

# BAPI-Stat 3™ Room Unit

Temperature or Temperature/Humidity Sensor



Rev. 12/13/10

## Large Display & Membrane Pushbuttons

### Features & Options

- Large Easy-to-Read Display
- Temperature Alone or Combination Temp./Humidity
- Membrane Pushbuttons for Wipedown Cleaning
- Temperature and Humidity Setpoints and Override
- Wide Selection of Temperature Sensing Elements
- Communication Jack (optional)
- 2% RH Accuracy
- Two Year Warranty



**BAPI-Stat 3 Unit  
(Temperature Only Unit  
shown above)**

The BAPI-Stat 3 features a large display and membrane pushbuttons for wipedown cleaning. It is available as a temperature sensor alone or as a combination temp/humidity sensor. Depending upon the options selected, the BAPI-Stat 3 can display room temperature, room humidity, temperature setpoint, humidity setpoint and override status.

The unit includes a number of field adjustments including °F or °C display, temperature offset ( $\pm 5$  °F or °C in increments of 0.1°), RH offset ( $\pm 5\%$  in increments of 0.1%), or setpoint lockout (which disables the setpoint pushbuttons). The display can also be set to show a large temperature and small RH, a large RH and a small temperature, or to alternate between these two settings every five seconds. The unit is available with the full line of BAPI temperature sensors.

### Specifications

**Power:** 10 to 35 VDC (15 to 24 VDC recommended) for 4 to 20 mA or 0 to 5 VDC Outputs  
15 to 35 VDC (15 to 24 VDC recommended) for 0 to 10 VDC Output  
12 to 28 VAC (Requires a separate pair of shielded wires) for 0 to 5 VDC Output  
15 VAC to 28 VAC (Requires a separate pair of shielded wires) 0 to 10 VDC Output

**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

**Sensing Elements:**

Temp. - Semiconductor Band Gap,  
Proportional to Absolute Temperature,  $\pm 0.3^\circ\text{C}$   
Humidity - Capacitive Polymer,  $\pm 1.8\%$  RH Accuracy  
Optional Direct Temp. Sensor - Therm., RTD or Semicond.

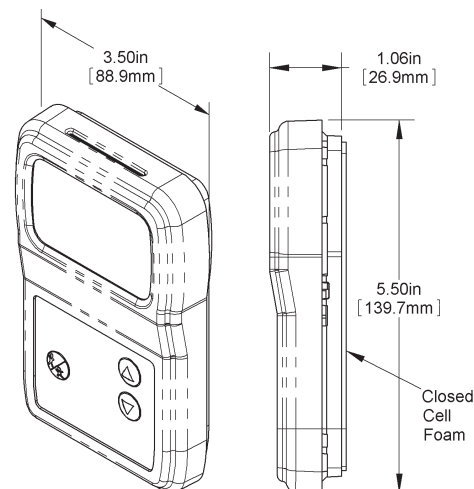
**Mounting:** 2" by 4" J-box or drywall mount - screws provided

**Environmental Specifications:**

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

**Wiring:** 2 to 5 pair of 16 to 22 AWG\*

**Material:** ABS Plastic - UL 94, V-0



\* Tek-Air 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.

**Tek-Air Systems, Inc.**

41 Eagle Road · Danbury, CT 06810 · (203) 791-1400 · FAX: (203) 798 -6534 · SALES FAX: (203) 730-9564 · www.tek-air.com



Rev. 12/13/10

# BAPI-Stat 3™ Room Unit

Temperature or Temperature/Humidity Sensor

Ordering Information BAPI-Stat 3 Room Unit - Temperature, Humidity or Combination															
TA/BS3															
<b>Temperature Display Mode</b>															
F Temperatures Displayed in °F															
C Temperatures Displayed in °C															
<b>Humidity Sensor Accuracy (skip if ordering a temperature only unit)</b>															
2 Accuracy in % for the Relative Humidity Output (i.e. ±2% RH)															
<b>Channel # 1* - T, H, R are placeholders for the range options. (See inset charts)</b>															
-0 T Temperature Output, 4 - 20 mA															
-1 T Temperature Output, 0 - 5 V															
-2 T Setpoint Output, Temperature 4 - 20 mA															
-3 T Setpoint Output, Temperature 0 - 5 V															
-4 H Setpoint Output, %RH 4 - 20 mA															
-5 H Setpoint Output, %RH 0 - 5V															
-6 T Temperature Output 0 - 10V															
-7 T Setpoint Output, Temperature 0 - 10V															
-8 H Setpoint Output, %RH 0 - 10V															
<b>Channel # 2* - T, H, R are placeholders for the range options. (See inset charts)</b>															
-10 H %RH Output, 4 - 20 mA															
-11 H %RH Output, 0 - 5 V															
-12 T Setpoint Output, Temperature 4 - 20 mA															
-13 T Setpoint Output, Temperature 0 - 5 V															
-14 H Setpoint Output, %RH 4 - 20 mA															
-15 H Setpoint Output, %RH 0 - 5 V															
-16 H %RH Output, 0 - 10 V															
-17 T Setpoint Output, Temperature 0 - 10 V															
-18 H Setpoint Output, %RH 0 - 10 V															
<b>Optional Additional Outputs Ch 3 &amp; 4 - T, H, R are placeholders for range options. (See inset charts)</b>															
-20 T R G Setpoint Output, Temperature Resistive w/ Override (DF is wired to Channel 3 & 4)															
-22 H R G Setpoint Output, %RH Resistive w/ Override (DF is wired to Channel 3 & 4)															
-24 T R G Setpoint Output, Temperature Resistive w/o Override (DF is wired to Channel 3 & 4)															
-25 T R G Setpoint Output, Temperature voltage w/o Override (Common Ground required)															
-26 H R G Setpoint Output, %RH Resistive w/o Override (DF is wired to Channel 3 & 4)															
-27 H R G Setpoint Output, %RH Voltage w/o Override (Common Ground required)															
-28 G Override Only [High Ω -> Low Ω -> High Ω] (DF is wired to Channel 3 & 4)															
-29 G Override Only [5 V -> 0 V -> 5V] (Common Ground required)															
<b>Optional Override Ch 3 or 4 - dry contact</b>															
-60 G Dry Contact Override Ch4 (If the unit is DF, use terminals CH3 & CH4)															
-61 G Dry Contact Override Ch5 [Temp - Temp]															
<b>Optional Sensor Type Ch 5 (if resistive sensor required)</b>															
-0 100 Platinum RTD, 100 Ω @ 0 °C, 0.385 Ω/°C temp. coeff.															
-1375 1K Platinum RTD, 1,000 Ω @ 0 °C, 3.75 Ω/°C temp. coeff.															
-1NI 1K Nickel RTD, 1,000 Ω @ 21°C, 5 Ω/°C temp. coeff.															
-1 1K Platinum RTD, 1,000 Ω @ 0 °C, 3.85 Ω/°C temp. coeff.															
-2 2K Silicon RTD, 2,000 Ω @ 20 °C, 8 Ω/°C temp. coeff.															
-18 1.8K Thermistor, 1,800 Ω @ 25 °C															
-3 3K Thermistor, 3,000 Ω @ 25 °C															
-33 3.3K Thermistor, 3,300 Ω @ 25 °C															
-102 10K-2 Thermistor, 10,000 Ω @ 25 °C															
-103 10K-3 Thermistor, 10,000 Ω @ 25 °C															
-10311 10K-3[11K] Therm., 5,238 Ω @ 25 °C, 11kΩ shunt resistor															
-20 20K Thermistor, 20,000 Ω @ 25 °C															
-50 50K Thermistor, 50,000 Ω @ 25 °C															
-100 100K Thermistor, 100,000 Ω @ 25 °C															
-592 AD592 Semiconductor, 273 μA @ 0 °C															
-ES External Sensor connection, 10K-2 thermistor purchased separately.***															
<b>Optional Communication Jack</b>															
-C11L RJ11 (4 pin) Style Jack with Leads															
-C11LT RJ11 (4 pin) Style Jack w/ Leads and Terminal Block															
-C35L 3.5 mm Phono Jack w/ Leads Attached															
-C35LT 3.5 mm Phono Style Jack w/ Leads and Term. Block															
-C22L RJ22 (4 pin) Style Jack with Leads Attached															
-C22LT RJ22 (4 pin) Style Jack with Leads and Terminal Block															
<b>Optional Test &amp; Balance Switch**</b>															
-TB Three Position Switch - "Low" & "High" values vary, "Normal" is live sensor value, call for details.*															
<b>EXAMPLE</b>															
TA/BS3	F	2	0	C	-10	M	-24	C	80	CG	-61	CG	-102	-C35L	-TB
Example Part Number: TA/BS3F2-0C-10M-24C80CG-61CG-102-C35L-TB															
<b>Your Part Number:</b>															

R = Output Range Designator		
Designator	Output Range	Span
00	0 to 5 V	5 Volts
01	1 to 5 V	4 Volts
02	3.7 to 0.85 V	2.85 Volts
03	5 to 0 V	5 Volts
04	4.2 to 1.2 V	3 Volts
10	0 to 10 V	10 Volts
20	889 to 111 Ω	778Ω
21	792 to 208 Ω	584Ω
22	695 to 305 Ω	390Ω
23	674 to 274 Ω	400Ω
24	597 to 305 Ω	292Ω
25	800 to 1200	400Ω
26	909 to 1309	400Ω
27	1800 to 2200	400Ω
28	866 to 1286	400Ω
40	0 to 1 kΩ	1 kΩ
41	500 to 1500 Ω	1 kΩ
42	2 to 3 kΩ	1 kΩ
43	249 to 1249 Ω	1 kΩ
44	10 to 11 kΩ	1 kΩ
45	12.5K-11.5K Ω	1 kΩ
46	1K to 0 Ω	1 kΩ
47	182 to 1182 Ω	1 kΩ
50	0 to 5 kΩ	5 kΩ
51	7.87k to 2.87kΩ	5 kΩ
60	0 to 10 kΩ	10 kΩ
61	15 to 5 kΩ	10 kΩ
62	9577 to 1422 Ω	10 kΩ
63	1 to 11 kΩ	10 kΩ
64	200 to 10200	10 kΩ
80	0 to 20 kΩ	20 kΩ
81	4.75 to 24.75 kΩ	20 kΩ
82	6.19 to 26.19 kΩ	20 kΩ
83	7.87 to 27.87 kΩ	20 kΩ
84	10 to 30 kΩ	20 kΩ

T = Temperature, Output & Display Range		
	°F	°C
A	-3 to +3	-3 to +3
B	-5 to +5	-5 to +5
C	50 to 90 °F	10 to 32 °C
D	55 to 85 °F	13 to 30 °C
E	60 to 80 °F	15 to 27 °C
F	65 to 80 °F	18 to 27 °C
G	45 to 96 °F	7 to 35 °C
J	68 to 78 °F	20 to 26 °C
K	65 to 95 °F	18 to 35 °C
L	70 to 74 °F	21 to 23 °C
P	-2 to +2	-2 to +2
X	40 to 80 °F	4 to 27 °C

H = Relative Humidity Range	
Designator	%RH
M	0 to 100
N	35 to 70

G = Connection Configuration	
Designator	Type
CG	Common Ground
DF	Differential Ground

All ranges and options may not be shown here, call BAPI for additional options or with questions about this ordering grid  
 \* Channel 1 or 2 are Common Ground  
 \*\* Test & Balance is only available with Direct Sensor Type Output  
 \*\*\*Must use a 10K-2 thermistor for the External Sensor option. Thermistor is purchased separately. (25' max) This option is only available on units without humidity