

### Features & Options

- 10 Field Selectable Pressure Ranges
- 3 Field Selectable Outputs, 4-20 mA, 0-5 or 0-10 VDC
- 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
- Mounting Tabs for Easy Installation
- 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 five-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 is available in two rugged, IP66-rated enclosures with 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 to the two pressure ports. 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).

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



Patent Pending



**BAPI-Box (BB)  
Enclosure**



**EU 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.



### Specifications

#### Power:

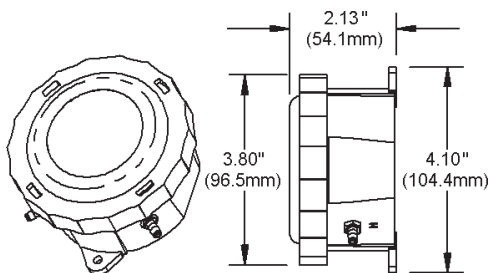
- 7 to 45 VDC (4-20 mA output)
- 7 to 45 VDC or 7 to 32 VAC (0-5 VDC output)
- 13 to 45 VDC or 13 to 32 VAC (0-10 VDC output)

#### Power Consumption:

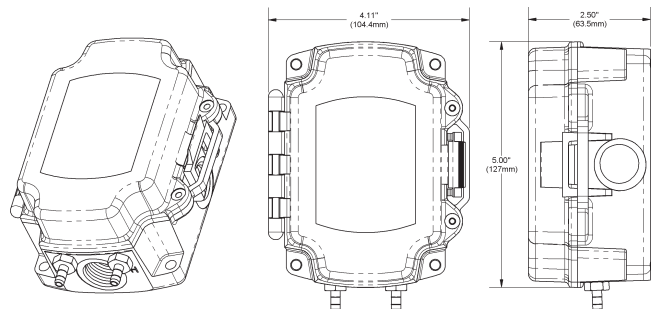
- 4.9 mA max DC at 0-5 VDC or 0-10 VDC Output
- 0.12 VA max AC at 0-5 VDC or 0-10 VDC Output
- 20 mA max, DC only at 4-20 mA Output

#### Load Resistance:

- 0-5 VDC or 0-10 VDC Output - 1 k $\Omega$  minimum
- 4-20 mA Output - 850  $\Omega$  max @ 24 VDC



**EU Enclosure**



**BAPI-Box Enclosure**



# Pressure Sensor with Display

C5

## Zone Pressure Sensors (ZPS)

Rev. 11/07/08

### Specifications

**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

**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

**Wiring:** 2 (loop powered) or 3 (AC powered) wires<sup>1</sup>

### Snaptrack Mountable

BAPI offers a Snaptrack Mountable Zone Pressure Sensor which fits industry standard 2.75" snaptrack.



For more information, see pages C2-3 of this section.

<sup>1</sup>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		Zone Pressure Sensor with Display	
<b>ZPS</b>			
<b>Output Range ‡</b>			
-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)	
<b>Pressure Range ‡</b>			
-SR(range)	Standard Pressure Ranges - replace (range) with option # shown below		
	<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]**
<b>Enclosure Style (EU is standard)</b>			
-EU	Weather Tight Enclosure - IP66 rated ABS polymer enclosure		
-BB	BAPI-Box Enclosure - IP66 rated, UV-resistant polycarbonate		
<b>Optional Static Pressure Probe</b>			
-NT	No Tube or Probe Included		
-ST	Static Pressure Measurement Probe Included (not attached)		
-AT	Attached Static Pressure Measurement Probe (BAPI-Box Units Only)		
<b>LCD Display</b>			
-D	LCD Display		
<b>Mounting Options (for the BAPI-Box Enclosure only)</b>			
-BM	Back Mount (wires and pressure ports run out the back)		
<b>Mounting Options (for the EU Enclosure only)</b>			
-FMK	Field Mounting Kit		
-FM	1/2" conduit adaptor only from the Field Mounting Kit		
-PM	Panel Mount (wires are run out the back rather than the side)		
<b>EXAMPLE</b>			
ZPS	-20	-SR01	-EU    -NT    -D    -FMK
Example Part Number: ZPS-20-SR01-EU-NT-D-FMK			
<b>Your Part Number:</b>			

\*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-SR01[0.00 to 3.00]-EU-NT-D)

\*\*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-SR01[0 to 100]-EU-NT-D)

\*\*\*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.

‡ Custom output ranges and higher accuracy units are available. Contact BAPI for details.