BAPI-Box Pressure Standard Range 1" to 5" WC *Zone Pressure Sensors (ZPS)*

Rev. 03/09/16

CE

Features & Options

- Field Selectable Outputs and Pressure Ranges
- Optional LCD shows Pressure Over the Entire Operational Range Regardless of Which Individual Pressure Range is Selected
- Inches of Water Column (W.C.) or Pascal Operation
- Simple Auto-Zero Process
- Mounting Tabs for Easy Installation
- Three Year Warranty

The BAPI-Box Zone Pressure Sensor is an accurate, rugged and economical solution for measuring and reporting duct/building static pressure, room-to-room differential pressure or air velocities/volumes. The heart of the unit is a micro-machined silicon pressure sensor with excellent accuracy, repeatability and stability.

The LCD model offers an additional level of troubleshooting and monitoring capability over the standard model by displaying the actual differential pressure over the entire operational range (-5 to +5 inches W.C. or -1,000 to 1,000 Pascals) regardless of which individual pressure range is selected for output to the system controller.

The unit comes with an IP66-rated BAPI-Box enclosure with short circuit proof outputs and reverse polarity protected inputs to perform under real world conditions. The various Output Ranges and Pressure Ranges are all field selectable with DIP switches, and the auto-zeroing process is very simple (flip a switch, wait five seconds, flip it back and walk away).

Pressure Sensor with and without Display

Sensor with Attached Static Tube

The unit is available in a BAPI-Box with an Attached Static Tube **(-AT)**, therefore it doesn't require two trades to install the unit.

Specifications

Power:
7 to 40 VDC (4 to 20 mA Output)
7 to 40 VDC or 18 to 28 VAC (0 to 5 VDC Output)
13 to 40 VDC or 18 to 28 VAC (0 to 10 VDC Output)

Power Consumption:
20 mA max, DC only at 4 to 20 mA Output
4.9 mA max DC at 0 to 5 VDC or 0 to 10 VDC Output
0.12 VA max AC at 0 to 5 VDC or 0 to 10 VDC Output

Load Resistance:
4 to 20 mA Output 850 Ω Maximum @ 24 VDC
0 to 5 VDC or 0 to 10 VDC output 1KΩ minimum

Accuracy at 72°F: ±0.25% of range

Stability: ±0.25% F.S. per year

Environmental Operation Range: -4 to 140°F (-20 to 60°C)

Storage Temperature: -40 to 203°F (-40 to 95°C)

Temperature Error:
0.01% FS/°F (0.02% FS/°C) (±5.0" W.C. @ -4 to 140°F [-20 to 60°C])

Overpressure: Proof: 27.68 in W.C (1 PSI),
                    Burst: 41.52 in W.C. (1.5 PSI)

Wiring: 2 wires (4 to 20mA Current loop)*
          3 wires (AC or DC powered, Voltage out)*

Humidity: 0 to 95% RH, non-condensing

Port Connection:
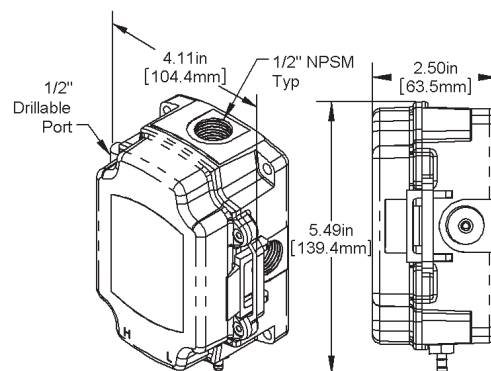1 High Pressure & 1 Low Pressure
for push-on 1/4" tubing (1/8" to 3/16" I.D.)

Enclosure Material:
UV-resistant Polycarbonate, UL94, V-0

Enclosure Rating: IP66, NEMA 4

Mounting:
Four external tabs with holes for #10 screws

*BAPI recommends that you do not run wiring for the pressure transmitter in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils.

Note: Mount unit with the pressure fittings on the bottom to prevent condensation from entering the sensor.

Ordering Information (for units without a factory specified range or output)

PART NUMBER	DESCRIPTION
ALC/ZPS-SR-BB-NT-D-IN	.....BAPI-Box Pressure with Display, W.C. ranges, No Tube or Probe included
ALC/ZPS-SR-BB-ST-D-IN	......BAPI-Box Pressure with Display, W.C. ranges with Static Pressure Probe
ALC/ZPS-SR-BB-AT-D-IN	......BAPI-Box Pressure with Display, W.C. ranges with Attached Static Tube
ALC/ZPS-SR-BB-NT-D-PA	....BAPI-Box Pressure with Display, Pascal ranges, No Tube or Probe included
ALC/ZPS-SR-BB-ST-D-PA	....BAPI-Box Pressure with Display, Pascal ranges with Static Pressure Probe
ALC/ZPS-SR-BB-AT-D-PA	....BAPI-Box Pressure with Display, Pascal ranges with Attached Static Tube
ALC/ZPS-SR-BB-NT-IN	.........BAPI-Box Pressure without Display, W.C. ranges, No Tube or Probe included
ALC/ZPS-SR-BB-ST-IN	.........BAPI-Box Pressure without Display, W.C. ranges with Static Pressure Probe
ALC/ZPS-SR-BB-AT-IN	.........BAPI-Box Pressure without Display, W.C. ranges with Attached Static Tube
ALC/ZPS-SR-BB-NT-PA	........BAPI-Box Pressure without Display, Pascal ranges, No Tube or Probe included
ALC/ZPS-SR-BB-ST-PA	........BAPI-Box Pressure without Display, Pascal ranges with Static Pressure Probe
ALC/ZPS-SR-BB-AT-PA	........BAPI-Box Pressure without Display, Pascal ranges with Attached Static Tube

Note: Pressure Range and Output Range for these units will be selected in the field.

Part numbers for units with a factory specified range or output

Ordering Information			*Zone Pressure Sensor in a BAPI-Box*				
ALC/ZPS							
	Output Range						
	-20	4 to 20 mA	(7 to 40 VDC Supply ONLY)				
	-05	0 to 5 V	(7 to 40 VDC Supply or 18 to 28 VAC Supply)				
	-10	0 to 10 V	(13 to 40 VDC Supply or 18 to 28 VAC Supply)				
		Pressure Range					
		-SR(range)	Standard Pressure Ranges - *replace (range) with option # shown below*				

Option	Range *(inches W.C.)*	Option	Range *(Pascals)*
71	0 to 1.00	81	0 to 250
72	0 to 2.00	82	0 to 300
73	0 to 2.50	83	0 to 500
74	0 to 3.00	84	0 to 1,000
75	0 to 5.00	85	0 to 1,250
76	-1.00 to 1.00	86	-250 to 250
77	-2.00 to 2.00	87	-300 to 300
78	-2.50 to 2.50	88	-500 to 500
79	-3.00 to 3.00	89	-1,000 to 1,000
80	-5.00 to 5.00	90	-1,250 to 1,250
	Custom Range *(W.C.)* ***		Custom Range *(Pascals)* ***
CI	[x.xx to y.yy]*	CP	[xxxx to yyyy]**

			Enclosure Style	**(Must Select One)**			
			-BB	BAPI-Box Enclosure - IP66 rated, UV-resistant polycarbonate			
				Static Pressure Probe	**(Must Select One)**		
				-NT	No Tube or Probe Included		
				-ST	Static Pressure Probe Included (not attached)		
				-AT	Attached Static Pressure Probe (not available with Back Mount option [-BM])		
					LCD Display (Omit if not required)		
					-D	LCD Display	
					Back Mount Option (Omit if not required)		
					-BM	Back Mount (wires and pressure ports run out the back, not available with Attached Tube option [-AT])	
EXAMPLE							
ALC/ZPS	**-20**	**-SR71**	**-BB**	**-NT**	**-D**	**-BM**	
Example Part Number: ALC/ZPS-20-SR71-BB-NT-D-BM							
Your Part Number:							

*For custom W.C. ranges, x.xx and y.yy can be any pressure from -5.00 to +5.00 inches W.C. However, x.xx must be less than y.yy and y.yy - x.xx must be at least 1 inch. (Example: ALC/ZPS-20-SRCI[0.00 to 3.50]-BB-NT-D-BM)

**For custom Pascal ranges, xxxx and yyyy can be any pressure between -1250 to +1250 Pascals. However, xxxx must be less than yyyy and yyyy - xxxx must be at least 250 Pascals. (Ex: ALC/ZPS-20-SRCP[0 to 750]-BB-NT-D-BM)

***There is a net add of $30 for custom ranges. Multipliers do not apply to net adds. Custom Ranges include a certification of 3 points within the custom pressure range.