DPI 610/615

DPI 610/615 LP Series

Druck

Portable Low Pressure Calibrators

- Ranges from ±2.5 to ±150 mbar
- Accuracy 0.05% of span
- Generates pressure and vacuum
- Dedicated tasks and dual readout
- Automatic zero equalisation
- RS 232 interface and documenting versions

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SETTING THE STANDARD FOR LOW PRESSURE CALIBRATORS

The Druck DPI 610/615 LP series incorporates a precision low pressure sensor and pneumatic generation, to provide a fully self contained, portable low pressure calibrator.

The DPI 610/615 LP can be easily configured for dedicated tasks. For example: P-I task sets the calibrator to source pressure and measure mA, P-DISPLAY task allows indicator readings to be manually entered and recorded, for example when checking devices such as Magnehelic gauges.

At low differential pressures, even connecting the device under test can induce significant pressure. To compensate for this, an "auto zero" facility is provided which uses an internal solenoid valve to equalise the differential pressure prior to zero correction.

The DPI 615 simplifies field use by displaying and recording PASS/FAIL status of the device under test and integrates with calibration/asset management software systems such as Intecal-W (see options) and Rosemount AMS.

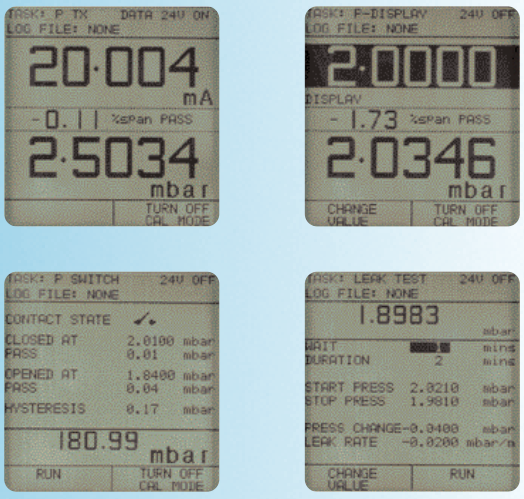
Key features	Model	
	DPI 610 LP	DPI 615 LP
Ranges: ±2.5 mbar to ±150 mbar.	●	●
Volume adjuster*: Dual piston for coarse/fine pressure setting.	●	●
Auto Zero: Equalises differential pressure and corrects zero offset.	●	●
Measure: Pressure, mA, V, switch, ambient temperature.	●	●
Source: Pressure, mA, 10 and 24Vd.c.	●	●
Results analysis: %errors, PASS/FAIL status and graphs.		●
PC interface: For transferring procedures and results. Auto storage of "As Found" and "As Left" results. Compatible with Intecal-W and Rosemount AMS.		●

*An external squeeze pump is supplied to supplement pressure generation into large volumes.

Applications

The DPI 610/615 LP is the ideal reference standard to reduce instrument maintenance time and errors for quality systems compliance.

Dedicated tasks for transmitters, transducers, gauges, micromanometers and switches, simplify commissioning, maintenance and calibration.



Note: *Error and Pass/Fail reported on DPI 615 model only.*

SPECIFICATIONS

Pressure

All models include an integral pressure sensor. In addition external sensors can be ordered (option B). Select the internal sensor pressure range and any external range from the table below:

Pressure Range mbar	Accuracy % Span	Max Line Pressure	Max Differential Pressure
±2.5 mbar differential	0.05	5 bar	100 mbar
±12.5 mbar differential	0.05	20 bar	500 mbar
±25 mbar differential	0.05	20 bar	500 mbar
±50 mbar differential	0.05	20 bar	1000 mbar
±75 mbar differential	0.05	20 bar	1000 mbar
±150 mbar differential	0.05	20 bar	1000 mbar

Accuracy is defined as non-linearity, hysteresis and repeatability. Temperature effects (averaged with respect to 20°C) ±0.008% rdg/°C.

Calibrator Connections - 2 x G $^1/_8$ female with 4mm ID tube adaptors.
Remote sensor Connections - 2 x 4mm ID 6mm OD hose quick connect
Pressure Media - non-corrosive gases.

Electrical

Input	Range	Accuracy	Resolution	Remarks
Voltage *	±50Vd.c.	0.05% Rdg. 0.004% FS.	100mV max	Autoranging, >10MW
Current *	±55mA	0.05% Rdg. 0.004% FS.	0.001mA	10W , 50V max
Temperature Switch	-10°C to 40°C Open/Closed	1°C	0.1°C	Local ambient 5mA whetting

Output	Range	Accuracy	Resolution	Remarks
Voltage	10Vd.c.	0.1%		Max. load 10mA
	24Vd.c.	5%		Max. load 26mA
Current*	0 to 24 mA	0.05% Rdg. 0.01% FS.	0.001mA	

*Temperature coefficient 0.0075% reading/°C w.r.t. 20°C.

Features

Pressure units - 25 scale units plus one user defined.
mA source - automatic 10 second step cycle and programmable ramp (60 seconds end to end).
Data logging - multi-parameter with 10,000 value memory.
RS 232 Interface - DPI 610 Uni-directional for uploading results to a PC. DPI 615 Bi-directional for downloading procedures and uploading results.
Process functions - filter, max/min, tare, flow, % span.
Language - English, French, German, Italian, Portuguese and Spanish.
Power management - auto power OFF, auto backlit off, battery status indicator.
Display - 60 x 60 mm graphic LCD with backlight ±99999 readout, 2 readings per second.

Environmental

Temperature - Operating range -10 to 50°C
Calibrated range -10 to 40°C
Humidity - 0 to 90% non-condensing.
Conformity - EN61010, EN50081-1, EN50082-1, CE marked.
Physical - 3.5kg, 300 x 170 x 140 mm.
Batteries - 6 x 1.5 V alkaline C cells (65 hrs nominal use at 20°C). For rechargeable batteries see option (A).

Druck

Multi-lingual firmware supported by Intecal-W calibration software

RS 232 and remote sensor connectors

Battery charger/eliminator input

Input and output connectors

Sealed tactile elastomeric keypad

Function keys used in response to display prompts

Task key for quick configuration to pre-defined test modes such as P-I, Switch Test and Leak Test

Documenting keys to store and recall screen 'snapshots', multi-channel data log, calibration procedures and results

Unique integral handle with compliant finger grip

Pressure release valve

Pressure input/output test ports

Automatic internal isolation/equalisation valve

Dual piston volume adjuster for coarse/fine pressure settings

Multi-purpose strap for carrying or hanging the calibrator

DPI 610/615 LP Series

Options and Related Products

OPTIONS

(A) Rechargeable batteries and charger
A rechargeable Ni-cad battery pack to replace the standard dry cells. Supplied with a universal input charger/battery eliminator which allows the instrument to be used whilst charging. 20 hrs nominal use.

(B1) Remote pressure sensors
The range of the DPI 610/615 LP can be extended with up to ten remote pressure sensors. For standard low pressure ranges please refer to specification. For higher range gauge, absolute or differential sensors up to 700 bar refer to Druck. A mating cable is required - see Option (B2).

(B2) Mating cable for remote sensors
A 2 metre mating cable for connecting remote sensors to the calibrator. At least one cable should be ordered when ordering Option (B1).

(C) Intecal-W calibration database software (P/N ICDPI)
Intecal-W Windows based software supports both portable field calibrators and on-line workshop calibrators. Manual data entry is also a key feature for recording data. Intecal-W is an easy to learn and easy to use calibration management software for process plants, workshops, contractors, manufacturers and service companies. It offers high productivity of calibration scheduling, calibration work and documentation. Device information, calibration procedures and calibration results are stored in an instrument database and multiple databases can be created for organising client accounts, processes or areas. Extensive management features are provided including a database search engine, time based calibration due queries and standard reports.

Visit www.druck.com for an Intecal-W demonstration

ACCESSORIES

All models are supplied with carrying case, test leads, 4mm ID hose, user guide and calibration certificate. LP models include a manual pressure/vacuum squeeze pump and 4mm ID hose "T" connector.

CALIBRATION STANDARDS

Instruments manufactured by Druck Limited are calibrated against precision calibration equipment traceable to International Standards.

RELATED PRODUCTS

Portable field calibrators
Druck manufacture a wide range of portable pressure, temperature and electrical field calibrators. A selection of these are shown below.

Laboratory and workshop instruments
Druck also manufacture a comprehensive range of pressure indicators and controllers. Included in this range are the Pressurements industrial deadweight testers and the Ruska high precision controllers and primary standard piston gauges.

Pressure transducers and transmitters
Druck manufacture a wide range of pressure transducers and transmitters, including the LP Series of low pressure sensors.

Please refer to Druck for further information.

ORDERING INFORMATION

Please state the following (where applicable):-

1. Type DPI 610 LP or DPI 615 LP.
2. Integral pressure range.
3. Options including range(s) for any remote sensors required.
   Note option (B1) and (C) should be ordered as separate line items.
4. Preferred language of user guide. (Refer to specifications for availability).

Continuing development sometimes necessitates specification changes without notice.

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