

DPI 603

Portable Pressure Calibrator

- Accuracy $\pm 0.075\%$ F.S.
- Integral Pressure Generation
- Standard ranges up to 300 psi g
- 5 digit LCD, multiple engineering units
- Dual pressure & electrical readout
- Transmitter supply & measurement
- Current loop verification test
- Vacuum Generation available



The DPI 603, which extends the Druck range of rugged portable battery powered pressure calibrators, with standard ranges of -14.7 to +15 psi, 30 psi, 100 psi or 300 psi gauge with an accuracy of $\pm 0.075\%$ F.S.

Designed for use in remote locations where AC power is not available, the DPI 603 enables pressure instrumentation to be serviced and calibrated.

The instrument features the capability to generate pneumatic test pressures with an integral hand-pump up to 300 psi. A volume adjuster provides fine control of the desired test value and a venting valve enables pressure release without disconnection of the device under test.

An optional pressure/vacuum switching facility can also be provided, which enables the hand-pump to source vacuum down to -22" Hg or pressure up to 300 psi g.

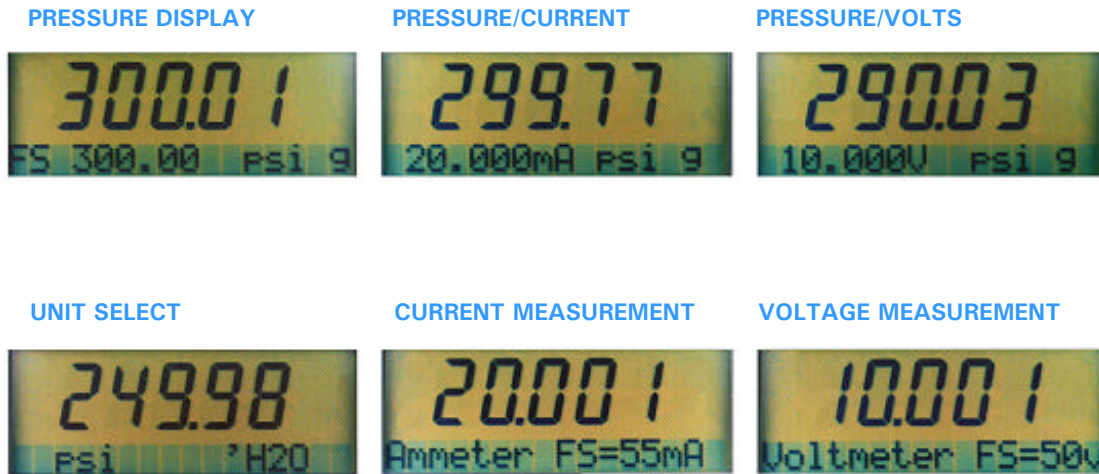
To facilitate pressure transmitter testing and calibration a 24Vdc power supply is provided and the ability to monitor the current loop from 0 to $\pm 55\text{mA}$ dc.

For loop verification, the DPI 603 can also output a single 12mA test value, or provide a passive sink if required.

The clear LCD display allows readout of pressure, voltage and current parameters with the ability to show current or voltage simultaneously with pressure.

Portable Pressure Calibrator

DISPLAYS



KEYPAD NOMENCLATURE



Portable Pressure Calibrator

STANDARD SPECIFICATION

Pressure Measurement Specification

Operating Pressure Ranges

Standard full scale ranges can be specified of -14.7 psi g to :
+ 15psi, + 30 psi, 100 psi, or 300 psi gauge.

Overpressure

The rated pressure can be exceeded by 2 x causing negligible calibration change, subject to a maximum safe working pressure of 350 psi.

Pressure Media

Dry, non-corrosive, non-conductive gasses compatible with 316 Stainless Steel, Hastelloy C276, BUNA-N and Nylon.

Accuracy

Combined non-linearity, hysteresis and repeatability $\pm 0.075\%$ F.S. for positive or negative pressures ± 1 digit.

Temperature Effects

Over 32° to 105°, the averaged Span temperature coefficient will not exceed 0.007% of reading/°F.

Digital Indicator

Readout and Display

± 99999 capability, 0.54" LCD digits with additional 16 text characters.

Pressure Scale Units

24 scale units are provided:
psi, lb/ft², inHg, inH₂O, ft of H₂O (40° and 68°F) torr, atm, Pa, kPa, MPa, hPa, mbar, bar, kg/cm³, kg/m², mmHg, cmHg, mHg, mmH₂O, cmH₂O, mH₂O, Special,
2 units are presented on the display.

Display Overload

Instruments are capable of nominal 100% F.S. Above this, an overrange error code is displayed.

Resolution

$\pm 0.005\%$ F.S. maximum.

Response

Nominal rate of three readings per second on the digital display.

Zero Control

Offset correction for pressure and electrical scales by key-press, protected against accidental use.

Calibration Controls

Front panel key-pad calibration controls for pressure and electrical ranges.

Position Effect

Negligible.

Electrical Specification

Electrical Inputs

Voltage Measurement:

Range : $\pm 50V$
Accuracy : $\pm 0.15\%$ of reading
 $\pm 0.02\%$ F.S.

Temperature Coefficient : $\pm 0.006\%$ reading/°F.

Current Measurements:

Range : $\pm 55mA$
Accuracy : $\pm 0.075\%$ of reading
 $\pm 0.005\%$ F.S.

Temperature Coefficient : $\pm 0.006\%$ reading/°F.

Electrical Outputs

Voltage outputs: 24V nominal, floating,
25mA maximum
Current Output: Loop check,
fixed 12mA nominal,
source or sink.

Power Supply

Battery powered 4 x 1.5V zinc carbon 'D' cells, 50 hours nominal continuous operation with no load on output terminals. Battery low condition indicated by display symbol.

Optional rechargeable batteries and external power adaptor/charger unit available.

Environmental Specification

Temperature

Operating 15° to 120°F
Calibrated 32° to 105°F
Storage -5° to +140°F.

Sealing

Sealed to NEMA 4.

Safety

IEC 1010
EMC Immunity to IEC 801-804
Certification : CE Marked.

Physical Specification

Weight

9 lbs

Dimensions

12.6" x 7.7" x 5.0" nominal

Pressure Connection

1/8" NPT female.

Carrying Case

Supplied with the instrument as standard and includes a complete set of accessories.

OPTIONS

(A) Pressure/ Vacuum Capability

A switch facility enables the integral handpump to generate pressure in the down stroke to a maximum of 300 psi or vacuum on the reverse stroke to -22 inHg.

(B) Rechargeable Batteries

NiCad rechargeable cells supplied complete with an external 110 Vac charger unit.

Note : European 230Vac charger available as P/N 191-057 alternate.

ACCESSORIES

Carrying Case, Electrical test probes, 4 standard "D" cells*, calibration certificate and User Handbook supplied with instrument.

*Not fitted when Option B is ordered.

ORDERING INFORMATION

Please state the following (where applicable):

- 1) Type number
- 2) Pressure range
- 3) Options
- 4) Pressure media

RELATED PRODUCTS

Druck manufactures a comprehensive range of pressure transducers, transmitters, indicators, controllers, calibrators and temperature calibrators. The range of portable calibrators also covers temperature and electrical parameters including RTDs thermocouples, volts, current, Ohms, frequency and digital sensor trim for frequency.

Please refer to manufacturer for further information and data sheets.

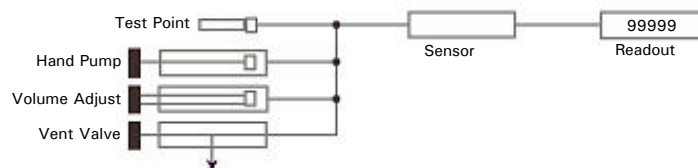
CALIBRATION STANDARDS

Instruments manufactured by Druck are calibrated against precision pressure calibration equipment which is traceable to the National Institute of Standards and Technology (NIST).

Druck is an ISO 9001 registered company.



PNEUMATIC OPTIONS



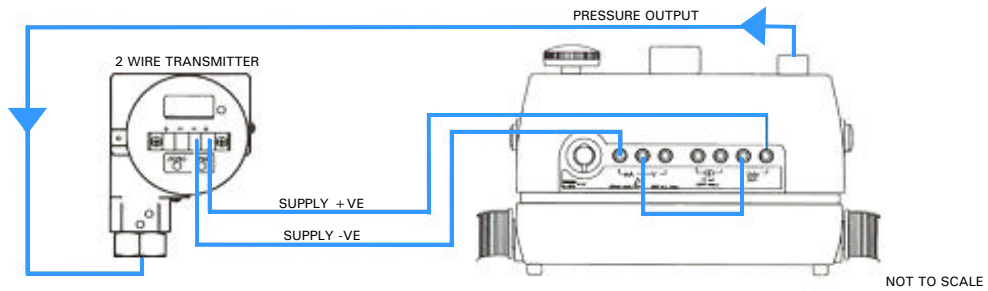
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Carrying Case



CALIBRATION CONNECTION SCHEMATIC



Representative