

30 Series

Wide Range Pressure Calibrators

Features

- ◆ **The Most Versatile**
One 33 can measure vacuum to 3000 PSI - without extra modules. Measure milliamps, too.
- ◆ **Unparalleled Field Performance**
 $\pm 0.05\%$ of reading accuracy - not affected by temperature from 0°C to 50°C (32°F to 122°F).
- ◆ **Tough**
Aluminum case, stainless steel sensors.
- ◆ **The Smallest**
 $\frac{1}{3}$ the size of any competing product.
- ◆ **Intrinsically Safe**
Class I, Groups A, B, C, and D, EEx ia IIC, T4.
- ◆ **The Easiest to Use**
Single-function keys.
- ◆ **Long Battery Life**
Runs for 90 hours. Uses **one** 9V battery.

PRESSURE
is Our
BUSINESS™

*Why carry a toolbox of
gauges and modules?...*



*...when a Crystal Calibrator
can do the whole job?*

Pressure Calibrator

30 Series Wide Range Pressure Calibrators

The smallest Crystals are shirt pocket size, but they're our toughest yet with an unbreakable aluminum case. They're our most versatile too, capable of measuring pressures from $^2\text{H}_2\text{O}$ all the way up to 3000 PSI and vacuum.

There are a variety of models to choose from. Model 31's have one sensor, Model 33's have two. **All sensors are built-in, stainless steel, gas and liquid compatible**, with an accuracy of $\pm 0.05\%$ of reading. All models measure milliamps (that can also be displayed in 0 to 100% for 4 to 20 or 10 to 50 milliamps), have an RS-232 port and come with a carrying case. **And, they're intrinsically safe.**

Every 30 Series instrument is tested and calibrated in an environmental chamber, duplicating field conditions. **That's why the specifications (including milliamps) are not derated for temperature!**

Last, but not least, a **single 9V battery** provides **90 hours** of continuous operation. **You won't find better performance or value in any size!**



Specifications

Notes: Specifications are for one year and include all effects of linearity, hysteresis, repeatability, and temperature.
Installed sensor depends on model. See ordering information below.

Pressure

LP (Low) Pressure Port

Accuracy:
0 to Full Scale: $\pm(0.05\%$ of Reading + 0.005% of Full Scale)
0 to -14.7 PSIG: $\pm(0.25\%$ of Reading + 0.004PSI)

HP (High) Pressure Port

Accuracy: $\pm(0.05\%$ of Reading + 0.005% of Full Scale)

Media Compatibility

Liquids and gases compatible with PTFE (Polytetrafluoroethylene) penetrated, hard anodized, aluminum transducer housing, 316 stainless steel (sensor), Viton® (O-ring). (Viton is a registered trademark of Dupont Dow Elastomers.)

Your unit can have one or more of the following pressure ranges:

Full Scale (PSIG)	Port	Displayed Over-Range (PSIG)	Maximum Pressure (PSIG)	Resolution/Scale
16	LP	18	100	0.01 ² H ₂ O; 0.001 PSI; 0.01 kPa; 1 mmH ₂ O; 0.01 mmHg; 0.001 ² Hg; 0.0001 kg/cm ² ; 0.1 mbar
36	LP	40	100	0.01 ² H ₂ O; 0.001 PSI; 0.01 kPa; 1 mmH ₂ O; 0.01 mmHg; 0.001 ² Hg; 0.0001 kg/cm ² ; 0.1 mbar
300	HP	330	450	0.1 ² H ₂ O; 0.01 PSI; 0.1 kPa; 1 cmH ₂ O; 0.1 mmHg; 0.01 ² Hg; 0.001 kg/cm ² ; 0.001 bar
1500	HP	1650	4500	0.1 PSI; 0.01 bar; 1 kPa; 0.01kg/cm ² ; 0.001 Mpa
3000	HP	3300	4500	0.1 PSI; 0.01 bar; 1 kPa; 0.01kg/cm ² ; 0.001 Mpa

*Standard factory calibration is 1²H₂O @ 4°C = 0.036126 PSI. Specify at time of order if your required conversion is different from standard (e.g., for water @ 68°F, 1²H₂O = 0.036063 PSI).

Specifications subject to change without notice.
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All 30 Series

Temperature Ranges

Operating & Compensated: 0°C to 50°C (32°F to 122°F)
Storage: -20°C to 70°C (-4°F to 158°F)

Electrical

Range: 0 to 55mA
Resolution: 0.001mA
Accuracy: $\pm(0.025\%$ of reading + 0.001mA)
Percentage conversion: 4mA = 0.00%, 20mA = 100.00% or
10mA = 0.00%, 50mA = 100.00%

Connections

Pressure Fitting: 1/8" female NPT
Electrical connection: 4mm jacks, 19mm (0.75") spacing

Power

Battery: One 9V carbon or alkaline battery
Battery Life: 90 hours typical (alkaline battery)
Low Battery Indicator: Displayed battery icon

Enclosure

Description: Extruded aluminum with single function sealed membrane keypad.
Dimensions: 29mm (1 1/8") D x 70mm (2 3/4") W x 130mm (5 1/8") L
Weight: Model 33 - 382g (13.5oz.); Model 31 - 342g (12.1oz.)

Intrinsically Safe Certifications

CSA: Intrinsically Safe, Entity - for Hazardous Locations Class I, Groups A, B, C and D
CENELEC: EEx ia IIC, T4

Ordering Information

Part Numbers:	LP	HP
IS31-16PSI	16 PSI	n/a
IS31-36PSI	36 PSI	n/a
IS31-300PSI	n/a	300 PSI
IS31-1500PSI	n/a	1500 PSI
IS31-3000PSI	n/a	3000 PSI
IS33-16/300PSI	16 PSI	300 PSI
IS33-16/1500PSI	16 PSI	1500 PSI
IS33-16/3000PSI	16 PSI	3000 PSI
IS33-36/300PSI	36 PSI	300 PSI
IS33-36/1500PSI	36 PSI	1500 PSI
IS33-36/3000PSI	36 PSI	3000 PSI

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