

## DPI 740

### Portable Precision Barometer

- Accuracy  $\pm 0.004$  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  $\pm 0.005$  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**  
a) Local pressure (QFE)  
b) Sea level pressure (QFF) from user  
set height  
c) 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, inH<sub>2</sub>O, ftH<sub>2</sub>O (40° and  
68°F), mH<sub>2</sub>O, cmH<sub>2</sub>O, mmH<sub>2</sub>O, mHg, cmHg,  
mmHg, kg/m<sup>2</sup>, kg/cm<sup>2</sup>, 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.



**Druck**

**TRANSCAT**