

Druck

DPI 320 / 325 Series

Portable High Pressure Pneumatic Calibrators

- High accuracy 0.025% FS
- Generates pneumatic pressures to 200 bar
- Dual channel readout: pressure and electrical
- Self contained rechargeable gas cylinder
- RS 232 interface and documenting versions
- Up to 11 sensors per instrument



DPI 320 / 325 Series

Portable High Pressure Pneumatic Calibrators

THE FAST AND CONVENIENT SOLUTION FOR PRESSURE CALIBRATION.

For over twenty years, Druck has led the world in portable pressure calibrator technology and function. The DPI 320/325 Series of high pressure pneumatic calibrators are the latest additions to a comprehensive range of compact and rugged instruments.

This range of portable calibrators is designed to make testing and calibration of high pressure instruments and systems both quick and simple. Two versions are available, the DPI 320 which is the standard model and the DPI 325 which supports real time error analysis and has full documenting capability.

These self-contained portable calibrators from Druck provide unparalleled accuracy and control performance. An integral gas cylinder provides source pressures up to 200 bar, a precision pressure regulator and fine volume adjuster ensures optimum control and a digitally characterised sensor measures pressure to better than 0.025% of full scale.

Field and workshop operation

The DPI 320/325 pressure calibrators are designed for use in the workshop, on the plant or out in the field. The large capacity gas cylinder ensures maximum productivity between refills. In addition, the calibrators can be operated directly from an external pressure source connected to the charging port.

Dual channel display

The DPI 320/325 are dual channel instruments able to display both the input and output values simultaneously. The calibrators are capable of providing current and voltage excitation to the unit under test (UUT) and can measure d.c. voltage, d.c. current and ambient temperature. Electrical terminations are made by industry standard 4mm sockets and the large backlit display provides a clear readout of the process parameters.

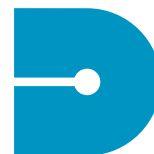
Application specific Task Menu

A dedicated task key provides instant access to the task menu permitting the calibrator to be configured for specific applications, for example, the P-I task configures the calibrator to source pressure and measure current, 24Vd.c. loop power is also available to allow complete pressure transmitter calibration. Running the pressure switch task captures the open and closed switch values and calculates switch hysteresis. The contact resistance of the switch under test can also be monitored.

Reduce process downtime

The DPI 325 version enables calibration criteria to be easily entered via the keypad allowing fast diagnosis of field instruments and automatic reporting of errors with a Pass or Fail status. In future, when used in conjunction with Intecal-W calibration management software, it will be possible to download test procedures from a PC to the DPI 325. The calibrator will prompt the technician during the calibration routine and the results will be recorded electronically, reducing the plant downtime significantly and eliminating human errors.





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DPI320/325 STANDARD SPECIFICATIONS

Pressure

The DPI 320 and 325 include an integral pressure sensor and matched pressure regulator. The pressure range should be selected from the table below.

Pressure Range	Accuracy* (% F.S.)	Max. Overpressure	Type**
35 bar	0.025%	70 bar	G or A
70 bar	0.025%	140 bar	G or A
100 bar	0.025%	200 bar	G or A
135 bar	0.025%	220 bar	G or A
200 bar	0.025%	220 bar	G or A

*Combined non-linearity, hysteresis and repeatability.

**G = Gauge, A = Absolute (pressure reference).

Temperature Effects (averaged and w.r.t. 20°C) $\pm 0.004\%$ of rdg/°C.

Pressure source: Integral Nitrogen/Air cylinder, (max refill pressure 200 bar). Storage volume 2 litres.

Recommended media: Oxygen Free Nitrogen (OFN).

Remote Pressure Sensors: Please refer to factory for list

Electrical Input

Input	Range	Accuracy	Resolution	Remarks
Voltage*	$\pm 50\text{Vd.c.}$	0.05% Rdg 0.004% F.S.	100 μV_{max}	Autoranging >10M Ω
Current*	$\pm 55\text{mA}$	0.05% Rdg 0.004% F.S.	0.001mA	10 Ω , 50V max.
Temperature	-10°C to 40°C	$\pm 1^\circ\text{C}$	0.1°C	Local ambient
Switch	Open/Closed			5mA whetting

Electrical Output

Output	Range	Accuracy	Resolution	Remarks
Voltage	10Vd.c.	0.1%		Max. load 10mA
Voltage	24Vd.c.	5%		Max. load 26mA
Current*	0 to 24mA	0.05% Rdg 0.01% F.S.	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 - Auto10-sec. step cycle and programmable ramp (60 sec. end to end)

Process functions - filter, max/min, tare, flow, and % span.

Power management - auto power OFF, auto backlight OFF, battery status indicator.

Display - 60 x 60 mm graphic LCD with backlight. +/-99999 readout, 2 reading per second.

Data Storage - 92 kbytes memory.

Environmental

Temperature - Operating range -10° to 50°C, Calibrated -10° to 40°C

Humidity - 0 to 90% non-condensing.

Sealing - IP54 in operation, IP65 when closed.

Conformity - EN61010, EN61326 Class A, CE marked.

Physical - 12.8 kg, dimensions approx. 42.9 x 25.4 x 16.5 cm.

Power supply - Rechargeable battery pack (20 hrs nominal use at 20°C). The unit will operate from ac power supplies 85V to 265V, 45 to 400 Hz and allow the battery pack to recharge. Display indicates a low battery condition.

DPI 325 ADDITIONAL SPECIFICATIONS

The fully documenting DPI 325 also provides the following additional features:

Calibration mode, showing on-line error analysis indicating Pass/Fail status. Storage of As Found and As Left results.

Graphical analysis of results showing Pass/Fail tolerance.

Two way PC interface for transferring test procedures and results.

Compatible with Intecal-W software. Confirm availability with your agent.

Options and Related Products

OPTIONS

(A1) High pressure hose kit

Consisting of:-

- 1 x G1/8 male to 1215 minimess adaptor.
- 1 x 1m 1215 minimess fill hose terminated with G1/4 female connection.
- 1 x 1/4 NPT male to 1620 minimess adaptor.
- 1 x 2m 1620 minimess test hose terminated with G1/4 female connection.

(A2) Stainless steel adaptor kit

Consisting of:-

- 1/4 NPT male to G1/4 female
- G1/4 male to G1/4 male
- G1/4 male to G3/8 male
- G1/4 male to G1/2 male
- G1/4 male to M14 female
- G1/4 male to M20 female
- G1/4 male to 1/4 NPT male
- G1/4 male to 1/4 NPT female
- G1/4 male to 3/8 NPT female
- G1/4 male to 1/2 NPT female

(B1) Remote pressure sensor

The calibrators have a second pressure channel which can be configured with up to 10 remote sensors (one at a time). For ease of use the sensors are fitted with an integral electrical connector and G1/4 female pressure ports. Mating cable is required - Option B2.

(B2) Mating cable for remote sensor

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

(C) Carry Case

A back-pack style carry case with padded shoulder straps and adjustable chest band providing a stable and comfortable carrying system for the DPI 320 series. Also features a large pocket designed to carry the DPI 320 series accessories and options.



(D) Intecal-W calibration database software (P/N ICDPI)

Builds on the basic concept of Linkpak-W supporting both portable field calibrators and on-line workshop calibrators; manual data entry is also a key feature for recording data. Intecal-W is a simplified calibration management software which enables a high productivity of calibration scheduling work and documentation. Device information, calibration procedures and results are stored in an instrument database. Multiple databases can be created for organising client accounts, processes or areas. Extensive management features include a database search engine, time based calibration due queries and standard reports.

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



ACCESSORIES

The DPI 320 series is supplied with battery charger/eliminator, test leads, RS 232 lead, user guide, pressure test certificate, calibration certificate and accessory bag as standard.

CALIBRATION STANDARDS

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



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 Ruska high precision controllers and primary standard piston gauges.

Pressure transducers and transmitters

Druck manufactures a wide range of high performance pressure sensors, including Transducers and Transmitters based upon its own proven precision micromachined and resonant silicon technologies. Please refer to Druck for further information on related products.

ORDERING INFORMATION

Please state the following (where applicable): -

1. Type number DPI 320 or DPI 325 .
2. Internal pressure range required.
3. Options (if required).

Continuing development sometimes necessitates specification changes without notice.

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