



BetaGauge PI Reference Class Digital Test Gauge

Features:

- The most accurate digital test gauge available with accuracy of $\pm 0.04\%$ of reading $\pm 0.01\%$ F. S.
- Temperature compensated accuracy over 0 to 50 °C
- Standard available pressure ranges — 30 PSI Compound (C/V), 30 psi, 100 psi, 500 psi, 1000 psi, 3000 psi, 5,000 psi, 10,000 psi
- Displays in 20 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 maximizes 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, Class 1, Div. 2 Groups A, B, C & D; ATEX approval pending; CE approved
- Available with optional 24 V external power input
- Rubber boot standard on all stand-alone bottom mount gauges

Description:

As with the original high accuracy BetaGauge PI gauges, the BetaGauge PIR takes the concept of a simple analog Test Gauge and combines it with the accuracy of digital technology. The new Reference Class gauges provide exceptional performance with $\pm 0.04\%$ of reading accuracy, especially when operated below 50% of their range.

The Reference Class BetaGauge PIR digital test gauges are available in eight ranges — 30 psi Compound, 30 psig, 100 psig, 500 psig, 1,000 psig, 3,000 psig, 5,000 psig, 10,000 psig. Setup of the BetaGauge PIR is fast and straightforward, through a menu-driven display, with minimal text and intuitive functions, that is simple enough to allow the gauge to be used anywhere in the world without the need for multilingual displays. Pressure readings are displayed in any one of 18 standard engineering units, or in user-defined custom units, eliminating tedious conversion calculations. Readings are displayed on a 5-1/2 digit, 0.65" high digital display



and companion percent-of-range bar graph. Accuracy is temperature-compensated over a 0 to +50 °C range. The internal temperature sensor measurement can be displayed in degrees Celsius or Fahrenheit.

The BetaGauge PIR provides an unmatched feature set, offering the user many options for ease-of-use. The reading sample rate can be adjusted to match the type of measurement, such as for pressure switch threshold points, instrument-grade readings, filtered readings, and a power-saving 1 reading per 2 seconds "sleep" mode. A MIN/MAX function instantly recalls pressure reading extremes. In addition to a Zero function, large residual system pressures can be nulled using the TARE adjustment. When combined with custom engineering units, the TARE adjustment allows the BetaGauge PIR to be used in a variety of liquid level and volume measurements, easily reading units of interest directly, such as gallons in a tank. Password-protected field calibration may be initiated through the keypad. An auto shutoff feature may be enabled for a preset interval to extend battery life. Damping can be set to integrate readings to accommodate pulsating sources, such as plant air. An RS232 port allows pressure reading data to be extracted directly from the gauge for off-line analysis. A protective rubber boot is provided as standard to help protect the gauge from damage if dropped.

A number of options are available for the BetaGauge PIR Digital Pressure Gauge making the gauge suitable in virtually any application. An optional 24 VDC external power input is available for applications where the gauge will be permanently incorporated into a process line. A self-contained calibration kit is available which includes a BetaGauge PIR, hand pressure pump, and associated fittings.

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

Input Ranges

30 PSI Compound (C/V), 30 psi, 100 psi, 500 psi,
1000 psi, 3000 psi, 5000 psi, 10,000 psi

Accuracy

±0.04% of reading, ±0.01% FS
Vacuum accuracy of the compound range is 0.1% of the
30 psi full scale. Vacuum measurement not calibrated
for other ranges.

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),
ft H₂O (4 °C, 20 °C or 60 °F), mmH₂O, 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; 30 C/V range non-corrosive gases and liquids

Environmental

Operating Temperature
-10 °C to +55 °C

Storage
-20 °C to +70 °C (-4 °F to +158 °F)

Mechanical

Dimensions
4.375" x 5.0" x 1.50"

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

Order #				
BetaGauge-PI	-Rxxx	-x	-Kitx	-24
30 psi compound (C/V), xxx=C30; 30 psi, xxx=030; 100 PSIG, xxx=100; 500 PSIG, xxx=500; 1000 PSIG, xxx=01K; 3000 PSIG, xxx=03K; 5000 PSIG, xxx=05K; 10000 PSIG, xxx=10K				
Port Position Bottom (standard); x = ___ (leave blank); Back (option); x = RM				
Kit (includes BetaGauge PI, case, rubber boot, pressure calibration hand pump, hose and fittings) With MECP500 pneumatic test pump (500 psi and below); Kit5 With MECP10K hydraulic test pump (above 500 psi); Kit3				
OPTIONAL: External 24 VDC Power Input				

