



## 2% MULTIFUNCTION HUMIDITY AND TEMPERATURE TRANSMITTER

**BAPI-COM SERIES**

### DESCRIPTION

The **BAPI-COM Series** multi-functional humidity and temperature sensor is the newest innovative product from BAPI. It features relative humidity measurement and a full function temperature sensor with temperature setpoint, occupant override, an optional easy-to-read display, all over just two wires. Many existing buildings have two wire sensors but do not have the other sensor features that customers expect in today's sophisticated systems. The BAPI-Com system uses those existing two wires to replace multiple pairs of wires dedicated to just one task.

This retrofit sensor can update old systems to a new look without pulling new wire or disrupting the occupants while saving on labor. The sensors are powered and communicate over two wires to a Communication Output Module for use by the BAS system. The outputs are configurable as a thermistor, voltage, resistance or dry contact override output. The sensor is powered by the Communication Output Module which is powered by any 24VDC/VAC source.



**NEW!**



### DIMENSIONS

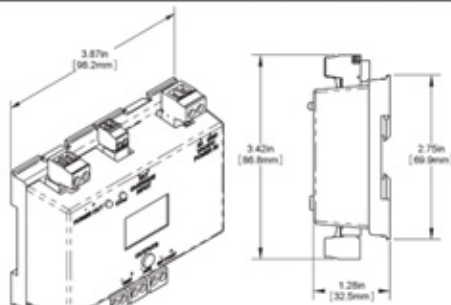


Fig 1. BAPI-Com Communication Output Module

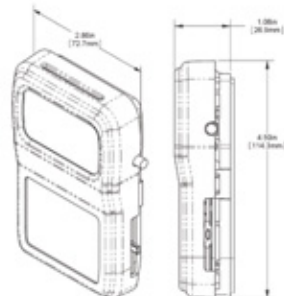
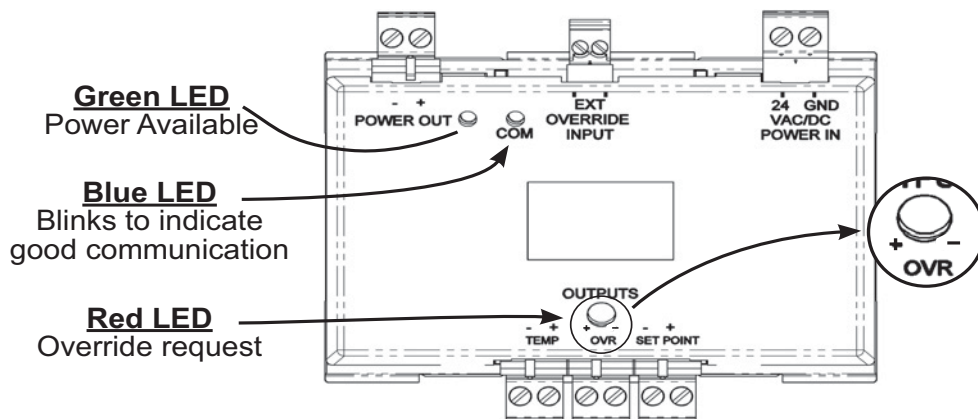


Fig 2. BAPI-Com Room Sensor, BA/BS4SCOM

### TERMINATION DIAGRAM





# HUMIDITY

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### SPECIFICATIONS

<b>Accuracy</b>		<b>Indication OPT.:</b>	LCD, (Temp/Humd/Setpoint/ Occupied), Window 2.5"x1.5", Main digit 3.5 digits, 0.6" high, $\pm 99.9$
<b>Thermistor</b>	$\pm 0.36^{\circ}\text{F}$ , ( $\pm 0.2^{\circ}\text{C}$ )	<b>Operating Humidity</b>	0-95% RH Non-condensing
<b>Humidity</b>	$\pm 2\%$ RH, (10% to 90%) @ $25^{\circ}\text{C}$	<b>Operating Temperature</b>	$32^{\circ}$ to $122^{\circ}\text{F}$ ( $0^{\circ}$ to $50^{\circ}\text{C}$ )
<b>Supply Voltage</b>		<b>Enclosure Rating</b>	Comm Module: UL94V-0, RoHS
<b>Sensor</b>	15 to 18 VDC @9mA, (Supplied from the Communication Output Module)	<b>Wiring</b>	
<b>Comm Module</b>	20 to 30 VDC/AC, 25mA maximum, 1.7VA @ 30 VAC	<b>Sensor</b>	2 wires, Up to 500ft, AWG gauge 22-14AWG, twist per foot 5 per ft preferred, Shielding Preferred, Wire spec typical Belden 9841, External sensor 22-18 AWG, TSP, shield grounded, 25' max
<b>Signal Output</b>	Communication Module Volts 0-5 or 0-10VDC, 10k $\Omega$ min Resistance 20K span Thermistor 10K-2 or 10K-3	<b>Comm Module</b>	Comm. & PWR 2 wires to the sensor, 22-14 AWG, Power In 2 wires, 12-28 AWG, Output 2 wires per output, 12-28 AWG, Override Input 2 wires, 16-30 AWG
<b>Input</b>	External dry contact connection (Closed = Occupied)	<b>Wiring Terminations</b>	
<b>Output (3 maximum)</b>		<b>Sensor</b>	AWG gauge 22-14AWG Twist per foot 5 per ft preferred Shielding Preferred (not required) Wire spec typical Belden 9841, Up to 500 ft (new or existng)
<b>Volts</b>	0-5 VDC or 0-10 VDC, I <sub>max</sub> = 20 mA DA or RA (factory configured)	<b>Comm Module</b>	
<b>Reed Switch</b>	0.5A @ 24 VDC	<b>Communication</b>	22-14 AWG
<b>Resistance</b>	20K span, V <sub>max</sub> = 15 VDC, DA or RA (factory configured)	<b>Power In/Output</b>	12-28 AWG (2wires per output)
<b>Thermistor</b>	10K-2, 10K-3[11K] (factory configured)	<b>Override Input</b>	16-30 AWG
<b>Communication</b>	Polling system (All messages are confirming), Baud rate 1200 baud, Poll Rate 400 ms, Type FSK	<b>Enclosure</b>	ABS Plastic, UL94V-0
<b>Sensing Technology</b>		<b>Approvals</b>	RoHS
<b>Sensor</b>	Type II 10,000 $\Omega$ thermistor	<b>Warranty</b>	1 year
<b>Humidity</b>	Capacitive polymer		
<b>Visual Indication</b>			
<b>Power</b>	Green LED (on = powered)		
<b>Communication</b>	Blue LED (blinks during normal communication)		
<b>Occupied</b>	Red LED (on = occupied request)		

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#### ORDERING INFORMATION

<b>BAPI-Com Room Temperature Sensor Unit</b>	
BA/BS4MCOM	BAPI-COM with Pushbutton Setpoint and Override plus Communication Module. (Must use display F or C)
BA/BS4SCOM	BAPI-COM with Slide Setpoint plus Communication Module
<b>Display Option (Required Selection Field, Select Only One)</b>	
F	Display Configurable in the field (Fahrenheit)
C	Display Configurable in the field (Celsius)
X	No Display Option, slide setpoint
<b>Humidity Sensing (Skip if not required)</b>	
-	No Humidity Sensor
2	2% Humidity Sensor
<b>Temperature Output Range (Also used for the voltage output module range) (Required)</b>	
C	50 to 90°F or 10 to 32°C
D	55 to 85°F or 13 to 30°C
<b>Setpoint Configuration</b>	
-	No Display
C	50 to 90°F or 10 to 32°C
D	55 to 85°F or 13 to 30°C
M	0 to 100% RH
<b>Legend Designator on the Sensor Cover</b>	
L0	No Legend
L6	COOL/WARM required for all slide type sensors
<b>Logo Plate Color</b>	
WMW	WARM White Logo Plate Color
GRY	Gray Logo Plate Color
<b>Special Factory Configurations — Specify as needed</b>	
-	No Special Configuration
ES	External Temperature Sensor (Requires separately purchased 10K-2 sensor), (Not available with humidity)
SDO	Setpoint Display Only
<b>Setpoint Output Value Range</b>	
-	No Setpoint output value range
81	4.75K to 24.75KΩ
00	0 to 5V*
10	0 to 10V*
<b>Override Output — Momentary for 3-5 seconds</b>	
J	Dry Contact Override on dedicated terminals (Not Available with Humidity option)
M	Override in Parallel (II) with RH signal
N	Override in Parallel (II) with Sensor
P	Override in Parallel (II) with Setpoint
Z	No Override
<b>Room Humidity Output Value (Skip if humidity is not required)</b>	
-	No Humidity output value
M00	Humidity Output 0-5V = 0-100%RH (Common ground only)
M10	Humidity Output 0-10V = 0-100%RH (Common ground only)
<b>Room Temperature Output Value (Skip if not required)</b>	
-	No temperature output value
102	Thermistor Temperature Output, 10K-2, 10KΩ @ 25°C
103	Thermistor Temperature Output, 10K-3, 10KΩ @ 25°C
00	0 to 5V over the Temperature Output Range (Common ground only)
10	0 to 10V over the Temperature Output Range (Common ground only)
<b>Connection Configuration</b>	
CG	Common ground for resistive and voltage outputs
DF	Differential ground for resistive outputs

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