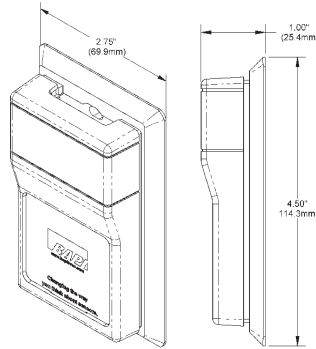
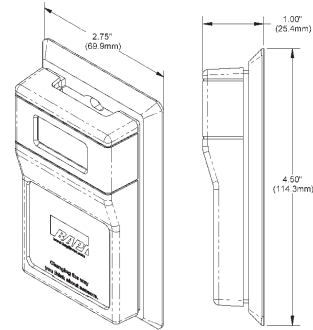
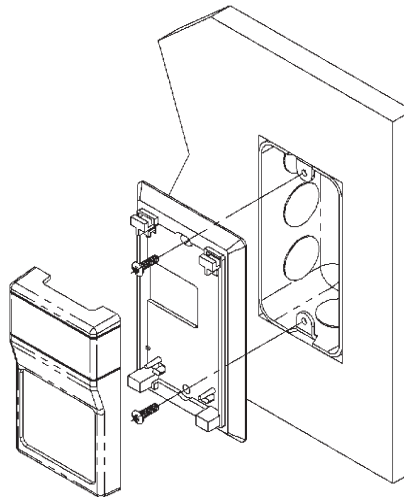


Product Identification**Fig. 1** Delta Enclosure**Fig. 2** Delta Enclosure with LCD Display**Tools & Materials**

#2 Phillips Screwdriver, 1/8" Screwdriver(BA116W), Min 22 Gauge Wire, Drill & Bits

Mounting**Fig. 3** Delta Enclosure

Mounting hardware is provided for both junction box and drywall installation (junction box installation shown).

Junction Box

1. Pull the wire through the wall and out of the junction box, leaving about six inches free.
2. Pull the wire through the hole in the base plate.
3. Secure the base to the box using the #6-32 x 1/2 inch mounting screw provided.
4. Terminate the unit according to the guidelines in **Termination** on page 3.
5. Attach Cover by latching it to the top of the base, rotating the cover down and snapping it into place.
6. Secure the cover by backing out the lock-down screws using a 1/16" allen wrench until they are flush with the bottom of the cover.

Drywall Mounting

1. Place the base plate against the wall where you want to mount the sensor.
2. Using a pencil, mark out the two mounting holes and the area where the wires will come through the wall.
3. Drill two 3/16" holes in the center of each marked mounting hole. Insert a drywall anchor into each hole.
4. Drill one 1/2" hole in the middle of the marked wiring area.
5. Pull the wire through the wall and out of the 1/2" hole, leaving about six inches free.
6. Pull the wire through the hole in the base plate.
7. Secure the base to the drywall anchors using the #6 x 1 inch mounting screws provided.
8. Terminate the unit according to the Termination guidelines below.
9. Attach Cover by latching it to the top of the base, rotating the cover down and snapping it into place.
10. Secure the cover by backing out the lock-down screws using a 1/16" allen wrench until they are flush with the bottom of the cover.

NOTE: In a wall-mount application, the wall temperature and the temperature of the air within the wall cavity can cause erroneous readings. The mixing of room air and air from within the wall cavity can lead to condensation, erroneous readings and premature failure of the sensor. To prevent these conditions, seal the conduit leading to the junction box and seal the hole in the drywall by using an adhesive backed, foam insulating pad (BA/FOAMBACK).

**Some items may not be CE compliant, call BAPI for additional information.*

Specifications subject to change without notice.

Termination

BAPI recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring of NEC class 1, NEC class 2, NEC class 3 or with wiring used to supply highly inductive loads such as motors, contactors and relays.

BAPI's tests show that fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your BAPI representative



BAPI does not recommend wiring the sensor with power applied as accidental arcing may damage the product and will void the warranty.

This device can provide 0 to 5 VDC humidity output or 4 to 20 mA humidity output. The output type is determined by field wiring (See below).

4 to 20mA Termination

TERMINAL LEGEND	FUNCTION
GND.....	4 to 20mA Humidity Signal [To analog input of controller]
V+	+11 to +24 VDC, 12 to 24 VAC
TEMP.....	Optional Temperature Sensor (- for Semiconductor)
TEMP +.....	Optional Temperature Sensor (+ for Semiconductor)

0 to 5VDC Termination

TERMINAL LEGEND	FUNCTION
GND.....	To Controller Ground [GND or Common]
V+	+12 to +24 VDC, 12 to 24 VAC
V OUT.....	0 to 5 VDC Humidity Signal [To analog input of controller]
TEMP.....	Optional Temperature Sensor (- for Semiconductor)
TEMP +.....	Optional Temperature Sensor (+ for Semiconductor)

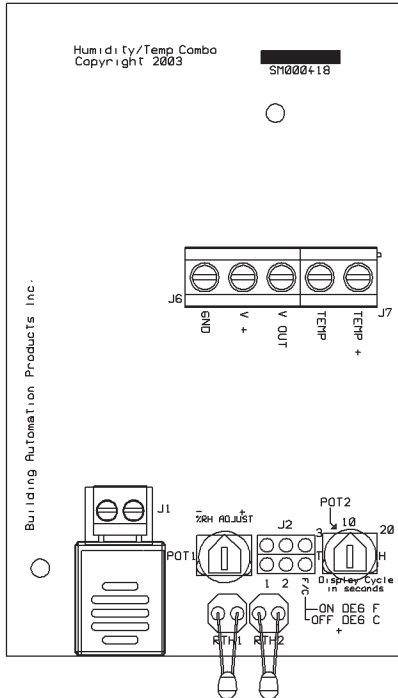
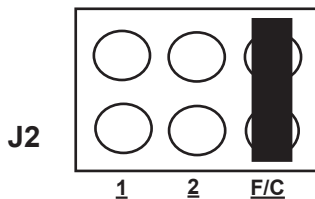


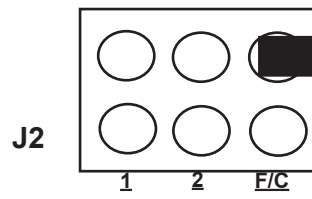
Fig. 4 Room Humidity Unit Circuit Board (shown with optional temperature sensor - RTD or Thermistor)

Digital Display Settings (for display units only)

°F or °C Indication

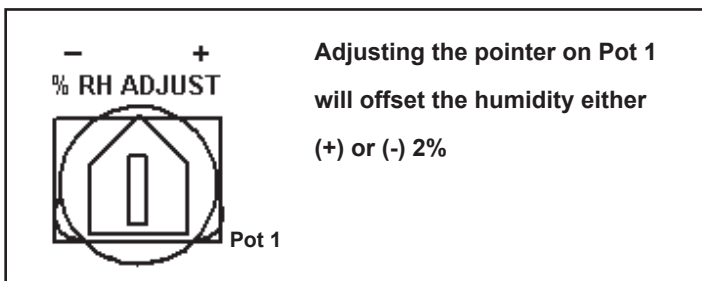


Degrees = °F
(#1 is Factory Use Only, #2 Not Used)



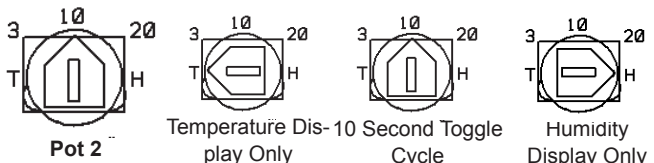
Degrees = °C
(Positions #1 & #2 Factory Only)

Humidity Offset Adjustment



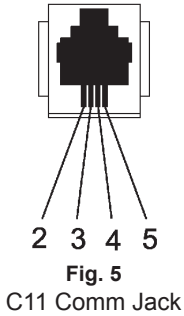
Display Toggle Rate Adjustment Between Humidity & Temperature

The pointer on POT 2 indicates the approximate display toggle rate in seconds between temperature and humidity or a constant display of either temperature or humidity.



Specifications subject to change without notice.

Optional Communication Jack Wiring



C11 Wiring	
Comm Jack Pin	Wire Color
1	Not Connected
2	Black
3	Red
4	Yellow
5	Green
6	Not Connected

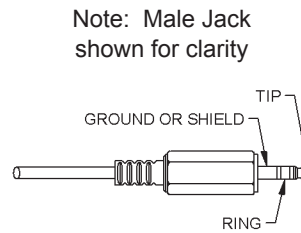
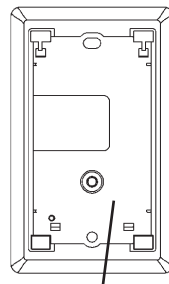
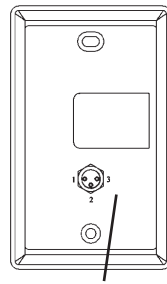


Fig. 8
C35 Comm Jack

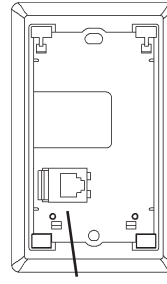
C35 Wiring	
	Wire Color
Ground	Black
Tip	White
Ring	Red



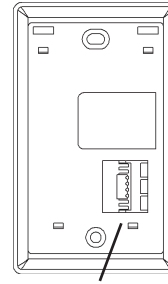
3.5mm on Delta Base (Front)



3.5mm on Delta Base (Back)



C11L on Delta Base (Front)



C11L on Delta Base (Back)

Diagnostics

General Problems:

Unit will not operate, display is not working

Possible Solutions:

- Determine that the input is set up correctly in the controller's and building automation software.
- Check wiring for proper termination
- Check for corrosion at either the controller or the sensor. Clean off the corrosion re-strip the interconnecting wire and reapply the connection. In extreme cases, replace the controller, interconnecting wire and/or sensor.
- If either of the next two tests fails, replace the wire. Label the terminals that the interconnecting wires are connected to at the sensor end and the controller end.
- Disconnect the interconnecting wires from the controller and the sensor. With the interconnecting wires separated at both ends measure the resistance from wire-to-wire with a multimeter. The meter should read greater than 10 Meg-ohms, open or OL depending on the meter you have.
- Short the interconnecting wires together at one end. Go to the other end and measure the resistance from wire-to-wire with a multimeter. The meter should read less than 10 ohms (22 gauge or larger, 250 feet or less).

Humidity Related Problems:

Unit will not operate, display is not working

Humidity reading is maximum 20mA, 5V or 100%

Humidity reading is minimum 4mA, 0 V or 0%

Humidity reading in software appears to be off more than specified accuracy

- Check power supply/controller voltage supply
- Disconnect sensor and check power wires for 11 to 24 VDC, or 12 to 24 VAC power to the sensor
- Make sure the sensor is installed properly, and is not shorted. **QUICK CHECK:** Remove sensor, readings should change toward 0%.
- Verify that the humidity sensor is installed. **QUICK CHECK:** Short the sensor terminal block with a wire, readings should change toward 100%.
- Check all software parameters
- If available, check the sensor against a calibrated instrument such as a hygrometer
- Check the 4-20mA loop against the 0-5V output to verify the output signal is the same (requires 2 dmm's).
- Determine if the sensor is exposed to an external source different from the room environment (Conduit Draft).
- Check "Toggle Rate Adjustment" pot on the back of the sensor, and make sure the adjustment is correct according to the instructions on Page 3.

Display will not toggle between Temperature and Humidity

Specifications subject to change without notice.



Room Humidity Sensor, H200-H300 series, (0 to 5V or 4 to 20mA)

Installation & Operating Instructions

13303_ins_rm_hum_H200_H300

rev.12/08/10

Temperature Related Problems:

Temperature sensor in front end software is reading high

- Check if the sensor is damaged
- Make sure wiring is correct
- Disconnect wires and measure temperature sensor with an Ohm meter**.

Temperature sensor in front end software is reading low

- Check if the sensor is damaged
- Verify that wiring is correct
- Disconnect wires and measure temperature sensor with an Ohm meter**.

Sensor reading is significantly off from LCD temperature

- Check control connection
- Disconnect wires and measure temperature sensor with an Ohm meter**.
- Verify the specified thermistor is correct

Display is reading °C instead of °F, or °F instead of °C

- Check to make sure J2 is installed correctly according to the instructions on Page 3.

**Compare Temperature readings to the appropriate table on the BAPI website: www.bapihvac.com Thermistor Output Tables.htm

Specifications

Power: 10 to 35 VDC, 12 to 24 VAC (0-5 VDC or 4-20 mA Outputs)

Wiring: 2 to 3 pair of 16 to 22 Ga

Power Consumption:

22 mA max. DC (0-5 VDC or 4-20 mA Outputs)
0.53 VA max. AC (0-5 VDC Output)

Wiring: 2 to 3 pair of 16 to 22 Ga

Mounting: Standard 2"x4" J-box or drywall, screws provided

Sensing Elements:

Temperature -Thermistor, RTD or Semiconductor
Humidity - Impedence Type ±2% or ±3% RH

Environmental Operation Range:

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

Material: ABS Plastic

Material Rating: UL 94,V-O

Specifications subject to change without notice.