an environmental chamber against a certified, traceable reference thermometer. Each matched pair is provided with a "Certificate of Calibration" which lists the tested and calculated offset values, and identifies the equipment, products and people involved in the calibration process. The overall accuracy of the matched pair now becomes a function of the transmitter linearity, RTD linearity and reference thermometer uncertainty.

Matched errors are

$\pm((\text{Span} * \text{Linearity Error}) + (\text{Reference Thermometer uncertainty})$
Where Linearity Error = $\text{Square Root}((\text{Transmitter Linearity})^2 + (\text{RTD Linearity})^2) = \text{Square Root}((0.125\%)^2 + (0.2\%)^2) = 0.234\%$

These accuracies are for the entire range of the sensor, although the accuracies in the midband of the sensor will be tighter than those near the endpoints of the specified range. Other matching and/or certification options may be available, please contact your BAPI representative for details.

BAPI temperature transmitters come in a robust package for all non-room configurations where moisture or condensation may be a problem. Due to the extremely low moisture absorption properties of the potting material, our transmitters will remain operational even if temporarily immersed in water.

TRANSMITTER SPECIFICATIONS

SENSOR:
10KΩ Thermistor

OUTPUT:
4 to 20 mA, 0 to 5 V, or 0 to 10 V

SUPPLY VOLTAGE:
10 to 35 VDC (0-5 VDC or 4-20 mA Outputs)
15 to 35 VDC (0-10 VDC Output)
12 to 24 VAC (0-5 VDC Outputs)
15 to 24 VAC (0-10 VDC Output)

MAXIMUM LOOP RESISTANCE:
700Ω at 24 VDC (4 to 20 mA Output)

IMPEDANCE:
>10K ohms (Voltage Output)

CALIBRATION RANGE:
-40 to 85°C (-40 to 185°F)

ACCURACY:
±1.015°C (0 to 65°C)

LINEARITY:
±0.065°C (0 to 65°C)

TEMPERATURE RESOLUTION:
Span/1024

OPERATING TEMPERATURE:

Transmitter:	0 to 70°C
Sensor:	-65 to 105°C (standard)
	-40 to 155°C (available)

SENSOR:
1KΩ Platinum RTD

SUPPLY VOLTAGE:
7 to 40 VDC

OUTPUT:
4 to 20 mA

MAXIMUM LOOP RESISTANCE:
850Ω at 24VDC

SPAN:
Min 16.6°C (30°F), Max 555°C (1000°F)

ZERO:
Min -100°C (-148°F), Max 482°C (900°F)

FIELD ADJUSTMENTS:
(Unit is factory calibrated, field adjustment will void calibration warranty)

ZERO:
+/- 10% • Span: +/- 10%

ACCURACY:
±0.065% of Span (8 & 16mA outputs)

LINEARITY:
±0.125% of Span

OPERATIONAL HUMIDITY:
0 to 95%, non-condensing
0 to 100%, condensing for short intervals

OUTPUT CURRENT LIMITS:
Less than 1mA and 22.35 ± 0.15 mA

POWER OUTPUT SHIFT:
±0.009% of Span 7 to 40VDC

CONNECTIONS:
Four 22-gauge etched Teflon leads or terminal blocks

OPERATING TEMPERATURE:

Transmitter:	-20 to 70°C
Sensor:	-65 to 105°C (standard)
	-200 to 600°C (available)

SPECIFICATIONS

HUMIDITY TRANSMITTER OVERVIEW

Sensor Specifications

BAPI humidity transmitters provide a high accuracy 4 to 20mA, 0 to 5V or 0 to 10V humidity measurement. Accuracies of 2% or 3% RH are available. Duct and outside air units come with a removeable sintered stainless steel filter. On duct and outside air units, the filter may be cleaned with warm, distilled water. These units are microprocessor based and do not require any field calibration.

For all non-room configurations, BAPI humidity transmitters come standard in a robust enclosure making them suitable for locations where moisture or condensation may be a problem. The potting material used to protect the transmitters has a high thermal conductivity to eliminate circuit overheating and a low thermal expansion to minimise the stress on the circuit components.

Due to the extremely low moisture absorption properties of the epoxy, our robust transmitter will remain operational even if temporarily immersed in water. Many tests and studies have been conducted on the sensor incorporated into these humidity transmitters to assure that they provide longterm accuracy and durability. For applications requiring even higher accuracy, however, certified units are available which have been tested and offset against an NIST traceable reference. Please call for details or with specific requirements.

TRANSMITTER SPECIFICATIONS

OUTPUT RANGES:
4 to 20 mA, 0 to 5 V, or 0 to 10 V

POWER:
10 to 35 VDC (0 to 5 VDC or 4 to 20 mA outputs)
15 to 35 VDC (0 to 10 VDC Output)
12 to 27 VAC (0 to 5 VDC Output)
15 to 27 VAC (0 to 10 VDC Output)

POWER CONSUMPTION:
22 mA max. DC (0 to 5 VDC or 4 to 20 mA Outputs)
6 mA max. DC (0 to 10 VDC Output)
0.53 VA max. AC (0 to 5 VDC or 4 to 20 mA Outputs)
0.14 VA max. AC (0 to 10 VDC Output)

SENSING ELEMENT:
Capacitive type humidity sensor

OPERATING RH RANGE:
0 to 100 %RH (non-condensing)

OPERATING TEMPERATURE RANGE:
Room: 0 to 70°C (32 to 158°F)
Duct & Outside: -20 to 70°C (-4 to 158°F)

ACCURACY RANGE:
from 10 to 90% RH at 25°C

RESPONSE TIME:
8 seconds in moving air for a 63% step

DRIFT:
<0.5%RH per year

PRESSURE SENSOR OVERVIEW

Sensor Specifications

The focal point of any sensor is the sensing element itself, and BAPI has gone to great lengths to produce one of the best sensors on the market today. The heart of every BAPI unit is a micromachined, single-crystal silicon, pressure sensor. Each sensor is fabricated using the same integrated circuit technology used to make millions of mobile phones, game machines and personal computers. To control and maintain the quality of these sensors, BAPI is involved in all phases of production from design to use.

Silicon does bring with it one undesired trait—thermal sensitivity. The traditional method of compensating for this thermal sensitivity is an external circuit with discreet resistors, some of which have their own temperature dependencies, introducing more error. BAPI uses a different, unique approach. We employ a custom compensation ASIC (Application Specific Integrated Circuit) that uses digital compensation while maintaining an analog signal path, producing a sensor that is precise and interchangeable. The result is a pressure sensor that offers the ultimate in high accuracy, while preserving the fast response and smooth output inherent to silicon sensors.

Because of the innovative sensor and digital temperature compensation circuit, we are able to produce a highly accurate and stable product. This accuracy is verified during final calibration at our factory using a pressure-controlled source accurate to 0.00015 inch of water and traceable to NIST standards.

SPECIFICATIONS

OUTPUT RANGES:
4 to 20 mA, 0 to 5 V or 0 to 10V

POWER:
7 to 45 VDC (4-20 mA output)
7 to 45 VDC or 7 to 32 VAC (0-5 VDC output)
13 to 45 VDC or 13 to 32 VAC (0-10 VDC output)

POWER CONSUMPTION:
4.9 mA max DC at 0-5 VDC or 0-10 VDC Output
0.12 VA max AC at 0-5 VDC or 0-10 VDC Output
20 mA max, DC only at 4-20 mA Output

PRESSURE RANGES:
Low Range Unidirectional
0 to 30, 0 to 50, 0 to 100, 0 to 175, 0 to 250
Low Range Bi-directional
±30, ±50, ±100, ±175, ±250
Standard Range Unidirectional
0 to 250, 0 to 300, 0 to 500, 0 to 1,000, 0 to 1,250
Standard Range Bi-directional
±250, ±300, ±500, ±1,000, ±1.250
High Range Unidirectional
0 to 1,250, 0 to 2,500, 0 to 4,000, 0 to 6,000, 0 to 7,400

ACCURACY AT 22.2°C:
Low Range
±0.5% of Pa ranges 0 to 30, 0 to 50, ±30 and ±50 Pa
±0.25% of range all other ranges
Standard and High Range
±0.25% of range

TEMPERATURE LIMITS:
Storage: -40°C to 95°C
Operational: 0°C to 95°C
Compensated: 10°C to 40°C

OPERATING RH RANGE:
0 to 95% non-condensing

MEDIA:
Non-Ionic, Non-Corrosive, Clean, Dry Gasses

NON-ROOM ENCLOSURES OVERVIEW

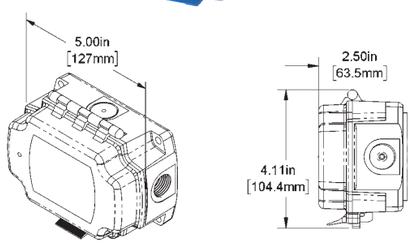
Sensor Specifications

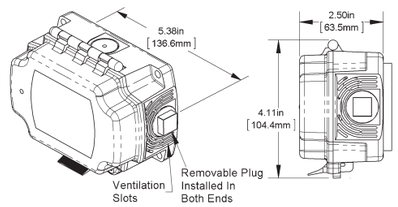
BAPI offers a number of designed and patented non-room enclosures including the BAPI-Box, BAPI-Box 2 and the BAPI-Box Crossover.

BAPI-Box

Enclosure

The BAPI-Box is made of a durable polycarbonate and comes in a regular and ventilated version. The regular version has an IP66 rating. It has a hinged cover for easy access

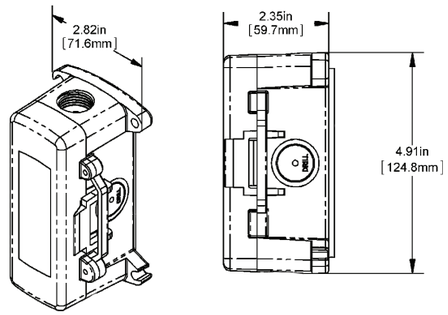




BAPI-Box 2

Enclosure

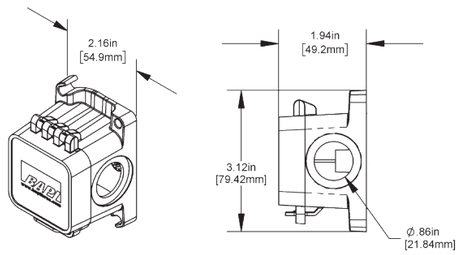
The BAPI-Box 2 is made of a UV-resistant polycarbonate and has IP66 rating. It has a hinged cover for easy access



BAPI-Box Crossover

Enclosure

The BAPI-Box Crossover is made of UV resistant polycarbonate and includes a wiring gland. It has a hinged cover for easy access and molded mounting feet for sturdy installation. With the wiring gland installed the enclosure has an IP44 rating.



SENSOR CERTIFICATIONS

Sensor Specifications

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 certificated 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.

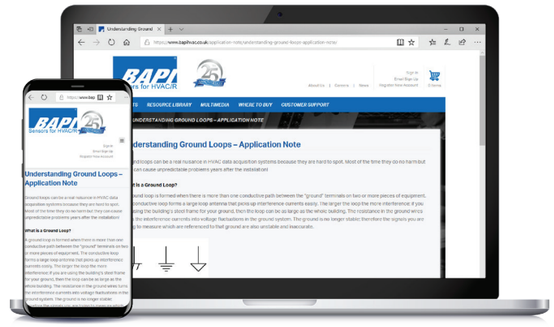
Application Notes

In addition to the Application Notes mentioned in this catalogue, BAPI also has many Application Notes available online at our website at www.bapihvac.co.uk. Below is a list of some of the Application Notes available online:

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



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