

# DPI 142

## Precision Barometric Indicator

- Ranges up to 50 psi absolute
- Precision 0.01% FS
- Long term stability 0.01% FS/yr
- Altitude display in feet and meters
- Programmable analog output
- RS232 and IEEE 488 communications

The DPI 142 is a high accuracy barometric indicator with digital communications suitable for integration into any datalogging or integrated information system. It provides highly accurate

readings using the resonant pressure sensor to better than 0.01% FS over 10°C to 40°C, with excellent long term stability. It can be used as a transfer calibration standard in laboratories or as a company reference standard.

The DPI 142 features easy to use software menus accessed via the front panel push buttons. The instrument also includes functional screens to measure barometric pressure, display a barograph (1 day, 2 day or 5 day trend), read altitude (feet/meters) and leak test pressure or altitude.

Digital communications allows easy data transfer of instrument readings and the analog output option enables the user to set a selectable output to be proportional to readings of pressure or altitude.



## SPECIFICATIONS

### Standard Specification

#### Standard Pressure Ranges

10.9 - 16.7 psia (750 - 1150mbar absolute) (barometric only).  
0.5 - 19 psia (35 - 1310mbar absolute).  
0.5 - 38 psia (35 - 2620mbar absolute).  
0.5 - 50 psia (35 - 3500mbar absolute).

#### Over Range

1.1 x FS pressure range.

#### Maximum Working Pressure

58 psia absolute.

#### Pressure Media

Non-corrosive dry gases only.

### Display

#### Panel

High contrast, back-lit LCD.

#### Readout

±9999999 maximum, updated 2 times per second.

#### Pressure Units

24 units plus two user-defined and altitude in feet (ft) or meters (m).

#### Languages

English, Chinese, French, German, Italian, Japanese, Portuguese, Spanish.

#### Process Features

Hold, Maximum/minimum value, Tare and programmable filter.

### Performance

#### Precision

Precision 0.01% FS includes non-linearity, hysteresis, repeatability and temperature effects over 10° to 40°C.

#### Measurement Stability

Better than 100 ppm (0.01% FS) per year.

### Electrical

#### Communications

RS232 serial interface supplied as standard (SCPI Protocol). IEEE-488 optional.

#### Power Supply

11V to 26V AC or DC, 10VA, via 0.083 inch (2.1mm) Jack, supplied with AC/DC power adaptor 90 to 264 VAC, 45 to 65 Hz.

### Environmental

#### Temperature

Operating: 5° to 50°C  
Calibrated: 23°C  
Storage: -20° to 60°C

#### Humidity

Compliant with Def Stan. 66-31 8.6 cat. 3

#### Vibration

Compliant with Def Stan. 66-31 8.4 cat. 3

#### Shock

Mechanical shock conforms to EN61010

#### Conformity

Electrical and mechanical safety: EN61010  
EMC Emission: EN61326-1  
EMC Immunity: EN61326-1  
Certification: CE marked

### Physical

#### Weight

2.2 pounds (1kg) nominal.

#### Dimensions

7.3" W x 7.7" D x 3" H (185mm W x 195mm D x 75mm H)

#### Pressure Connection

1/8 NPT female

### Options

#### (A) Analog Output

0 - 10V, 0 - 5V, -5V to 5V, 0/4 - 20mA outputs selectable. Accuracy 0.05% FS, update rate 2 readings per second. Programmable between minimum and full scale pressure for proportional output against pressure.

#### (B) IEEE 488 digital communications

Full computer control is available via a databus using the SCPI protocol. IEEE parallel D connector is provided on the rear panel.

#### (C) Panel mounting kit

Two sided plates and front panel cutout enable easy mounting to racks and panels.

### Supplied as Standard

User handbook, calibration certificate and AC/DC power adaptor.

### Calibration Standards

Instruments manufactured are calibrated against precision pressure calibration equipment which is traceable to International Standards.

### Related Products

We manufacture a wide range of pressure sensors, indicators, calibrators, controllers, Air Data Test Systems and deadweight testers. The range of portable calibrators also covers temperature and electrical parameters.

Please refer to gesensing.com for further information and datasheets.

### Ordering Information

Please state the following:

- (1) DPI 142
- (2) Pressure range, absolute
- (3) Options required.

Continuing development sometimes necessitates specification changes without notice.



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