

“Touch” Pressure Low Range 0.1” to 1” WC

Zone Pressure Touch (ZPT) Sensors

Rev. 05/09/14

Features & Options

- Touch Interface Through the Cover, No More Dip Switches
- Field Selectable Output, Ranges and WC or Pascal Operation
- Free NIST Certificate with Each Pressure Unit
- 21 Field Selectable Pressure Ranges
- Adjustable Pressure Endpoints for Custom Pressure Ranges

BAPI's “Touch” Low 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 unit has been optimized for pressures below 1” W.C. or 250 Pascals.

The touch interface allows for quick and easy set up of all parameters including auto zero, pressure ranges, output ranges, W.C. or Pascal operation, and display format of pressure, percent output or “On”. You can also use the interface to create custom ranges.

The LCD helps with troubleshooting because it displays the actual differential pressure over the entire operational range (-1 to +1 inches W.C. or -250 to +250 Pascals) regardless of which individual pressure range is selected for output to the system controller.

Patent Pending



“Touch” Low Pressure Sensor in the BAPI-Box

Sensor with Attached Static Tube

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



Specifications

Power:

7 to 40 VDC (4 to 20 mA Output)
7 to 40 VDC or 18 to 32 VAC (0 to 5 or 1 to 5 VDC Output)
13 to 40 VDC or 18 to 32 VAC (0 to 10 or 2 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 1K Ω minimum

Accuracy at 72°F:

$\pm 0.5\%$ of range 0 to 0.1”, 0 to 0.25”, ± 0.1 ” and ± 0.25 ” ranges
 $\pm 0.5\%$ of range 0 to 30 Pa, 0 to 50 Pa, ± 30 Pa and ± 50 Pa ranges
 $\pm 0.25\%$ of range all other ranges

Stability: $\pm 0.25\%$ F.S. per year

Temperature Error:

0.04% FS/°F (0.07% FS/°C) (± 1.0 ” W.C. @ -4 to 140°F [-20 to 60°C])

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

Storage Temperature: -40 to 203°F (-40 to 95°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-inch tubing (1/8” to 3/16” I.D.)

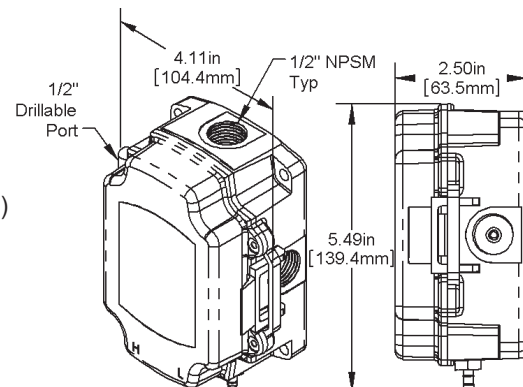
Enclosure Material:

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/ZPT-LR-BB-NT-D	Zone Pressure Touch sensor, Low Ranges, No Tube/Probe included
ALC/ZPT-LR-BB-ST-D	Zone Pressure Touch sensor, Low Ranges, with Static Pressure Probe
ALC/ZPT-LR-BB-AT-D	Zone Pressure Touch sensor, Low 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 Touch sensor in a BAPI-Box, Low Pressure Ranges				
ALC/ZPT	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 32 VAC Supply)			
	-10	0 to 10 V	(13 to 40 VDC Supply or 18 to 32 VAC Supply)			
	-12	2 to 10 V	(13 to 40 VDC Supply or 18 to 32 VAC Supply)			
	-15	1 to 5 V	(7 to 40 VDC Supply or 18 to 32 VAC Supply)			
	Pressure Range					
	-LR(range)	Low Pressure Ranges - replace (range) with option # shown below				
		Option	Range (inches W.C.)	Option	Range (Pascals)	
		51	0 to 0.10	61	0 to 30	
		52	0 to 0.25	62	0 to 50	
		53	0 to 0.50	63	0 to 100	
		54	0 to 0.75	64	0 to 175	
		55	0 to 1.00	65	0 to 250	
		56	-0.10 to 0.10	66	-30 to 30	
	57	-0.25 to 0.25	67	-50 to 50		
	58	-0.50 to 0.50	68	-100 to 100		
	59	-0.75 to 0.75	69	-175 to 175		
	60	-1.00 to 1.00	70	-250 to 250		
	Custom Range (W.C.)***		Custom Range (Pascals)***			
	CI	[0 to y.yy]*	CP	[0 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 Probe (Not available with Back Mount [-BM])				
LCD Display (Must Select, See note **** below)						
	-D	LCD Display				
Back Mounting Options (Omit if not required)						
	-BM	Back Mount (pressure ports run out the back, not available with Attached Static Pressure Probe [-AT])				
EXAMPLE						
ALC/ZPT	-20	-LR51	-BB	-NT	-D	-BM
Example Part Number: ALC/ZPT-20-SRCI[-0.50 to 0.75]-BB-NT-D-BM						
Your Part Number:						

While field technicians can easily set up custom ranges in the field, BAPI will setup custom ranges in our factory. See the notes below for additional information and fees.

*For custom W.C. ranges, x.xx and y.yy can be any pressure from -1.00 to +1.00 inches W.C. However, y.yy - x.xx must be at least ±0.1 inch. (Example: ALC/ZPT-20-SRCI[-0.50 to 0.75]-BB-NT-D-BM)

**For custom Pascal ranges, xxxx and yyyy can be any pressure between -250 to +250 Pascals. However, yyyy - xxxx must be at least ±30 Pascals. (Ex: ALC/ZPT-20-SRCP[0 to 125]-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.

****If you do not wish to view the current pressure on the display, simply leave off the "-D" in the part number. Instead of showing the current pressure, the display will show the word "on".