

ConST 811 Automated Pressure Calibrator



- Ranges from 90% vacuum to 25bar(375PSI)
- 0.02%FS pressure uncertainty
- Only 5.6 Kg



OVERVIEW

The ConST811 is a revolution in pressure calibration technology for the process industries. With the ConST811, technicians have a compact, light weight calibrator that generates from 90% vacuum to 375 PSI (25bar) using a high performance integral electric pump.

In a portable package, this little calibrator can automatically generate from 90% vacuum to 375 psi (25bar) pressure with 0.005%FS pressure control stability and 0.02%FS accuracy. To improve the calibrator accuracy, two pressure modules with differing ranges are used. These are built-in and integrated with the internal pump and controller.

With optional external pressure modules (CDP series), the ConST811 can measure pressures up to 10,000 psi (700 bar) with 0.025%FS accuracy. In addition to the pressure generation, control, and measurement capabilities, the ConST811 also features HART communication capability, supply 24V loop power, and read the current or voltage produced by the pressure transducers. The state-of-the-art ConST811 automated pressure calibrator brings automated pressure calibration to the field.

FEATURES

► Pressure Range

- Pressure generated by built-in pump and controlled automatically from 90% vacuum to 375 psi (25 bar)
- Pressure measured with external pressure modules (CDP series) to 10,000 psi (700 bar)

► Accuracy

- 0.02%FS
- Fully temperature compensated

► Control Stability

- 0.005%FS

► Automation and Test Program

- Fully Automated pressure calibration
- Task preset and auto run
- Auto step

► Easy to Use

- User friendly interface
- Intuitive icon driven menu structure

► Sourcing and Measuring electrical signals

- Measure mA or V with 0.01% RD + 0.005%FS accuracy
- Source 0 to 22mA current
- 24 VDC loop power supply to pressure transmitter during test
- Automatic switch test

► Misuse Protection

Up to 30V misuse protection on any two sockets

► Display

7" LCD color screen (800X480)

► Documenting and data logging

- Task management capability
- Internal memory stores 120 tasks
- Download tasks and upload results

► Hart Communication capability

Support HART instrumentation

► Rechargeable battery

Rechargeable battery with up to 8 hours operation between charges

► Leak testing

Apply leak test to an external pressure system to determine the magnitude of pressure variations due to leaks

► Pipeline Protection

Special design the pipeline layout to avoid possible blockage and leakage

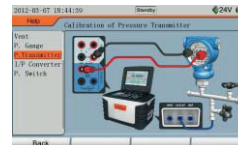
► Portable: Only 12 lb (5.6KG)

► Dedicated Task Menu



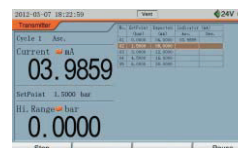
The dedicated task key gives direct access to the calibration tasks.

► Built-in User Manual



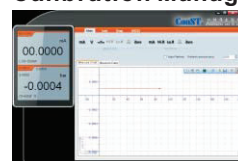
The technicians could check the wires connection sample and User Manual in the device.

► Pressure Transmitter Calibration



Verify pressure switch performance using the automatic procedure.

► Calibration Management System



It has full documenting facilities to prepare reports and provide calibration certificates from its database, utilizing readout data from connected calibration equipment and test devices.

ConST 811 Automated Pressure Calibrator

SPECIFICATION

Pressure Ranges					
Model	Pressure Range	Pressure Module 1		Pressure Module 2	
		Range	Accuracy	Range	Accuracy
ConST811-D	(-0.95 to 1)bar	±25mbar (±10inH ₂ O)	0.05%FS	±1bar	0.02%FS
ConST811-L	(-0.95 to 7)bar	-1bar to 2.5bar	0.02%FS	0 to 7bar	0.02%FS
ConST811-M	(-0.9 to 25)bar	-1bar to 2.5bar	0.02%FS	0 to 25bar	0.02%FS

Note: * ConST811 calibrators support CDP series pressure modules that are available for gauge, vacuum and absolute pressure from -15 psi to 10,000 psi (-1 bar to 700 bar). Accuracy from 0.025%FS includes operation over 14°F to 122°F (-10°C to 50°C), one year stability and calibration uncertainty. For detailed specification refer to CDP series pressure modules datasheet.

Electrical Measurements			
Item	Range	Resolution	Accuracy
Voltage Measurement	(-30.0000~30.0000)V	0.1mV	0.01%RD+0.005%FS
Current Measurement	(-30.0000~30.0000)mA	0.1µA	0.01%RD+0.005%FS
Current Source	(0~22.000)mA	1µA	0.02%RD+0.01%FS
On-off Measurement	If the switch has detective Voltage, the range is from 3V to 24V		
DC 24V output	24V ± 0.5V		

Control Stability

<0.005%FS

Pressure Connections

- 0.156 inch (Φ4 mm) test hose on calibrator
- Two 1/4"NPT female hand-tight connectors on the external pressure connection kit (included)

External Pressure Module Connection

External pressure module connector

Electrical Connection

0.156 inch (4mm) banana sockets

Data Logger

Storage capacity: 120 files maximum

Display

- 7 LCD color screen (800X400)
- Display rate: 5 readings per second

Pressure Units

- Pa, kPa, MPa, psi, bar, mbar, inH₂O, mmH₂O@4°C, inHg@0°C, mmHg @0°C, kgf/cm²

Power

- Battery: Rechargeable Li-ion Polymer battery (included)
- Li-Battery working time: ~8 hours
- Recharge time: ~3 hours
- External Power: 110/220V Power adapter (DC 27 V) (Included)

Environmental Specification

- Operating temperature: 0 °C to 50°C
- Storage temperature: -20°C to 60°C
- Humidity: <90%, non-condensing

European Compliance

CE Marked

Multi lingual Interface

- English, German, French, Italian, Spanish, Portuguese, Simplified Chinese (Traditional Chinese, Japanese and Russian are available per request)

Communication

- RS232 (DB9/F, environmentally sealed)
- Baud rate: 2400, 4800, 9600, 19200, 38400, 57600, 115200
- Data length: 7 Bits, 8 Bits
- Stop bit: 1 Bit, 2 Bits
- Address: from 1 to 121

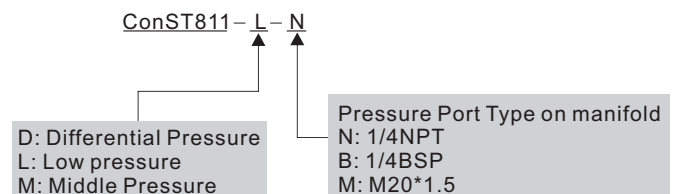
Dimension

11.65" X 7.32" X 7.09" (296mm X186mm X180mm)

Weight: 12.4 lb (5.6 kg)

ORDERING INFORMATION

Model Number



Accessories (Included)

1pc	-----	ConST104 External pressure manifold
1pc	-----	110V/220V external power adapter
1pc	-----	Rechargeable Li-ion battery
4pcs	-----	Test leads
2pcs	-----	Short circuit cables
20pcs	-----	O-rings
1pc	-----	User's manual
1set	-----	Tools
2pcs	-----	Hose
1pc	-----	Carrying Case

Optional Accessories

Model Number	Description
ConST100-811-4N ConST100-811-4B ConST100-811-M	Hose Test Kit, 5feet flexible hose, 0.156(4mm) tube to hand-tight quick connector. (4N: 1/4NPT, 4B: 1/4BSP, M: M20*1.5)
ConST104-N ConST104-B ConST104-M	Pressure Manifold Kit with hand-tight quick connector. N: 1/4 NPT, B: 1/4BSP, M: M20*1.5 (Note: The pressure range is required before select manifold)
CDP	Pressure modules (please check CDP datasheet)
9050	USB to RS232 (DB9/M) Adapter
9060	Pressure Module connection cable
9510	ConST/CAL Calibration Management Software
9818	110V/220V external Power adapter
9722	Chargeable Li-ion battery