

*Calibration Technology Starts Here*

*Value-oriented,  
general-purpose pressure calibrator*

*Accuracy  
by  
Any  
Measure*



## BetaGauge 301

### The BetaGauge 301

The 301 is a single sensor pressure calibrator offering great performance at  $\pm 0.05\%$  accuracy. It combines pressure with milliAmp and Voltage measurement capabilities, as well as a built-in loop power supply to power transmitters under test. With an optional BPPA-100 adapter, the 301 can even use industry standard BetaPort-P high performance pressure modules. A large backlit display can be configured to show one, two or three variables. Another advanced feature not normally seen in this price range is the ability to easily perform pressure switch tests. The calibrator automatically captures and displays set and reset values. Pressure readings can be displayed in a number of engineering units including PSI, inches of water (with selectable temperature compensation), Bar, mBar, cmH<sub>2</sub>O, kPa and others including a User Defined option. Other features include remote operation via the RS-232 serial port; power from 4 AA Alkaline batteries, standard carrying case and test leads. A range of pressure pumps and pump kits are also available for a full pressure calibration package. The BetaGauge 301 is supplied with carrying case, test leads, instruction manual, set of four AA alkaline batteries, and a calibration certificate. Kits include the BetaGauge 301 Pressure Calibrator, carrying case, pneumatic pump, connections and fittings.

### General Features

- Full scale accuracy on all pressure ranges of  $\pm 0.05\%$  FS
- Temperature compensation ensures accuracy in the field with no temperature effect over 18 °C to 23 °C
- Standard available pressure ranges — 1, 5, 30, 100, or 300 psi
- 4-20 mA measurement input
- DC Voltage measurement input range 0 to 30 V
- Internal 24 V Loop Power Supply
- Displays in 19 standard engineering units plus one user-defined
- Large graphic style LCD with backlight can be configured to display up to 3 inputs simultaneously
- External pressure module connection supports all BETA Port-P pressure modules (29 ranges)
- Switch test on Pressure (internal or external)
- Up to five frequently used setups can be stored; last setup automatically recalled on power-up
- % Error and damping functions



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

#### Input Ranges

1 psi, 5 psi, 30 psi, 100 psi, 300 psi

#### Accuracy

All pressure ranges ±0.05 % FS

4-20 mA measurement ±0.015 % of rdg; ±0.002 V

#### Temperature Compensation

18 °C to 23 °C (64 °F to +73 °F) to rated accuracy

#### Standard Engineering Units

psi, bar, mbar, kPa, kgcm<sup>2</sup>, mmH<sub>2</sub>O@4°C, mmH<sub>2</sub>O@20°C, cmH<sub>2</sub>O@4°C, cmH<sub>2</sub>O@20°C, mH<sub>2</sub>O@4°C, mH<sub>2</sub>O@20°C, inH<sub>2</sub>O@4°C, inH<sub>2</sub>O@20°C, inH<sub>2</sub>O@60°F, mmHg@0°C, inHg@0°C, ftH<sub>2</sub>O@4°C, ftH<sub>2</sub>O@20°C, ftH<sub>2</sub>O@60°F

#### Media Compatibility

liquids and gases compatible with 316 stainless steel

#### Environmental

Operating Temperature -10 °C to +55 °C

Storage -20 °C to +60 °C (-4 °F to +140 °F)

#### Mechanical

Dimensions 21 cm H x 10 cm W x 4.6 cm D  
(8.3" H x 3.9" W x 1.8"D)

Weight 1 lb., 4 oz. (0.57 kg)

#### Input Ports

Pressure (1) J" FNPT, BetaPort-P pressure module, std. banana jacks for mA and V.

#### Display

Large, backlit, configurable display for 1, 2 or 3 variables

#### Power

Battery four (4), size AA alkaline batteries

Battery Life >35 hours continuous typical usage

#### Accessories (included):

carrying case, test leads, instruction manual, set of four AA alkaline batteries, and a calibration certificate.

Kits include the BetaGauge 301 Pressure Calibrator, carrying case, pneumatic pump, connections and fittings.



Order #	Description and Range
BG301-1	BetaGauge 301, 1 psi
BG301-5	BetaGauge 301, 5 psi
BG301-30	BetaGauge 301, 30 psi
BG301-100	BetaGauge 301, 100 psi
BG301-300	BetaGauge 301, 300 psi
BG301K-1	1 psi with MECP100 Pump
BG301K-5	5 psi with MECP100 Pump
BG301K-30	30 psi with MECP100 Pump
BG301K-100	100 psi with MECP100 Pump
BG301K-300	300 psi with MECP500 Pump



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