



# BetaGauge Pressure Modules

## High Accuracy Digital Modules

### Features:

- 29 standard ranges
- Gauge, vacuum, absolute, compound, and differential measurements
- Accuracy specified over 15 °C to 35 °C range
- Isolated and non-isolated measurements, range dependant

### Description:

Martel Electronics offers 29 standard pressure modules, covering gauge, vacuum, absolute, compound, and differential measurements. All modules are directly compatible with the BetaGauge II. With the Model BPPA-100 BETA Port Pressure Adapter, all modules are fully compatible with the Martel MC-1200 and MC-1000 Multi-Function Calibrators, the BetaGauge 330, 321, 311 and 301 Pressure Calibrators, the DMC-1400 Documenting Multi-Function Calibrator, and the Martel Electronics M2001 and 3001 Laboratory/Bench Standards. Pressure ranges may be displayed in any of 13 user-selectable units. The choice of pressure unit may be restricted by limitations on resolution of the instrument display of the particular calibrator the module is used with.



For optimum mechanical strength, external pressure connection is made by a 1/8" FNPT 316SS connector welded to a stainless steel metal plate.



Model BPPA-100 BETA Port Pressure Adapter



## BetaPort-P Pressure Module Specifications (all % of Full Scale)

Parameter/Range	Positive <sup>1</sup> Accuracy	Vacuum Accuracy	Over-Pressure	Notes
<b>Isolated Gauge (PSIG)<sup>2</sup></b>				
0 to 15 (0 to 1 Bar)	±0.025%		300 %	
0 to 30 (0 to 2 Bar)	±0.025%		300 %	
0 to 500 (0 to 35 Bar)	±0.025%		200 %	
0 to 1000 (0 to 70 Bar)	±0.025%		200 %	
0 to 1500 (0 to 100 Bar)	±0.035%		200 %	
0 to 3000 (0 to 200 Bar)	±0.05%		200 %	
0 to 5000 (0 to 340 Bar)	±0.05%		200 %	
0 to 10000 (0 to 700 Bar)	±0.1%		120 %	
<b>Isolated Absolute (PSIA)<sup>2</sup></b>				
0 to 15 (0 to 1 Bar)	±0.04%		300 %	
0 to 30 (0 to 2 Bar)	±0.025%		300 %	
0 to 50 (0 to 3.5 Bar)	±0.03%		300 %	
0 to 100 (0 to 7 Bar)	±0.025%		300 %	
0 to 300 (0 to 20 Bar)	±0.025%		200 %	
<b>Non Isolated Compound (PSIG)<sup>2</sup></b>				
-0.4 to 0.4 (-20 to 20mBar)	±0.1%	±0.15%	400 %	
-1 to 1 (-70 to 70 mBar)	±0.05%	±0.1%	400 %	
-5 to 5 (-350 to 350 mBar)	±0.075%	±0.1%	400 %	
-7.2 to 7.2 (-500 to 500 mBar)	±0.07%	±0.1%	300 %	
-10 to 10 (-700 to 700 mBar)	±0.03%	±0.05%	300 %	
-15 to 15 (-1 to 1 Bar)	±0.04%	±0.04%	300 %	
-15 to 30 (-1 to 2 Bar)	±0.025%	±0.025%	300 %	
<b>Isolated Compound (PSIG)<sup>2</sup></b>				
-12 to 50 (-0.8 to 3.5 Bar)	±0.03%	±0.03%	300 %	
-12 to 100 (-0.8 to 7 Bar)	±0.025%	±0.025%	300 %	
-12 to 150 (-0.8 to 10 Bar)	±0.03%	±0.03%	200 %	
-12 to 300 (-0.8 to 20 Bar)	±0.025%	±0.025%	200 %	
<b>Differential (PSID)<sup>2</sup></b>				
0 to 5 (0 to 350 mBar)	±0.075%		400 %	3
0 to 30 (0 to 2 Bar)	±0.025%		300 %	3
0 to 50 (0 to 3.5 Bar)	±0.03%		300 %	3

### Notes:

- Accuracy is percent of full scale range, over the 15 °C to 35 °C temperature range. Includes the pressure/temperature hysteresis in psi. The accuracy statement shown in the specification table is the base accuracy from 15 °C to 35 °C. Outside this temperature range, add an additional ±0.0015% of FS per °C. (For the 0.3 and 1psi ranges add an additional ±0.005% of FS per °C) To calculate the allowed deviation of a particular BetaPort-P Pressure Module, use the following formula: Deviation = ±%FS , ±T/P H, ±tempco Where ±T/P H = thermal/pressure hysteresis in psi where applicable, And ±tempco = ±0.0015% FS/°C when the temperature is outside the 15-35 °C temperature range
- The Gauge, Vacuum, and Compound type range measurements are relative to atmospheric pressure. The Absolute type is a measurement made relative to absolute zero (perfect vacuum). The Differential type is a measurement made relative to the pressure applied to the low-pressure port of the module.
- The maximum static pressure is 200 psig (14 bar).