

Portable High-Pressure Pneumatic Calibrators PC10 Series



Features

- High accuracy 0.025% FS
- Generates pneumatic pressures to 3000 psi
- Dual channel readout: pressure and electrical
- Self contained rechargeable gas cylinder
- RS 232 interface and documenting versions
- Coarse/fine adjust selection



The PC10 Series of high pressure pneumatic calibrators are the latest additions to a comprehensive range of compact and rugged instruments.

This range of portable calibrators is designed to make testing and calibration of high pressure instruments and systems both quick and simple.

These self-contained portable calibrators from SI Pressure provide unparalleled accuracy and control performance. A built-in gas cylinder provides source pressures up to 3000 psi, a precision pressure regulator and fine volume adjuster ensures optimum control and a digitally characterized sensor measures pressure to better than 0.025% of full scale.

Field and workshop operation. *The PC10 pressure calibrators are designed for use in the workshop, on the plant or out in the field. The large capacity gas cylinder ensures maximum productivity between refills. In addition, the calibrators can be operated directly from an external pressure source connected to the charging port.*

Dual channel display. *The PC10 are dual channel instruments able to display both the input and output values simultaneously. The calibrators are capable of providing current and voltage excitation to the unit under test (UUT) and can measure d.c. voltage, d.c. current and ambient temperature. Electrical terminations are made by industry standard 4mm sockets and the large backlit display provides a clear readout of the process parameters.*

Application specific Task Menu. *A dedicated task key provides instant access to the task menu permitting the calibrator to be configured for specific applications, for example, the P-I task configures the calibrator to source pressure and measure current, 24Vdc loop power is also available to allow complete pressure transmitter calibration. Running the pressure switch task captures the open and closed switch values and calculates switch hysteresis. The contact resistance of the switch under test can also be monitored.*

Reduce process downtime. *The PC10 enables calibration criteria to be easily entered via the keypad allowing fast diagnosis of field instruments and automatic reporting of errors with a Pass or Fail status.*



PC10 Series Specifications

Pressure

Pressure Ranges	35 bar / 500 psi 70 bar / 1000 psi 100 bar / 1500 psi 140 bar / 2000 psi 200 bar / 3000 psi Combined non-linearity, hysteresis & repeatability
Accuracy	0.025% FS
Maximum Overpressure	2X FS
Pressure Reference	Gauge or absolute
Temperature Effects	0.002% of rdg/°F (averaged and w.r.t. 68°F)
Pressure Source	Built-in Nitrogen/Air cylinder, (max refill pressure 3000psi). Storage volume 122 cubic inches. Capacity 14.0 cubic feet
Recommended Media	Oxygen Free Nitrogen (OFN)
Remote Pressure Sensors	Please consult factory for list

Electrical

Input Ranges	±50VDC, ±55mA, 15 to 105°F, Open/Close Switch. <i>Temperature coefficient 0.004% reading/°F w.r.t. 68°F</i>
Input Accuracy	0.05% Rdg 0.004% FS, ±2°F
Resolution	100 microV _{max} , 0.001mA, 0.1°F
Output Ranges	10VDC, 24VDC, 0-24mA. <i>Temperature coefficient 0.004% reading/°F w.r.t. 68°F</i>
Output Accuracy	0.1% for 10VDC, 5% for 24VDC, 0.05% Rdg 0.01% FS
Maximum Load	10mA for 10VDC, 26mA for 24VDC
Display	Dual display can simultaneously monitor mA, V, switch, continuity and ambient temperature. Also, 10VDC and 24VDC power supplies are available for the Device Under Test

Other Specifications

Pressure Units	25 scale units plus one user defined
mA Source	Auto10-sec. step cycle and programmable (60 sec. end to end) ramp
Process Functions	Filter, max/min, tare, flow, and % span
Power Management	Auto power OFF, auto backlight OFF, battery status indicator
Display	2.36 x 2.36 inches graphic LCD with backlight. +/-99999 readout, 2 reading per second
Data Storage	92 kb memory
Documenting Features	1. Calibration mode, showing on-line error analysis indicating Pass/Fail status. 2. Storage of As Found and As Left results. 3. Graphical analysis of results showing Pass/Fail tolerance. 4. Two way PC interface for transferring test procedures and results.

Environmental

Temperature	Operating range 15 to 120°F, Calibrated 15 to 105°F
Humidity	0 to 90%, non-condensing
Sealing	Nema 12 (IP54)
Conformity	EN61010, EN61326 Class A, CE marked
Physical	28 lbs, dimensions approx. 16.9 x 10 x 6.5 in.
Power Supply	Battery powered 6 x 1.5 V NiCad cells (20 hrs nominal use at 68 F). The unit will operate from AC power supply, and allow the battery pack to recharge. Display indicates a low battery condition

Options

Remote Pressure Sensors	The calibrators have a second pressure channel which can be configured with up to 10 remote sensors (one at a time). The sensors are supplied with an electrical connector and 1/4" NPT female pressure ports. Mating cable is required. A 6 foot mating cable for connecting remote sensors to the calibrator. At least 1 should be ordered when ordering remote pressure sensor.
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Mating Cable for Remote Sensor

Accessories

Delivery	The PC10 Series is supplied with a battery charger, test leads, RS 232 cable, user manual, pressure test certificate, calibration certificate and accessory bag as standard. Please note: The Nitrogen cylinder will be supplied empty for filling on site.
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Ordering Information

PC10 - **A****A****A** - **B** - **C** - 3

Box A: Pressure Range

035 = 35 bar / 500 psi
070 = 70 bar / 1,000 psi
100 = 100 bar / 1,500 psi
140 = 140 bar / 2,000 psi
200 = 200 bar / 3,000 psi

Box B: Type

G = Gauge
A = Absolute

Box C: Documenting

S = Standard
D = Fully Documenting

Box D: Options

N = NIST Calibration Certificate



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