

Overview

BAPI's EZ Pressure is a true differential pressure transmitter that provides ± 5 Inches W.C. in 10 field selectable ranges (see specifications). BAPI's new EZ base is designed to mount on DIN rail, in Snap Track or be screwed to a surface. Three output ranges of 0 to 5 VDC, 0 to 10 VDC and 4 to 20 mA are also field selectable for all pressure ranges. The wiring terminal block is depluggable. Imperial or metric pressure units are available at time of order.

Product Identification

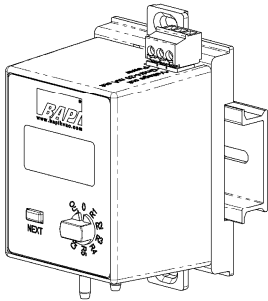


Figure 1: BAPI EZ Pressure on a DIN rail

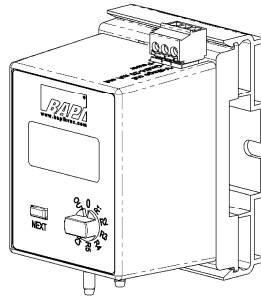


Figure 2: BAPI EZ Pressure in Snap Track

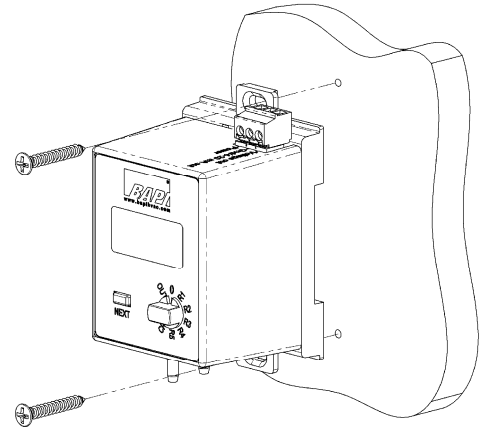


Figure 3: EZ Pressure Screwed to a Surface

Mounting

Mounting Tabs

The EZ Mount Base has mounting tabs that can be extended or pushed in. Figures 4 and 5 show the details.

Din Rail Mounting, Figure 1

- If not showing, pull the blue mounting tabs out as shown in Figure 5.
- Catch EZ mount hook on DIN rail as shown in Figure 6.
- Rotate the EZ pressure module down until the bottom mounting tab snaps into place on the DIN rail.
- Connect wires and pressure lines as needed.

Snap Track Mounting, Figure 2

- If showing, push the blue mounting tabs in as shown in Figure 4.
- The edges of the EZ Mount base will fit into the board slots in 2.75 inch snap track.
- Connect wires and pressure lines as needed.

Screwed to a Surface, Figure 3

- If not showing, pull the blue mounting tabs out as shown in Figure 5.
- Place the EZ Pressure unit against the surface and mark the screw holes.
- Drill 1/8" pilot holes for #8 flathead screws.
- Screw EZ Pressure unit to surface. **Note:** The mounting holes are elongated to allow for alignment.
- Connect wires and pressure lines as needed.

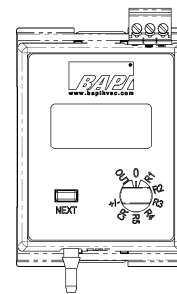


Figure 4: EZ Pressure with mounting tabs pushed in

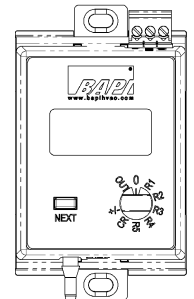


Figure 5: EZ Pressure with mounting tabs extended

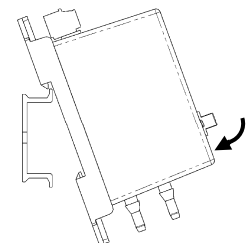


Figure 6: Catch EZ Mount hook on DIN rail before rotating sensor into place

Specifications subject to change without notice.

Wiring Termination

Table 1			
Output	Terminal		
	Power	Gnd/4-20mA out	Voltage out
4-20 mA	DC (see specifications)	To Controller Analog Input	Not Used
Voltage	AC/DC (see specifications)	To Controller Ground	To Controller Analog Input

4 to 20 mA, "two wire" operation

- Connect the EZ Pressure's [Power] terminal to a DC voltage of 7 to 45 VDC.
- Connect the [Gnd/4-20 mA out] terminal to an analog input on your controller
- The [Voltage out] terminal is not used for 4 -20 mA signaling.

0 to 5 V or 0 to 10 V, "three wire" operation

- Connect the EZ Pressure's [Power] terminal to either 7 to 45 VDC or 7 to 32 VAC (0-5 VDC output) or 13 to 45 VDC or 13 to 32 VAC (0-10 VDC output).
- Connect the terminal labeled [Gnd/4-20 mA out] to the controllers ground.
- Connect the [Voltage] out terminal to an analog input configured for voltage input.

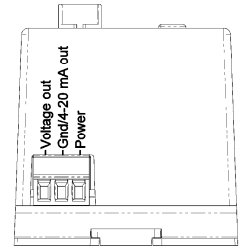


Figure 7: Wiring terminations

Note: The terminals use a rising block screw terminal to hold the wires. It is possible for the block to be in a partially up position allowing the wire to be inserted under the block. Be sure that the connector screws are turned fully counterclockwise before inserting the wire. Lightly tug on each wire after tightening to verify proper termination.

Pressure Connections

The Pressure ports will accept 1/8" or 3/16" inside diameter tubing.

- Connect the high pressure to the port labeled High
- Connect the low pressure to the port labeled Low

Note: Remove blue dust covers from pressure ports before use.

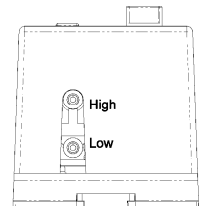


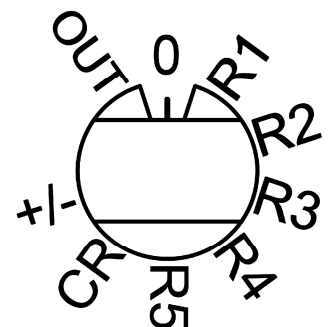
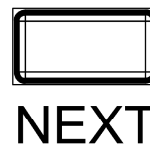
Figure 8: Pressure Connections

The output will be the pressure difference between the high and low port.

Front Panel Operation

Figure 9 shows the front panel controls.

The rotary switch is used to select the pressure range, bi-directional or uni-directional pressure, output range, or auto zero. The notch in the knob skirt indicates the rotary switch position. The rotary switch in Figure 9 is indicating 0 (the numeral zero), showing that the switch is in the Auto Zero position.



Pressing the NEXT button toggles between values when the rotary switch is in the [+/-] bi-directional or uni-directional pressure or [OUT] output range position. The NEXT button is also used to initiate [0] Auto-Zero or change the display mode.

Figure 9: Front Panel Controls

Specifications subject to change without notice.

Auto-Zero Select

- Connect the high and low ports together with a short length of tubing, do not allow any kinks in the tubing.
- Place the rotary switch into the [0] position, the display will show Aut0.
- Press the NEXT button, the display will show a series of progress bars. Starting with one bar and ending with four.
- When the Auto-Zero process is complete the display will show "done" for approximately 4 seconds, then Aut0.
- Return the rotary switch to the pressure range you need.

Table 5

Rotary Switch Position	Display		
	Start	Push NEXT button	Complete
	Aut0		done

Pressure Range Select

Rotate the rotary switch to any of the positions labeled R1 through R5 or CR (Custom Range). The display will show the pressure range for 2 to 4 seconds, and then the display shows the differential pressure across the ports. Imperial or metric pressure units are available at time of order.

Table 2

Rotary Switch Position	Display	
	Inches W.C.	Pascals
	0.1 In	25 Pa
	0.25 In	50 Pa
	1.0 In	300 Pa
	2.5 In	500 Pa
	5.0 In	1000 Pa
	Cu.	Cu.

Note: Custom Range units will have the pressure range printed on the label.

All pressure ranges can be made bi-directional.

- Place the rotary switch into the [+/-] position, the current mode will show on the display.
- Press the NEXT button until the mode you need is showing on the display.
- Return the rotary switch to the pressure range you need.

Table 3

Rotary Switch Position	Unidirectional Pressure	Bidirectional Pressure
	Un 1	-b 1

Specifications subject to change without notice.

Output Range Select

- Place the rotary switch into the [OUT] position.
- Press the NEXT button until the output range you need is showing on the display.
- Return the rotary switch to the pressure range you need.

Table 4

Rotary Switch Position	Display		
	4 to 20 mA output	0 to 5 VDC Output	0 to 10 VDC Output
	4-20	0-5	0-10

Display Mode Select

At time of order if you requested a display model the four-digit display shows the applied pressure from -5.0 inches W.C. to +5.0 inches W.C. or -1,000Pa to +1,000 PA, depending on model. If you requested a non-display model the four-digit display simply shows On. At any time you may toggle the Display Mode from one to another by following the procedure below.



Figure 10: Rotary Switch Position for Display Mode Selection

- Place the rotary switch into the blank position, see Figure 10, the display will show either In or Pa depending on model
- Press and hold the NEXT button until the display reads On (approximately 7 seconds)
- The unit will now be in the opposite display mode
- Return the rotary switch to the pressure range required

Specifications

Power:

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

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

Stability: ±2% F.S. per year

Temperature Error: ±2% of Span max (±5.0 in W.C. @ 0 to 60°C)

Overpressure: Proof 1 PSI, Burst 1.5 PSI

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

Environmental Operation Range:

- 13°F to 176°F (-25°C to 80°C)
- 32°F to 140°F (0°C to 60°C) compensated range

Humidity: 0 to 95% RH, non-condensing

Mounting: BAPI's EZ Mount for 35mm DIN Rail, 2.75" Snaptrack or Surface mount

Ranges: Imperial or metric pressure units are available at time of order.

Range	Inches Unit		Pascal Unit	
	0 to	±	0 to	±
R1	0 to 0.1 in W.C.	± 0.10 in W.C.	0 to 25 Pa	± 25Pa
R2	0 to 0.25 in W.C.	± 0.25 in W.C.	0 to 50 Pa	± 50Pa
R3	0 to 1.00 in W.C.	± 1.00 in W.C.	0 to 300 Pa	± 300Pa
R4	0 to 2.50 in W.C.	± 2.50 in W.C.	0 to 500 Pa	± 500Pa
R5	0 to 5.00 in W.C.	± 5.00 in W.C.	0 to 1,000 Pa	± 1,000Pa

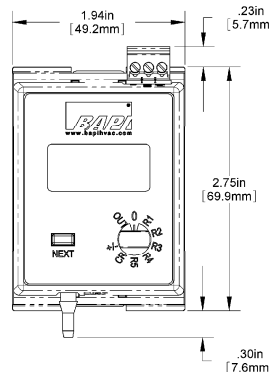


Figure 11: Dimensions with mounting tabs pushed in

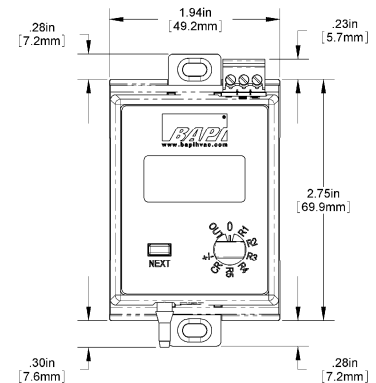


Figure 12: Dimensions with mounting tabs extended

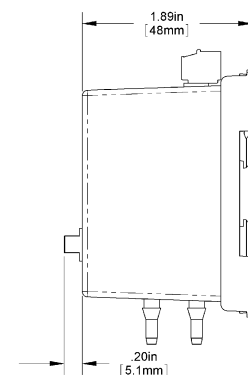


Figure 13: Dimensions side view

Specifications subject to change without notice.