

DPI 740

Portable Precision Digital Pressure Indicator

- Barometric accuracy $\pm 0.15\text{mbar a}$
- Ranges to 3.5 bar abs and barometric
- 6 digit resolution LCD display
- Multiple pressure scale factors
- Altitude in feet and metres
- Dry cells or rechargeable batteries
- Lightweight hand-held rugged design
- RS 232 output



The Druck DPI 740 is a portable battery powered precision pressure indicator, providing outstanding capabilities in a hand-held package, especially useful as a barometer.

The fundamental sensor technology employed within this instrument is the Druck Resonant Pressure Transducer (RPT). This vibrating element sensor not only provides accuracies of $\pm 0.15\text{mbar}$ 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 reference device, with the recommended recalibration period being one year.

A variety of scaling factors is available to enable the operator to display the 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 utilise the DPI 740 data as input parameters to computer systems or simply print out the displayed values.

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

STANDARD SPECIFICATION

Pressure Measurement Specification

Operating Pressure Ranges
750 - 1150mbar absolute, barometric
Alternative ranges available:-
35 - 1300mbar absolute
35 - 2600mbar absolute
35 - 3500mbar absolute.

Over Pressure
Pressures between 0 and 4000mbar absolute will not cause a permanent calibration change.

Pressure Media
Compatible with non-corrosive gases.

Accuracy
Combined non-linearity hysteresis, repeatability and temperature effects over:-
-10° to +50°C ±0.02% F.S.

Stability
Better than 100ppm (0.01% F.S.) per annum.

Digital Indicator

Readout and Display
999999 capability LCD digits 13.6mm high with additional 16 text characters.

Display Overload
Instrument capable of nominal 110% F.S. over-range. Above this, error code will flash.

Resolution
0.01mbar, e.g. 1013.25mbar 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 RS232.

Operating Modes
a) Local pressure (QFE)
b) Sea level pressure (QFF) from user set height
c) Altitude above user set datum.

Process Features
Maximum/minimum store, tare and programmable filter available in all operating modes.

Scales
mbar, Pa, hPa, kPa, MPa, bar, kgf/cm², kgf/m², mmHg, cmHg, mHg, mmH₂O, cmH₂O, torr, atm, psi, lbf/ft², inHg, inH₂O and ftH₂O @ 4°C, inH₂O and ftH₂O @ 20°C and inH₂O @ 60°F
Altitude values in ft and m. Tare available for surveying.

Position Effect
Negligible.

Power Supply
Battery powered 3 x 1.5V alkaline AA cells. 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.

Environmental Specification

Temperature
Operating: -10° to +50°C
Storage: -40° to +70°C.

Sealing
To IP54.

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

Physical Specification

Weight
0.5kg nominal.

Dimensions
190 mm x 90 mm x 36 mm.

Pressure Connection
6 mm O/D 4mm I/D hose fitting.

Serial Output
RS232 via 6-way LEMO socket (Adaptor Lead Option).

Carrying case
This is supplied with the instrument as standard and includes the handbook and storage for fittings and tube.

ACCESSORIES

Handbook, calibration certificate and carrying case supplied with the instrument

OPTIONS

(A) Enhanced Barometric Accuracy
An improved accuracy to ±0.15mbar can be provided with this option over 10° to 30°C on barometric range instruments.

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

(C) Adaptor Lead
For RS232 output, an adaptor lead 2m long connecting 6-pin LEMO to standard 9-way D type socket is available.

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

ORDERING INFORMATION

Please state the following (where applicable):-
(1) Type number DPI 740
(2) Operating Pressure Range
(3) Options.

For non-standard requirements, please refer to Druck.

Continuing development sometimes necessitates specification changes without notice.

RELATED PRODUCTS

Druck manufacture a comprehensive range of pressure indicators, controllers, 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 Limited are calibration equipment which is traceable to International Standards.



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