

Zone Pressure Sensors (ZPS)

Rev. 06/21/11

Features & Options

- Field Selectable Pressure Ranges and Outputs
- 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
- Three Year Warranty



Patent Pending



ZPS in the BAPI-Box, with and without Display

BAPI's High 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 sensor with excellent accuracy, repeatability and stability.

The LCD aids in troubleshooting by displaying the actual differential pressure over the entire operational range (0 to 30 W.C. or 0 to 7,400 Pascals) regardless of which individual pressure range is selected for output to the controller.

The unit is available in a rugged, IP66-rated enclosure 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).

Pressure Sensor with Attached Static Tube

The unit is available with an Attached Static Tube so it doesn't require two trades to install the unit. Choose the (-AT) option in the Static Pressure Probe section of the ordering grid at right.



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 at 72 °F: ±0.25% on all ranges**Stability:** ±0.25 % F.S. (full scale) per year**Temperature Error:**

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

Environmental Operation Range: 32°F to 140°F (0°C to 60°C)**Storage Temperature:** -40°F to 203°F (-40°C to 95°C)**Overpressure:** Proof - 2 PSI, Burst - 3 PSI**Wiring:** 2 wires (4-20mA Current loop)

3 wires (AC or DC powered, Voltage out)¹

Humidity: 0 to 95% RH, non-condensing**Port Connection:**

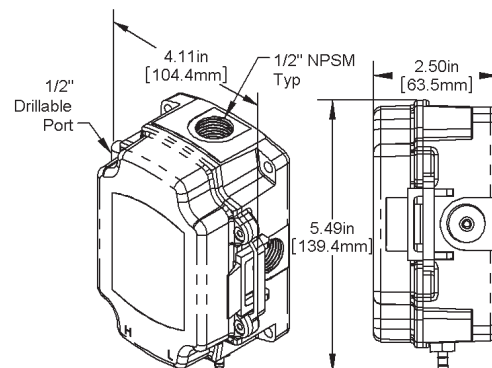
1 High Pressure & 1 Low Pressure for push-on 1/4-inch tubing (1/8" – 3/16" I.D.)

Enclosure Material:

UV-resistant Polycarbonate, UL94, V-0

Enclosure Rating: IP66, NEMA 4**Mounting:**

Four external tabs with holes for #10 screws



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.



High Pressure Sensor (up to 30" W.C.) **C11**

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Datasheets without List Prices are available on our website at www.bapihvac.com

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

PART NUMBER	DESCRIPTION	LIST PRICE
ZPS-HR-BB-NT-D-IN	BAPI-Box High Pressure with Display, inches of W.C. ranges, No Tube or Probe included.....	\$340
ZPS-HR-BB-ST-D-IN.....	BAPI-Box High Pressure with Display, inches of W.C. ranges with Static Pressure Probe	\$340
ZPS-HR-BB-AT-D-IN.....	BAPI-Box High Pressure with Display, inches of W.C. ranges with Attached Static Tube	\$340
ZPS-HR-BB-NT-D-PA ...	BAPI-Box High Pressure with Display, Pascal ranges, No Tube or Probe included	\$340
ZPS-HR-BB-ST-D-PA ...	BAPI-Box High Pressure with Display, Pascal ranges with Static Pressure Probe.....	\$340
ZPS-HR-BB-AT-D-PA ...	BAPI-Box High Pressure with Display, Pascal ranges with Attached Static Tube.....	\$340
ZPS-HR-BB-NT-IN	BAPI-Box High Pressure without Display, inches of W.C. ranges, No Tube or Probe included...	\$340
ZPS-HR-BB-ST-IN	BAPI-Box High Pressure without Display, inches of W.C. ranges with Static Pressure Probe	\$340
ZPS-HR-BB-AT-IN	BAPI-Box High Pressure without Display, inches of W.C. ranges with Attached Static Tube	\$340
ZPS-HR-BB-NT-PA	BAPI-Box High Pressure without Display, Pascal ranges, No Tube or Probe included	\$340
ZPS-HR-BB-ST-PA	BAPI-Box High Pressure without Display, Pascal ranges with Static Pressure Probe.....	\$340
ZPS-HR-BB-AT-PA	BAPI-Box High Pressure without Display, Pascal ranges with Attached Static Tube.....	\$340

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							List Price	Your Order
Zone Pressure Sensor in a BAPI-Box, High Pressure Ranges							\$340	\$ _____
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								
-HR(range)	High Pressure Ranges - replace (range) with option # shown below							
	Option	Range (inches W.C.)	Option	Range (Pascals)				
	31	0 to 5	41	0 to 1,250				
	32	0 to 10	42	0 to 2,500				
	33	0 to 15	43	0 to 4,000				
	34	0 to 25	44	0 to 6,000				
	35	0 to 30	45	0 to 7,400				
Enclosure Style								
-BB	BAPI-Box Enclosure - IP66 rated, UV-resistant polycarbonate						\$0	
Optional Static Pressure Probe								
-NT	No Tube or Probe Included						\$0	
-ST	Static Pressure Probe Included (not attached)						\$0	
-AT	Attached Static Pressure Probe (Not available with Back Mount [-BM])						\$0	
Optional LCD Display (Omit if not required)								
-D	LCD Display						\$0	
Back Mounting Options (Omit if not required)								
-BM	Back Mount (wires and pressure ports run out the back, not available with Attached Static Pressure Probe [-AT])						\$0	
EXAMPLE								
ZPS	-20	-HR31	-BB	-NT	-D	-BM	Total = \$ _____	
Example Part Number: ZPS-20-HR31-BB-NT-D-BM								
Your Part Number:								