**Temperature Sensors** 

## Features & Options

- Patented Enclosure Style with Large Display
- Robust Tactile Pushbuttons
- Setpoint Adjust (Slider or Pushbutton)
- Optional Override, Fan Speed & Mode Control
- Optional Communication Jack and Test & Balance
- Two Year Warranty

The patented BAPI-Stat 4 Style Enclosure features a large LCD with all the visual indicators on the display itself. It provides local indication of Temperature and Setpoint with Setpoint Adjust and Override.

It also has optional Fan Speed and Mode Control for applications with Fan Coils, Heat Pumps or Unit Ventilators. The Setpoint is available as a slidepot or as pushbuttons and is displayed on the LCD for a short time after an adjustment.

The Override is a momentary signal that can be configured in parallel with the sensor or setpoint, or as a separate output or a latching switch. An optional 3.5mm (1/8"), RJ11 or RJ22 Communication Jack can be mounted in the base to provide direct access to the network.

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



BAPI-Stat 4 Units with Warm White Logo Plate



BAPI-Stat 4 Units with Gray Logo Plate

## Specifications

## Power for 5VDC Power Units:

0 to 5 VDC Setpoint or Resistive Setpoint....  $5V \pm 1\%$  (5 VDC nominal, Input regulation affects accuracy) Power for 24VDC Power Units:

Power for 24VDC Power Units:

Note: AC power requires a separate pair of shielded wires.

Power Consumption: 7 mA max DC; .17 VA max AC

Sensing Element: Thermistor, RTD or Semiconductor

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

Comm. Jack: Optional 3.5mm (1/8") Phono Jack or RJ11 Phone Jack

Mounting: Standard 2" by 4" J-box or drywall mount (screws provided)

## **Environmental Operation Range:**

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

Agency: RoHS & CE\*



\*Units with passive Thermistors 20K $\Omega$  and smaller are CE compliant.

\*\*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. Also, these units are not designed for line voltage applications.



Rev. 02/24/16

**Temperature Sensors** 

**A5** 

F C S	av woo	le (Reau	uired se	election)	Pi	ck F (°E	) or C (°C) indic	ation		
C	Temper	atures D	Jisplaye	d in °F			,			
Ś	Temper	atures D	Jisplaye	d in °C						
	Setpoin	etpoint Configuration Warm/Cool legend on base is standard for BA/BS4S Units								
	-#	# SETPOINT DISPLAY OPTIONS (Skip if not required)								
			Desire	d Range	De	signator	r ,		Desired Range	Designator
			-2 to +2	2		Р	-		55 to 85 °F or 13 to 30 °C	; <u>D</u>
			-3 to +:	3		Α			60 to 80 °F or 15 to 27 °C	; E
			-5 to +!	5		в			65 to 80 °F or 18 to 27 °C	F
			50 to 9	90 °F or 1	0 to 32 °C	С			70 to 74 °F or 21 to 23 °C	C L
									45 to 96 $^\circ\text{F}$ or $$ 7 to 36 $^\circ\text{C}$	G
					Se	эе Арр. I	Notes pg I3 for A	dditional Se	etpoint Display Ranges	
	##	SETPO	INT OU	JTPUT VA	LUE RANGE	(Skip if	f not required)			
		Desired Range Designator					<u>.</u>		Desired Range	Designator
		889 to 111 Ω <sup>1</sup> 20				20			0 to 20 kΩ	80
			674 to 274 Ω			23			4.75 k to 24.75 kΩ	81
			800 to	ο 1200 Ω		25			6.19 k to 26.19 kΩ	82
			909 to	0 1309 Ω		26			7.87 k to 27.87 kΩ	83
			1800 t	to 2200Ω		27				84
			0 to 1000 Ω				40 41 42		0 to 100 kΩ 0 to 5 V <sup>2</sup> 3.7 V to 0.85 V <sup>1,2</sup> 5 to 0 V <sup>2</sup>	90
		500 to 1500 Ω 41 2 k to 3 kΩ 42 0 to 10 kΩ 60 15 k to 5 kΩ 61				41				00
						42 60 61				02
									0 to 10 V <sup>3</sup>	10
			IS K IL	0 0 112	Se	e Ann I	Notes pg 12 for 4	dditional Se	atpoint Ranges	10
		Pushbutton Fan Speed/Mode Options (BA/BS4M only) Skip if not required (Single resistive output)								ve output)
		-XLD	Pushbu	utton Fan S	speed Adjustn	nent [Off	(5K), Auto (10K	), Lo (15K),	Med (20K), Hi (25K)] with L	CD Indication
		-X01	Pushbu	utton Fan S	Speed Adjustn	1ent [Off	(4.89K), Auto (2		10.03K), Med (13.24K), Hi (1	16.33K)] with LCD Indication
		-X02	Pushbu	utton Fan S	Speed Adjustr	ient [Uff	(2K), Auto (4K),	LO (0K), M	eu (oK), HI (10K)] with LCD	Indication
		-706	Pushbi	utton Mod	Speed Adjustn		(U.SK), LO (8.5K	(10.	Heat/On (20K) Off/On (25	
			Pushbu	utton Mode	E [Heat/Auto (3	(0, 0)	Auto (TUK), COUL	Auto (15K)	, Heal/OII (20K), OII/OII (25	R), COOI/OTI (SOR)] WITI LCD
		-HU1	Pushbu	de Config		12), OII//	Auto (2K), C00//	Auto (4K), F		CODI/ON (TOK)] WITH LCD INDIC
		Override Configuration Must select							e () The "#" represente letebi	a diaplay antiana 1.0
		-L# Override as a Latching Switch (24VDC/VAC @ 800mA Notes pg. 111 for more information or contact your BAP						ouur RAPI ror	c). The # Tepresents laterili	ig display options 1-9. 3
		-J Override as a Separate Output (Dry contact only not					ly not inter	ded to switch a load )		
			-J	Override	in Parallel (//)	with Ser	(Dry contact of	ily, not inter	ded to switch a load.)	
			-N	Override	in Parallel (//)	with Set	noint <sup>.</sup> This includ	es voltage	setpoint models	
			-Z	No Overr	ide. (Needed i	if no over	rride is required)	co voltage		
				Optional	Communicat	tion Jac	k		Mounted in unit's base	
				-C11L	RJ11 (4 pin)	Style Ja	ick with Leads A	ttached		
				-C11LT	RJ11 (4 pin)	Style Ja	ick with Leads ai	nd a Termin	al Block Attached	
				-C35L	3.5 mm Phor	10 Style	Jack with Leads	Attached		
				-C35LT	3.5 mm Phor	10 Style	Jack with Leads	and a Tern	ninal Block Attached	
				-C22L	RJ22 (4 pin)	Style Jac	ck with Leads At	tached		
				-C22LT	RJ22 (4 pin)	Style Jac	ck with Leads an	d Terminal	Block Attached	
					Power Avail	able at F	Panel		Must select on	e
					-5 Re	egulated,	5 VDC (See fu	Il power spe	ecs on the datasheet)	~
					-24 91	:0 40 VD	C or 15 to 28 VA	AC (See ful	power specs on the datash	neet)
					Di	rect Out	t Sensor or Exte	ernal Sens	or Must select on	e
						-1375	1K Platinum RT	D, 1,000 Ω	@ 0 °C, 3.75 Ω/°C temp. co	peff.
						-1NI	1K Ω Nickel RT	D, 1,000 Ω	@ 21°C, 5 Ω/°C temp. coeff	
						-1	1K Platinum RT	υ, 1,000 Ω	@ 0 °C, 3.85 Ω/°C temp. co	ett.
- 1						-2	2K Silicon RTD,	2,000 Ω @	20 °C, 8 Ω/°C temp. coeff.	
						-18	1.8K Thermistor	, 1,800 Ω @	0 25 °C	
						-3	3K Thermistor,	3,000 Ω @	25 °C	
					∣ ⊢	-33	3.3K Thermistor	, 3,300 Ω @	y 25 ℃	
						-102	10K-2 Thermister	or, 10,000 0	2 @ 25 °C	
			1			-103	10K-3 Thermiste	or, 10,000 0	2 @ 25 °C	
						10311	10K-3[11K] The	rmistor, 5,2	38 12 @ 25 °C (10K-3 Ther	rmistor with 11kΩ shunt resist
						-20	ZUK I hermistor,	20,000 Ω (	ມ_25 °C ລວ5 °C	
					⊢		50K I hermistor.	50,000 Ω (	ay 25 °C	
						-50	400K TL	- 400 000		
						-50 -100	100K Thermisto	r, 100,000 g	0 @ 25 °C	
						-50 -100 -592	100K Thermisto AD592 Semicor	r, 100,000 9 Iductor, 273	2 @ 25 °C μA @ 0 °C	tor concretely 05 4 may
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor	r, 100,000 g iductor, 273 for Display	<u>Ω @ 25 °C</u> μA @ 0 °C Only. Order 10K-2 thermis	tor separately. 25 ft max.
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor Optional Test a	r, 100,000 g ductor, 273 for Display and Balanc	<u>Ω</u> @ 25 °C μA @ 0 °C Only. Order 10K-2 thermis Switch Witch	tor separately. 25 ft max.
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor Optional Test a -TB	r, 100,000 g aductor, 273 for Display and Balanc ee Position S	2 @ 25 °C μA @ 0 °C Only. Order 10K-2 thermis <b>9 Switch</b> Switch - "Low" & "High" value Not available with the	tor separately. 25 ft max. es vary, "Normal" is live sens
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor Optional Test a -TB Thre call t	r, 100,000 g ductor, 273 for Display and Balanc e Position S for details. (	2 @ 25 °C µA @ 0 °C Only. Order 10K-2 thermis e Switch Switch - "Low" & "High" value Not available with the -ES o offerentia - Solate con	tor separately. 25 ft max. es vary, "Normal" is live sens ption)
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor Optional Test a -TB The call t	r, 100,000 g ductor, 273 for Display and Balanc e Position S for details. ( nection Co	Q 25 °C   µA @ 0 °C   Only.   Order 10K-2 thermis   switch   witch - "Low" & "High" value   Not available with the -ES o   onfiguration Select one, o   Graved Select one, o	tor separately. 25 ft max. es vary, "Normal" is live sens ption) default is common ground
						-50 -100 -592 -ES	100K Thermisto   AD592 Semicor   External Sensor   Optional Test a   -TB   Threcall for the control of the control	r, 100,000 g ductor, 273 for Display and Balanc e Position S for details. ( nection Co G Commo	2 @ 25 °C µA @ 0 °C Only. Order 10K-2 thermis e Switch witch - "Low" & "High" valu Not available with the -ES o infiguration Select one, on in Ground (must select for "	tor separately. 25 ft max. es vary, "Normal" is live sens ption) default is common ground voltage setpoint units)
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor Optional Test a -TB Thre call 1 Con -C -D	r, 100,000 g aductor, 273 for Display and Balanc ee Position S for details. ( nection Co G Commo F Differen	2 @ 25 °C µA @ 0 °C Only. Order 10K-2 thermis <b>9 Switch</b> Switch - "Low" & "High" value Not available with the -ES o infiguration Select one, on in Ground (must select for vital Inputs (only available with late Color - Must select	tor separately. 25 ft max. es vary, "Normal" is live sens ption) default is common ground voltage setpoint units) th resistive setpoint)
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor Optional Test a -TB Thre call 1 Con -C	r, 100,000 g ductor, 273 for Display and Balanc e Position S for details. ( nection Co G Commo F Differer Logo P	Q   25 °C     µA @ 0 °C   Only. Order 10K-2 thermis     o Switch   Switch     switch   "Low" & "High" value     Not available with the -ES o   Infiguration     sector   Select one, n     in Ground (must select for vitial inputs (only available with the IES of the Inputs)   West select for vitial inputs (only available with the IES of the Inputs)     Vite Color   Must select for vitial inputs (only available with the IES of the Inputs)   Nust select for vitial inputs)	tor separately. 25 ft max, es vary, "Normal" is live sens ption) default is common ground voltage setpoint units) th resistive setpoint) ct one loc (matches enclosure colo
						-50 -100 -592 -ES	100K Thermisto AD592 Semicor External Sensor Optional Test a -TB Thre call 1 Con -C -D	r, 100,000 g iductor, 273 for Display and Balanc the Position S for details. ( nection Co G Commo F Differer Logo P -WMW -GRY	Q 25 °C       µA @ 0 °C       Only. Order 10K-2 thermiss       switch       switch       miguration       select one, on Ground (must select for vital inputs (only available with tail inputs (only available with tail inputs (only available with tail for the color       Mark Color     Must select for vital inputs (only available with tailable withtailable withtailable with tailable with tailable withtailable wit	tor separately. 25 ft max. es vary, "Normal" is live sens ption) default is common ground voltage setpoint units) th resistive setpoint) ct one olor (matches enclosure colo

Your Part Number: All models can be field calibrated so the displayed ambient temperature value matches a reference device (±3°, ½° steps), call for details.

All models can be field calibrated so the displayed ambient temperature value matches a ren Override indication is activated by logic low or dry contact signal from the controller to GND. <sup>1</sup> Available on pushbutton (BS4M) models only <sup>2</sup> 9 to 40 VDC (24 VDC nominal) power is required. Common Ground Only (-CG) <sup>3</sup> 15 to 40 VDC (24 VDC nominal) power is required. Common Ground Only (-CG)

