

Beta Gauge PI

Precision Digital Pressure Test Gauge



**Single-handed
process validation**

The BetaGauge PI Digital Pressure Test Gauge takes the concept of an analogue Test Gauge, and brings it to a new level, as only Beta Calibrators can do. The Beta Gauge PI. combines the accuracy of digital technology with the simplicity of an analogue gauge and achieves performance, ease-of-use, and a feature set unmatched in the pressure measurement world.

Setup of the BetaGauge PI. is fast and straightforward, through a menu-driven display, with minimal text, and intuitive functions that are simple enough to allow the gauge to be used anywhere in the world, without the need for multilingual displays. Ease-of-use, performance, and features set the BetaGauge PI. Digital Pressure Test Gauge apart, just as you've come to expect from Martel Electronics!

The BetaGauge PI. first and foremost, provides 0.05% of full scale readings of pressure in any one of eight (8) ranges. Readings may be displayed in any one of seventeen (17) ranges, 18 standard engineering units, or, in 1 custom unit you define, to eliminate tedious conversion calculations.

The 5-1/2 digit, 0.65" high digital display and companion percent-of-range bar graph provide an easy to read display, even from a distance. A number of features provide additional ease of use. The reading sample rate can be user-adjusted to match the type of measurement required. A power saving mode allows the Beta Gauge PI. to enter a

"sleep" mode, where the display is frozen between readings, maximizing battery life to 2,000 hours. A MIN/MAX function is provided which instantly recalls the minimum and maximum pressure readings that have been automatically stored by the BetaGauge PI. An auto power shutoff feature may be enabled for a preset time interval to extend battery life.

Password-protected field calibration of the BetaGauge PI. may be initiated through the keypad. An RS232 port allows pressure reading data to be extracted directly from the gauge for off-line analysis. (Requires Martel RS232 cable (P/NC232SJ).) In addition to a ZERO function that compensates for sensor drift, large residual system pressures can be nulled using the TARE adjustment. This adjustment, when combined with the ability to create custom engineering units for display, allows the BetaGauge PI. to be used in a variety of liquid level and volume measurements, easily reading units of interest, such as gallons in a tank, directly. Damping can be set to integrate readings to accommodate pulsating sources, such as plant air. An optional external 24 VDC power input is available for applications where the Beta Gauge PI. will be permanently incorporated into a process line. A protective rubber boot is standard to help protect the BetaGauge PI. from damage when dropped. The Beta Gauge PI. is available in a self-contained calibration kit, including a hand pressure pump, and associated fittings.

General Features

- Accuracy of $\pm 0.05\%$ of F.S.
- Temperature compensated accuracy over 0 to 50°C
- 17 standard pressure ranges available
- Displays in 18 standard or 1 custom engineering unit
- Displays ambient temperature in °C or °F
- Large, back-lit, 5-1/2 digit display with 0.65" high digits and 20 segment bar graph
- Rugged stainless steel case meets NEMA 4/IP65
- MIN/MAX recall
- Adjustable TARE zeros large system offsets
- User-configurable sample rate maximises measurement performance and battery life
- User-configurable damping smooths readings from pulsating/plant air sources
- Auto Shut-off for extended battery life
- Low battery indicator
- CSA intrinsically safe, Class1, Div. 2 Groups A, B, C & D; ATEX approved; CE approved
- Available with optional 24 V external power input
- Rubber boot standard on all stand-alone bottom mount gauges

Beta Gauge PI

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Specification (0°C to +50°C, unless otherwise noted)

PRESSURE RANGES	
Input pressure ranges	1psi*/70mBAR; 15psi/1BAR, 30psi/2BAR; 100psi/7BAR; 300psi/20BAR; 500psi/30BAR; 1,000psi/70BAR; 2,000psi/140BAR; 3,000psi/200BAR; 5,000psi/300BAR; 10,000psi/700BAR; -15to+15psi*; -15to+30psi*
Absolute ranges	15psia, 30psia, 100psia, 300psia
ACCURACY	
	±0.05% FS positive pressure ±0.1% FS for 1.0 psi
TEMPERATURE COMPENSATION	
	0°C to +50°C (32°F to +122°F) to rated accuracy
STANDARD ENGINEERING UNITS	
	PSI, Bar, Kg/cm2, inH2O (4°C, 20°C or 60°F), ftH2O (4°C, 20°C or 60°F), cmH2O (4°C and 20°C), mH2O (4°C and 20°C), Kpa, mbar, inHg, mmHg, TORR
MEDIA COMPATIBILITY	
	liquids and gases compatible with 316 stainless steel; except for ranges marked * above
ENVIRONMENTAL	
Operating Temperature	-10°C to +55°C
Storage	-20°C to +70°C (-4°F to +158°F)
MECHANICAL	
Dimensions	11.1 x 12.7 x 3.8 cm
Input Port	1/4" male NPT
DISPLAY	
5 Digits	0.65" (16.53 mm) height
Bar Graph	0 to 100% in 20 segments
Power	
Battery	three(3), size AA alkaline batteries
Battery Life	1,500 hours without backlight; 2,000 hours at slow sample rate; battery life can be displayed on bar graph to indicate the amount of time left
Low Battery Indicator	displayed icon near the end of battery life
INCLUDES	
	manual, batteries



Ordering Information

BetaGauge PI

Pressure range

001 = 1 psi*/70 mBAR,
 015 = 15.000psi/1BAR
 030 = 30.000psi/2BAR
 100 = 100.00psi/7BAR
 300 = 300.00psi/20BAR
 500 = 500.00psi/30BAR
 01K = 1,000.00psi/70BAR
 02K = 2,000.0psi/140BAR
 03K = 3,000.0psi/200BAR
 5K = 5,000.0psi/300BAR
 10K = 10,000psi/700BAR
 015C = -15 to +15 psi*
 030C = -15 to +30 psi*

Port position

___(leaveblank) = Bottom (standard)
 RM = Back (option)

Kit (includes Beta Gauge PI, case, rubber boot, pressure calibration hand pump, hose and fittings)

Kit 5 = MECP 500 pneumatic test pump (500psi and below)

Kit 3 = MECP 10K hydraulic test pump (above 500psi)

24 = OPTIONAL: External 24 VDC Power Input

BetaGauge PI -



MECP10K kit
 Pump Kits shown with optional
 Beta Gauge PI Digital Test Gauge.

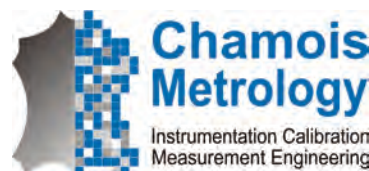


MECP500 kit
 Pump Kits shown with optional
 Beta Gauge PI Digital Test Gauge.



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All devices can be supplied with a
 UKAS accredited calibration
 certificate from our laboratory.



Instrumentation Calibration
 Measurement Engineering

Chamois Metrology Limited

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