



# PACE 1001B Laboratory Barometer

## A measurement you can trust

The most stable barometric measurement for laboratory applications.

PACE 1001B barometer employs digitally characterized pressure sensors which offer the quality, stability and precision associated with this latest generation of resonant devices, providing a measurement you can trust throughout the 12 month calibration cycle.

The PACE 1001B precision barometric indicator brings together the latest measurement technology from Druck to offer an elegant, fast, flexible and cost-effective solution to barometric indication and monitoring.

The PACE 1001B barometer offers four levels of precision to accommodate specification and budget requirements.

## Key features

- Utilizes Druck's unique range of resonant pressure sensor technology (TERPS) to ensure measurement accuracy inline with the 12 month specification, removing the need for regular taring or vacuum resets
- Pressure range 750–1150 mbar (10.9–16.7 psi, 75–115 Kpa), absolute
- Choice of precision up to 0.020 mbar or 0.0002901 psi
- Long term stability of 0.05 mBara/0.00073 psi per annum
- RS232, IEEE connectivity, Ethernet and USB as standard
- Min/max/average display
- Versatile, maintains performance with a wide range of environmental conditions and test media

## Applications

### Measurement of barometric pressure in the laboratory environment for use as:

- Atmospheric reference for pseudo absolute measurements – high accuracy barometer reduces the effect on the total uncertainty budget
- Tare of laboratory devices to a single reference
- Realtime measurement output for use in metrology applications and calculations

Range	Total uncertainty per annum*	Precision**	Long term stability per annum
IRS0	0.13 mbar 0.0019 psi	0.1 mbar 0.0015 psi	0.05 mbar 0.00073 psi
IRS1	0.10mbar 0.0015 psi	0.05 mbar 0.00073 psi	0.05 mbar 0.00073 psi
IRS2	0.08mbar 0.0012 psi	0.025 mbar 0.00036 psi	0.05 mbar 0.00073 psi
IRS3	0.06 mbar 0.00087 psi	0.020 mbar 0.00029 psi	0.05 mbar 0.00073 psi

## Specification

Pressure Measurement	
Barometer pressure range	750–1150 mbar absolute, 10.9–16.7 psi absolute, 75–115 kPa absolute
Over range indication:	10% above mbar/bar full scale pressure range
Pressure media:	Dry, oil free, non-corrosive gas, air
Display	
Panel	¼ VGA wide format 4.3 inch color graphics LCD c/w integral touch screen
Comms update rate	8 times per second
Display update rate readout	2 times per second± 9999999
Pressure unit	mbar, bar, Pa(N/m <sup>2</sup> ), hPa, kPa, MPa, mm Hg @ 0°C, cm Hg @ 0°C, m Hg @ 0°C, in Hg @ 0°C, mm H <sub>2</sub> O @ 4°C, cm H <sub>2</sub> O @ 4°C, m H <sub>2</sub> O @ 4°C, mm H <sub>2</sub> O @ 20°C, cm H <sub>2</sub> O @ 20°C, m H <sub>2</sub> O @ 20°C, kg/m <sup>2</sup> , kg/cm <sup>2</sup> , torr, atm, psi, lb/ft <sup>2</sup> , in H <sub>2</sub> O @ 4°C, in H <sub>2</sub> O @ 20°C, in H <sub>2</sub> O @ 60°F, ft H <sub>2</sub> O @ 4°C, ft H <sub>2</sub> O @ 20°C, ft H <sub>2</sub> O @ 60°F, user defined 1, user defined 2, user defined 3, user defined 4 (feet and meters in airfield task)

Performance over the calibrated temperature range	
Pace 1001 barometer standard precision	Standard precision is 0.10 mbar or 0.001450 psi. Includes non-linearity, hysteresis, repeatability and temperature effects between 15°C (59°F) and 45°C (113°F)
Pace 1001 barometer high precision	High precision is 0.05 mbar or 0.000725 psi. Includes non-linearity, hysteresis, repeatability and temperature effects between 15°C (59°F) and 45°C (113°F)
Pace 1001 barometer premium precision	Premium precision is 0.025 mbar or 0.0003625 psi. Includes non-linearity, hysteresis, repeatability and temperature effects between 15°C (59°F) and 45°C (113°F)
Pace 1001 barometer reference precision	Reference precision is 0.020 mbar or 0.0002901 psi. Includes non-linearity, hysteresis, repeatability and temperature effects between 15°C (59°F) and 45°C (113°F)
Pace 1001 barometer long term stability	0.05 mBar / 0.00072515 psi per annum
Pace 1001 barometer reference accuracy	Accuracy (2 Sigma) over calibrated temperature range 0.06 mbar / 0.00087022 per annum Includes measurement precision, measurement long term stability (see above) and calibration equipment expanded uncertainty.
Electrical	
Power supply	90 VAC to 130 VAC @ 47 to 63 Hz and 180 VAC to 260 VAC @ 47 to 63 Hz. 15 VA
Communications	
Communication	RS232, USB and IEEE-488, SCPI, DP1141, DP1142 and DP1150 emulation. LabVIEW drivers ethernet (VXI-II and sockets using SCPI)
Data log	
Data log	Display screen shot stored in CSV format, onto memory card or external USB storage device. User defined update rate from 1 second
Environmental	
Temperature	Operating 10°C to 50°C (50°F to 122°F) Calibrated 15°C to 45°C (59°F to 113°F) Storage -20°C to 70°C (-4°F to 158°F)
Sealing Humidity Vibration Shock Conformity	<ul style="list-style-type: none"> <li>• IP20 (EN60529), indoor use only</li> <li>• 5% RH to 95% RH non-condensing</li> <li>• Compliant with def. stan. 66-31 8.4 Cat 3 and MIL-T-28800E cat 2</li> <li>• Mechanical shock conforms to EN61010</li> <li>• Electrical safety - Global (IEC61010-1, UL61010-1, CSA 22.2, No. 61010-1 and CB test certificate), LVD (EN 61010-1). EMC EN61326, PED, ROHS and WEEE. CE marked</li> </ul>
Physical	
Weight	3.2kg (excluding external PSU and packaging) to 6.5 lbs (including external PSU and packaging)
Dimensions	218 mm wide x 88mm (2U) high x 250 mm deep (8.6in x 3.5 (2U) x 9.8 in)
Pressure connection	G 1/8 Female (1/8 NPT female by adapter, standard for North America)

## Ordering information

Please state the following (where applicable)

### 1. Model PACE 1001B barometer

One internal barometric sensor

- I1001STANDARD-BARO—standard precision
- I1001HIGH-BARO—high precision
- I1001PREMIUM-BARO—premium precision
- I1001REFERENCE-BARO- reference precision

For further information refer to full PACE1001B datasheet [here](#) to contact us, email, phone or fill out the form in: [druck.com/contact](http://druck.com/contact)