



BetaGauge II

Field-Portable, Precision Calibration, Hot-Swappable Range Modules, AND Documenting

Features:

- Available pressure ranges - any two companion modules
- DC electrical measurements; 0.01% accuracy
- Pressure measurements; $\pm 0.025\%$ FS
- 128 by 128 pixel, 63 by 63 mm LCD display with on-demand backlighting
- Pressure displayed in 13 standard engineering units
- MIN/MAX recall
- %Error
- Field Calibrator Interface Standard (FCINTF) compatible
- ESD protection on all pins; EMI shielding
- Intrinsically safe; Class 1, Division 2, Groups A, B, C, and D
- CE approved; EC92 compliant

Description:

The BetaGauge II is a two-channel pressure calibrator, with interchangeable modules for measuring a variety of pressure ranges and DC electrical signals.

The BetaGauge II becomes a documenting calibrator when used with our versatile, menu-driven, PC-based ProCAL Software. Used together, they can create a centralized database, with a history for every pressure instrument and pressure I/O loop in your plant, with minimal guesswork and data entry. The BetaGauge II's RS232 port also permits use with key software programs from manufacturers like Cornerstone, Honeywell Loveland, Emerson AMS, and others.

The BetaGauge II uses two independent, hot-swappable, field changeable pressure modules, available in a wide variety of pressure ranges to redefine calibrator versatility. Changing ranges is as easy as plugging in new input modules, which can be done even while the unit is powered up. The



BetaGauge II automatically recognizes the signals and assigns them to the proper channel. This plug-in design simplifies maintenance, too. The base unit needs no recalibration; only the input modules do. That means you never have to be out of service — you send only the out-of-calibration modules back to the shop, while continuing to use the BetaGauge II in the field. For optimum mechanical strength, external pressure connection is made by a 1/8" FNPT 316SS connector welded to a stainless steel metal plate.

The BetaGauge II is supplied with a standard voltage/current input module, an external battery pack (NiCd, rechargeable) and trickle charger, test leads, manual, carrying case, and 9-pin D shell serial cable.



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

Parameter/Range	Positive ¹ Accuracy	Vacuum Accuracy	Over-Pressure	Notes
Isolated Gauge (PSIG)²				
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 %	
Isolated Absolute (PSIA)²				
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 %	
Non Isolated Compound (PSIG)²				
-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 %	
Isolated Compound (PSIG)²				
-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 %	
Differential (PSID)²				
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).