Vivarium Combo Sensor & Display

Humidity & Combination Temp/Humidity Sensors

Rev. 07/08/08

Wall Plate Sensor with Room Unit

for Washdown and Wipedown Applications

Features & Options

- Stainless Steel, Water Tight Wall Plate Unit
- ± 2% and ± 3% RH Accuracies
- Room Unit with LCD Display
- °C or °F Operation (user selectable)
- Full Range Temperature Compensation of RH Signal
- Wide Selection of Temperature Sensing Elements
- Choice of Humidity Outputs (0 to 5 VDC or 4 to 20mA)
- Override and Setpoint Adjustment (optional)
- Two Year Warranty

Vivarium Wall Plate Sensor and Room Unit Combo

The Vivarium Combination Sensor & Display provides measurement, display and adjustment of both humidity and temperature in a single package. The water tight Wall Plate Unit is designed for washdown or wipedown areas and features a series 304 stainless steel plate, a stainless steel sintered filter with washdown/wipedown cover, a small probe containing the temperature and humidity elements and a "ruggedized" encapsulated transmitter. A ¼" closed cell foam pad insulates the sensors from the wall temperature.

The Room Unit is designed to be located outside of the washdown/wipedown area that is being monitored. The display toggles between temperature and humidity at a user adjustable rate, and an optional Setpoint allows adjustment of both temperature and humidity. An override pushbutton is also available. An optional Light Sensor can be added to all available models for a nominal charge. This sensor provides a resistance value indicating the presence or absence of ambient light.

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

Filter caps and other replacement parts are available, see page B26 of this section.

Specifications

Power:
12 to 35 VDC (15 to 24 VDC recommended)
15 to 24 VAC (Requires a separate pair of shielded wires)

Power Consumption: 50 mA maximum DC
1.2 VA maximum AC

Material: Room Unit: ABS Plastic
Wall Plate: Stainless Steel

Enclosure Material Rating: UL 94, V-0

Sensing Elements:
Temperature - Thermistor or RTD
Humidity - Impedance Type, ±2% or ±3% RH

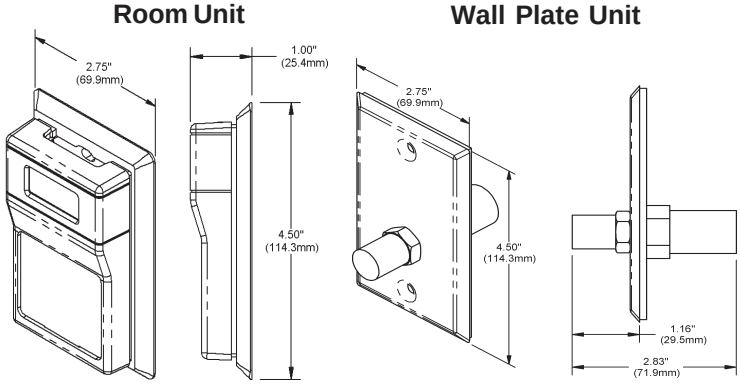
Environmental Operation Range:
Temp: 32 to 122 °F (0 to 50 °C)
Humidity: 0 to 95% RH, non-condensing

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

Mounting: Standard 2" by 4" J-box
- mounting screws provided

* **BAPI** recommends that you do not run wiring for the 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.

Room Unit **Wall Plate Unit**



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Ordering Information — Vivarium Combo Sensor & Display

BA/XC

Display Mode

F	Temperatures Displayed in °F
C	Temperatures Displayed in °C

Accuracy

2	Accuracy in % for the Relative Humidity Output (i.e. ±2% RH)
3	Accuracy in % for the Relative Humidity Output (i.e. ±3% RH)

Channel # 1 - *T*, *H*, *R* are placeholders for the range options. (See inset)

-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

Channel # 2 - *T*, *H*, *R* are placeholders for the range options. (See inset)

-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

Channel # 3 - *T*, *H*, *R* are placeholders for the range options. (See inset)

-20	*T*	*R*	Setpoint Output, Temperature Resistive w/ Override
-22	*H*	*R*	Setpoint Output, %RH Resistive w/ Override
-24	*T*	*R*	Setpoint Output, Temperature Resistive w/o Override
-25	*T*		Setpoint Output,Temperature 0-5 V w/o Override
-26	*H*	*R*	Setpoint Output, %RH Resistive w/o Override
-27	*H*		Setpoint Output, %RH 0-5 V w/o Override
-28			Override Only [High Ω -> Low Ω]
-29			Override Only [5 V -> 0 V]

Sensor Type (if resistive sensor required)

-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 Ω Nickel @ 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
-22	2.2K Thermistor, 2,200 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
-47	47K Thermistor, 47,000 Ω @ 25 °C
-50	50K Thermistor, 50,000 Ω @ 25 °C
-100	100K Thermistor, 100,000 Ω @ 25 °C
-334	LM334 Semiconductor
-592	AD592 Semiconductor, 273 µA @ 0 °C

Optional Communication Jack

-C11L	RJ11 (4 pin) Style Jack with Leads
-C11LT	RJ11 (4 pin) Style Jack with Leads and Terminal Block
-C35L	3.5 mm Phono Jack w/ Leads Attached
-C35LT	3.5 mm Phono Style Jack with Leads and Terminal Block
-C22L	RJ22 (4 pin) Style Jack with Leads Attached
-C22LT	RJ22 (4 pin) Style Jack with Leads and Terminal Block

Optional Test & Balance Switch

-TB	3 Position Switch - "Low" & "High" values vary, "Normal" is live sensor value, call for details.*

Wall Plate Unit

-SPV	Stainless Steel Wall Plate

Range Options

***T* = Temperature Range**

Designator	°F	°C
C	50 to 90	10 to 32
D	55 to 85	13 to 30
E	60 to 80	15 to 27
F	65 to 80	18 to 27
G	45 to 96	7 to 35

***H* = Relative Humidity Range**

Designator	%RH
M	0 to 100

***R* = Resistance Range**

Designator	Ohms
P	0 to 20k
Q	4.75k to 24.75k
R	6.19k to 26.19k
S	7.87k to 27.87k
T	10k to 30k

EXAMPLE

BA/XC	F	3	-4 M	-10 M	-20 C P	-102	-C11L	-TB	-SPV

Example Part Number: BA/XCF3-4M-10M-20CP-102-C11L-TB-SPV

Your Part Number:

Call BAPI if you have questions about the above ordering grid or the configuration of the product you are ordering.

* Test & Balance is only available with Direct Sensor Type Output