

DPI 705 Series

Druck Handheld Pressure Indicators



The Druck DPI 705 Series of handheld pressure indicators combine tough and rugged design with accurate and reliable pressure measurement.

Compact, robust and lightweight, the DPI 705 Series is designed for single handed operation and provides many essential features required for routine maintenance and system troubleshooting.

Features

- Ranges 0 to 70 mbar (1 psi) through to 700 bar (10,000 psi)
- 0.1% full scale (FS) accuracy
- Rugged, lightweight handheld design
- Leak test, tare, max/min and filter
- Intrinsically safe version
- Optional pneumatic and hydraulic hand pumps



DPI 705

- Impact resistant, sealed to Type 12/IP54
- Clear high resolution LCD
- Optional carrying case with belt loop
- Long battery life
- Integral desk stand and hanger

Improves Test Efficiency

- No warm up time
- 14 pressure units
- One minute leak test
- Ambient temperature measurement

The calibration tools required to comply with quality assurance programs such as ISO9000 put ever increasing demands on maintenance budgets. The DPI 705 Series, used in conjunction with pneumatic or hydraulic pressure generators, is a simple, low cost solution complementing the wide range of Druck portable process calibrators.

Special Features

Pressure Units

psi, inHg, inH₂O (4°C, 20°C and 60°F), ftH₂O (4°C, 20°C and 60°F), mmHg, mHg, mbar, bar, mH₂O, Pa, hPa, kPa, MPa, Kg/cm²

Calibration Units

mbar, bar, psi, kPa, mPa, hPa, Kgh/cm²

Leak Test

Standard 60 second leak test.



Max/Min

Captures both maximum and minimum readings.



Zero

Zero pressure correction.

Tare

0 to 100% FS zero offset capability.

Filter

10 reading rolling average for unstable pressures.

Alarm

Adjustable high pressure alarm with visual and audible warning.

Ambient Temperature

°C and °F reading of local condition $\pm 1.5^{\circ}\text{C}$ ($\pm 3^{\circ}\text{F}$).

Calibration

Used with the optional pneumatic or hydraulic pumps, the DPI 705 Series becomes a low cost calibration tool for gauges and indicators.

Power Management

Low battery indicator and selectable 'auto off'.



Pressure Ranges

DPI 705 Internal Sensor Version

Includes an internal sensor and has a 1/8 in NPT female or G 1/8 female (with 4 mm ID hose adaptor) pressure connector. Most internal ranges are available from stock.

DPI 705R Remote Sensor Version

Has an integral cable connector, a 3 ft (1 m) mating cable and a 1/4 in NPT female or G 1/4 female pressure connector.

Pressure Range	Internal Sensor DPI 705	Remote Sensor DPI 705 R
70 or 200 mbar (1 or 3 psi)	d	
350 mbar (5 psi)		g, a, d
1 bar (15 psi)	d	g, a, d
2 bar (30 psi)	g, a	g, a, d
3.5 bar (50 psi)		g, a, d
7 bar (100 psi)	g	g, a, d
10 bar (150 psi)		g, a, d
20 bar (300 psi)	g	g, a, d
35 bar (500 psi)		g, a, d
70 bar (1000 psi)		g, a
135, 200, 350 or 700 bar (2000, 3000, 5000 or 10,000 psi)		a

a = absolute, d = differential (line pressure: 2 bar (30 psi) for internal ranges and 35 bar (500 psi) for remote sensors), g = gauge
Do not apply pressure greater than 1 bar (16 psi) absolute to the negative port of differential pressure indicators.

Accuracy

±0.1% FS non-linearity, hysteresis and repeatability.

Environmental

Temperature Performance Averaged 0°C to 50°C (32°F to 122°F)

- ±0.02% reading/°C (±0.01% rdg/°F)
- For absolute ranges <= 1 bar (15 psi) add ±0.05% FS/°C (±0.025% FS/°F)
- For absolute ranges > 1 bar (15 psi) add ±0.02% FS/°C (±0.01% FS/°F)
- Calibrated range: 0°C to 50°C (32°F to 122°F)
- Operating range: -10°C to 50°C (15°F to 122°F)

Humidity

0 to 95% non condensing.

Overpressure

Safe to 2 x FS. Display flashes at 110% FS.

Media Compatibility

- Internal sensor: stainless steel, except positive differential non-corrosive fluid and negative differential dry gas.
- Remote sensor: stainless steel, except negative differential non-corrosive fluid.

Safety Conformance

EN61326-1, CE marked

Intrinsically Safe Version

- IS Class I, Groups A, B, C & D, T4 Exia; Class I, Zone 0, AEx/Ex ia IIC T4 Ga (-10°C ≤ Ta ≤ +50°C) to CSA Std. 157-92, UL 913 (7th Ed.), CAN/CSA-C22.2 No. 60079-0:11, CAN/CSA-C22.2 No. 60079-11:11, ANSI/UL 60079-0:09 and ANSI/UL 60079-11:09.
- Ex ia IIC T4 Ga (-10°C ≤ Ta ≤ +50°C) to ATEX IEC 60079-0:2011 and EN 60079-11:2012

Display

13mm LCD with 99999 readout

Weight

<500 g

Dimensions

190 x 90 x 36 mm

Battery

3 x Alkaline cells

Options

(B) Carrying Case

A protective case with convenient wrist strap, belt loop and storage pocket to accommodate a remote sensor and accessories.

Part Number	Description
IO705B	Fabric case for standard DPI 705 models
IO705SB	Leather case for DPI 705 IS models

(D) Negative calibration

Ranges below 1 bar (15 psi) are calibrated to ±FS e.g. ±200 mbar (±3 psi). Ranges of 1 bar (15 psi) and above are calibrated -1 bar (-15 psi) to FS. Accuracy is 0.1% of the compound range. Certificate provided.

Pneumatic and Hydraulic Test Kits

PV210 Low Pressure Pneumatic Hand Pump

Fully portable, easy to use and generates pneumatic pressures up to 3000 mbar (45 psi). It is an ideal tool for calibration checks on pressure transmitters, pressure switches, indicators, recorders and controllers.

- Generates pressures to 3 bar (45 psi)
- Generates vacuum to 90%



PV211 Pneumatic Hand Pump

Lightweight, high quality combined pressure and vacuum hand pump, designed to provide maximum pneumatic pressures efficiently and effortlessly.

- Pneumatic pressures in excess of 40 bar (600 psi)
- Generates vacuum to 96%



PV212 High Pressure Hydraulic Hand Pump

Lightweight, easy to use and generates pressure up to 1000 bar (15,000 psi), it is an ideal tool for calibrating pressure transmitters, pressure transducers, pressure switches and pressure gauges.

- Generates pressures to 1000 bar (15,000 psi)
- Controlled pressure release and adjustment



PV411A Multifunction Hand Pump

High quality field proven pressure and vacuum hand pump providing functionality never before seen in a hand held pressure source. This product replaces four conventional hand pumps.

- Pneumatic pressures to 40 bar (600 psi)
- Hydraulic pressures to 700 bar (10,000 psi)
- Excellent low pressure control
- 95% vacuum



Accessories

The DPI 705 and DPI 705R are supplied with a user guide and calibration certificate as standard.

Calibration Standards

Druck instruments are calibrated against precision pressure calibration equipment, which is traceable to the international standards.

Related Products

- Portable field calibrators
- Laboratory and workshop instruments
- Pressure transducers and transmitters

Ordering Information

Please state the following (where applicable)

1. Part number

DPI 705 (internal sensor)
DPI 705R (remote sensor)

For Intrinsically safe version order and state CSA or ATEX:

DPI 705IS (internal sensor)
DPI 705ISR (remote sensor)

2. Pressure range

3. Calibration unit - if not bar or mbar:

psi, kPa, mPa, hPa, Kg/cm²

4. Pressure reference:

Gauge
Absolute
Differential

5. Pressure connection:

1/8 NPT female (internal sensor)
G 1/8 female (internal sensor)
1/4 NPT female (remote sensor)
G 1/4 female (remote sensor)

6. Options as required



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