

Rev. 01/13/10

Features & Options

- Field Selectable Pressure and Output Ranges
- LCD Displays 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
- Three Year Warranty

BAPI's 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 piezoresistive pressure sensor specifically developed for low pressure. The sensor receives a 5-point error correction over the compensated temperature range for excellent accuracy, repeatability and stability – even at low pressures.

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 in an IP66 rated BAPI-Box enclosure and includes short circuit proof outputs and reverse polarity protected inputs to perform under real world conditions. The unit installs quickly by connecting standard 1/8" or 5/32" I.D. tubing. The Output and Pressure Ranges are 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).

*Some items may not be CE compliant, call BAPI for additional information.

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

Part Number	Description
ZPS-BB-NT-D-IN	... BAPI-Box with Display, inches of W.C. ranges, No Tube or Probe included
ZPS-BB-ST-D-IN	... BAPI-Box with Display, inches of W.C. ranges with Static Pressure Probe
ZPS-BB-AT-D-IN	... BAPI-Box with Display, inches of W.C. ranges with Attached Static Tube
ZPS-BB-NT-D-PA	... BAPI-Box with Display, Pascal ranges, No Tube or Probe included
ZPS-BB-ST-D-PA	... BAPI-Box with Display, Pascal ranges with Static Pressure Probe
ZPS-BB-AT-D-PA	... BAPI-Box with Display, Pascal ranges with Attached Static Tube

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

Specifications

Power:

- 7 to 45 VDC (4-20 mA output)
- 7 to 45 VDC or 7 to 32 VAC (0-5 VDC output)
- 13 to 45 VDC or 13 to 32 VAC (0-10 VDC output)

Load Resistance:

- 0-5 VDC or 0-10 VDC Output - 1 kΩ minimum
- 4-20 mA Output - 850 Ω max @ 24 VDC

Power Consumption:

- 4.9 mA max DC at 0-5 VDC or 0-10 VDC Output
- 0.12 VA max AC at 0-5 VDC or 0-10 VDC Output
- 20 mA max, DC only at 4-20 mA Output

Accuracy:

- ±1% on 0 to 0.1 range and ±0.1 range,
- ±0.5% on other ranges

Stability: ±2 % F.S. (full scale) per year

Temperature Error:

- Zero - ±0.025% F.S. per °C,
- Span - max ±0.03% F.S. per °C

Overpressure: Proof - 5 PSI, Burst - 10 PSI

Wiring:

- 2 (loop powered) or 3 (AC powered) wires¹



Patent Pending



**BAPI-Box (BB)
Enclosure**

Pressure 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.



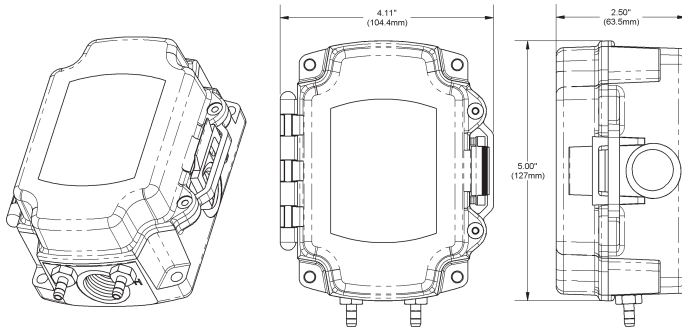
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Enclosure Specifications

Material: ABS Plastic (EU), Polycarbonate (BB)

Encl. Rating: IP66 for EU and BAPI-Box

Environmental Operation Range:

 Temp.: -13 to 176 °F (-25 to 80 °C)
 32 to 140 °F (0 to 60 °C) compensated range
 Humidity: 0 to 95% RH, non-condensing


Having Trouble Fitting Your Pressure Sensor Into Small Spaces?



BAPI's EZ pressure sensor has all the functionality of larger units with only 1/3rd of the footprint. It's also the easiest sensor on the market to install.

For more info, see pgs 2-3.

¹BAPI 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 Zone Pressure Sensor with Display

ZPS			
Output Range			
-20	4 to 20 mA	(7 to 45 VDC Supply ONLY)	
-05	0 to 5 V	(7 to 45 VDC Supply or 7 to 32 VAC Supply)	
-10	0 to 10 V	(13 to 45 VDC Supply or 13 to 32 VAC Supply)	
Pressure Range			
-SR(range)	Standard Pressure Ranges - <i>replace (range) with option # shown below</i>		
	<u>Option</u>	<u>Range (inches W.C.)</u>	<u>Option</u> <u>Range (Pascals)</u>
	01	0 to 0.10	11 0 to 25
	02	0 to 0.25	12 0 to 50
	03	0 to 1.00	13 0 to 300
	04	0 to 2.50	14 0 to 500
	05	0 to 5.00	15 0 to 1,000
	06	-0.10 to 0.10	16 -25 to 25
	07	-0.25 to 0.25	17 -50 to 50
	08	-1.00 to 1.00	18 -300 to 300
	09	-2.50 to 2.50	19 -500 to 500
	10	-5.00 to 5.00	20 -1,000 to 1,000
	<u>Custom Range (W.C.)***</u>		<u>Custom Range (Pascals)***</u>
	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 Measurement Probe Included (not attached)		
-AT	Attached Static Pressure Measurement Probe (BAPI-Box Units Only)		
LCD Display			
-D	LCD Display		
Back Mount Option (Omit if not required)			
-BM	Back Mount (wires and pressure ports run out the back)		
EXAMPLE			
ZPS	-20	-SR01	-EU -NT -D -BM
Example Part Number: ZPS-20-SR01-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 inches. (Example Part #: ZPS-20-SRCI[0.00 to 3.00]-BB-NT-D-BM)

**For custom Pascal ranges, xxxx and yyyy can be any pressure from -1250 to +1250 Pascals. However, xxxx must be less than yyyy and yyyy - xxxx must be at least 25 Pascals. (Example Part #: ZPS-20-SRCP[0 to 100]-BB-NT-D-BM)

***There is a net add of \$100 for custom ranges. Multipliers do not apply to net adds. Custom Ranges include a certification of 3 points within the custom pressure range.