

DPI 740

Portable Precision Barometer

- Accuracy ± 0.004 inHg absolute
- Ranges to 103 inHg A
- 6 Digit resolution LCD display
- Multiple pressure scales and aeronautical units
- Alkaline or rechargeable batteries
- Lightweight hand-held rugged design
- RS 232 output



The Druck 740 is a portable battery powered precision barometer, providing outstanding capabilities in a hand-held package.

The fundamental sensor technology employed within this instrument is the Druck Resonant Pressure Transducer (RPT). This vibrating element sensor not only provides accuracies of ± 0.005 inHg but equally important has a calibration stability of better than 100 ppm per year. This instrument can confidently be used in both laboratory and field applications as a first-class barometric reference device, with the recommended recalibration period being one year.

A variety of pressure scales is available to enable the operator to display the atmospheric pressure in any desired units or in height equivalent units for altimetry and surveying applications. With the serial RS 232 interface, it is possible to utilize the DPI 740 data as input parameters to computer systems or simply print out the displayed values.

The DPI 740 ABS molded case has been designed for hand-held use, either in field applications, or for use on the bench with its integral folding stand.

DPI 740: Portable Precision Barometer

STANDARD SPECIFICATIONS

Pressure Measurement

Operating Pressure Ranges

22 - 34 inHg absolute

Alternate Pressure Ranges Available

1 - 38 inHgA

1 - 77 inHgA

1 - 103 inHgA

Over Pressure

Pressures between 0 and 118 inHg absolute will not cause a calibration change.

Pressure Media

Compatible with non-corrosive gases. Insensitive to media density.

Accuracy

± 0.02% F.S.

For all pressure ranges include: Combined non-linearity hysteresis, repeatability and temperature effects over: 15° to + 120°F

Stability

Better than 100 ppm per annum.

Digital Indicator

Readout and Display

999999 capability LCD digits 0.54 in. high with additional 16 text characters.

Display Overload

Instrument capable of nominal 110% F.S. for each range. Above this, error code will flash.

Resolution

0.0003 inHg absolute.

Response

2 readings per second nominal on digital display.

Calibration Controls

Front panel keypad instructions PIN number and/or link protected against illegal entry. Also via RS 232.

Operating Modes

- Local pressure (QFE)
- Sea level pressure (QFF) from user set height
- Altitude above user set datum.

Process Features

Max/min, reading store, tare and programmable filter available in all operating modes.

Scales

The following scales can be selected: inHg, psi, atm, torr, inH₂O, ftH₂O (40° and 68°F), mH₂O, cmH₂O, mmH₂O, mHg, cmHg, mmHg, kg/m², kg/cm², bar, hPa, mPa, kPa, Pa, mbar
Altitude values in ft. and m. Tare available for surveying.

Position Effect

Negligible.

Power Supply

3 each 1.5V Alkaline AA batteries. 20 hours nominal continuous operation. Programmable powerdown prolongs battery life. Battery low indicated by display symbol. Optional rechargeable NiCad batteries and external power adaptor/charger unit available. Reference option (B)

Environmental Specification

Temperature

Operating: 15° to + 120°F
Storage: -40° to + 160°F

Sealing

Generally NEMA 4

Safety

Electrical and mechanical safety: EN61010
EMC Emissions: EN50081-1
EMC Immunity: EN50082-1
Certification: CE marked

Physical Specification

Weight

1.1 lbs nominal

Dimensions

7.5 in x 3.5 x 1.4 in. nominal

Pressure Connection

Accepts 1/4 in. O/D 5/32 I/D tubing

Serial Output

RS232 via 6-way LEMO socket
Reference option (C)

Carrying case

This is supplied with the instrument as standard and includes the Handbook and storage for fittings and tube.

OPTIONS

(A) Enhanced Barometric Accuracy

Version: An improved accuracy to ± 0.013% FS (0.004 inHg can be provided with this option over 50° to 86°F)

(B) Rechargeable Batteries: Ni-Cad batteries and external universal recharger unit can be supplied to replace the standard alkaline batteries.

(C) adaptor Lead: For RS232 output, an adaptor lead connecting 6-pin LEMO to standard 9-way D type socket is available.

(D) Transit Case: For storage of instrument, accessories and options.

ACCESSORIES

Alkaline batteries, handbook, calibration certificate and carrying case supplied with the instrument.

ORDERING INFORMATION

Please state the following (where applicable):

- 1) Type number DPI 740
- 2) Pressure Range
- 3) Options.

For non-standard requirements, please refer to Druck.

Continuing development sometimes necessitates specification changes without notice.

RELATED PRODUCTS

Druck manufactures a comprehensive range of pressure indicators, controllers, dead weight gauges, calibrators, transducers and transmitters. The range of portable calibrators also covers temperature and electrical parameters.

Please refer to Druck for further information and data sheets.

CALIBRATION STANDARDS

Instruments manufactured by Druck are calibrated against precision pressure calibration equipment which is traceable to National Institute of Standards and Technology (NIST). **Druck is an ISO 9001 registered company.**



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