

30 Series Wide Range Pressure Calibrators

Why Carry A Toolbox of Gauges and Modules?



*When a Crystal Calibrator
Can Do the Whole Job!*

PRESSURE
is Our
BUSINESS™

CRYSTAL
engineering corporation

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 10 Pa / 0.1mBar / 0.01"H₂O all the way up to 200 bar/ 20 MPa / 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, 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! A single 9V battery provides 90 hours** of continuous operation.

You won't find better performance or value in any size!

Specifications

Specifications are for one year and include all effects of linearity, hysteresis, repeatability, and temperature.

Pressure

0 to Full Scale: $\pm(0.05\%$ of Reading + 0.005% of F.S.)

Vacuum (Applies to 300 PSI, 20 bar, 2000 kPa, or lower ranges only.)
0 to -14.7 PSIG: $\pm(0.25\%$ of Reading + 0.004 PSI)

100 kPa range only:

0 to Full Scale: $\pm(0.05\%$ of Reading + 0.01 kPa)
0 to -99.9 kPa: $\pm(0.25\%$ of Reading + 0.025 kPa)

Pressure Fitting(s): 1/8" female NPT

Media Compatibility

Liquids and gases compatible with PTFE (Polytetrafluoroethylene) penetrated, anodized aluminum sensor manifold, 316 stainless steel (sensor), Viton® (O-ring). (Viton is a registered trademark of Dupont Dow Elastomers.) Sensor manifold available in stainless steel (eliminates PTFE). Specify option SPSS (see below).

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 + 0.001 mA)
Percentage conversion: 4mA = 0.00%, 20mA = 100.00% or 10mA = 0.00%, 50mA = 100.00%
Connection: 4mm jacks, 19mm(0.75") spacing

Enclosure

Description: Extruded aluminum w/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.)

Power

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

Intrinsically Safe Certifications

CENELEC: EEx ia IIC, T4

CSA: Intrinsically Safe, Entity - for Hazardous Locations Class I, Groups A, B, C, D



Notes:

Over-range occurs at 110% of full scale, and causes "Over Range" to be displayed.

Standard factory setting is 1"H₂O = 0.036126 PSI (density of water @ 4°C). Specify at time of order if you require a different density (e.g., for water @68°F, 1"H₂O = 0.036063 PSI).

First Pressure Range					Available Units and Resolution										Second Pressure Range						
PSI	max	bar	max	kPa*	max	PSI	kg/cm ²	"Hg	"H ₂ O	mmHg	cmH ₂ O	mmH ₂ O	kPa	MPa	mBar	Bar	300 PSI 20 bar 2000 kPa	600 PSI 40 bar 4000 kPa	1500 PSI 100 bar 20000 kPa	3000 PSI 200 bar 40000 kPa	
16	100	1	7	100	700	0.001	0.0001	0.001	0.01	0.01			1	0.01		0.1	0.0001	X	X	X	X
36	100	2	7	200	700	0.001	0.0001	0.001	0.01	0.1			1	0.01		0.1	0.0001	X	X	X	X
300	450	20	31	2000	3100	0.01	0.001	0.01	0.1	1	1		0.1		1	0.001	n/a	n/a	X	X	
600	900	40	62	4000	6200	0.01	0.001						0.1	0.0001		0.001	n/a	n/a	n/a	n/a	
1500	4500	100	310	10000	31000	0.1	0.01						1	0.001		0.01	n/a	n/a	n/a	n/a	
3000	4500	200	310	20000	31000	0.1	0.01						1	0.001		0.01	n/a	n/a	n/a	n/a	

*KPA versions only have kPa, Bar and where possible, mBar and/or MPa. PSI and bar versions include all available scales except Bar for 300 PSI ranges and lower (they indicate mBar, instead).

Ordering Information (part number example in blue): Model SI-IS-33-200/2000 KPA-SPSS

SI: Metric units, only.

Approved Intrinsically Safe

1 = Single pressure sensor
3 = Dual pressure sensors

First pressure range

Second pressure range

Manifold Type:
Omit = Standard
SPSS = Stainless Steel

PSI, BAR, or KPA (if SI prefix, only)

Specifications subject to change without notice.
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PRESSURE is Our BUSINESS™



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