

CPG2300 Portable Barometer

Data Sheet CPG2300 Barometer • 03/2016

mentor

Applications

- Portable High Accuracy Barometer
- Calibration Labs
- Semiconductor Manufacturers
- Utilities
- Pharmaceutical / Medical / Health Care

Features

- 0.015% of reading Accuracy
- Barometric range: 8 to 17 psi (~560 to 1170 mbar)
- Dynamic Temperature Compensation from 0-50°C
- RS-232 Communications
- Two sensor channels



CPG2300 Portable Barometer

Description

The CPG2300 Portable Barometer is a special version of the CPG2300 Portable Digital Pressure Gauge. This single channel barometric version contains a sensor with a range of 8 to 17 psia and an accuracy of 0.015% of reading. If an additional sensor range is required the standard CPG2300 Potable Digital Pressure gauge can be supplied. The barometer range can be specified in inches of mercury, mbar or kPa, or any of the 17 other units of measure available within the CPG2300.

Applications

The CPG2300 Portable Barometer is used in diverse applications from rugged field calibration of barometers to testing and calibration in clean rooms, nuclear power plants, weather stations, for medical radiation devices, and the manufacture of health care and pharmaceutical products. The CPG2300 fits applications that require a high degree of accuracy. It is used wherever there is a need for a high level of accuracy in a handheld barometer.

Functional Flexibility

Mensor CPG2300 Portable Barometer has one of the best uncertainty specifications of any portable barometer. With an uncertainty of 0.015% of reading, technicians have a reliable and accurate way to measure barometric pressure or calibrate barometers in remote locations. Temperature compensation from 0 to 50°C, permits use in most environments, without degradation of accuracy. Seventeen selectable pressure units and one user defined unit allows flexibility in measurement and calibration.

Communications

The user interface is through a monochrome 128 x 64 LCD, with white LED back light. A tactile membrane keypad makes navigation within the intuitive menu easy. Built in functionality to display min/max peak pressure and rate per second per hour and per three hour plus a null function give the CPG2300 additional functionality for monitoring barometric pressure trends.

Specifications

Accuracy ⁽¹⁾		0.015% R
Calibration stability (after warm up)		Better than 0.015% FS for 180 days with periodic re-zeroing.
Calibration interval		180 days
Calibration adjustment		Zero and Span may be reset without affecting linearity.
Pressure ranges		8 ... 17 psi (other unit ranges are available within the equivalent psi range)
Pressure units		psi, in.Hg @ 0°C, in.Hg @ 60°F, in.H ₂ O @ 4°C, in.H ₂ O @ 20°C, bar, mbar, cmH ₂ O @ 4°C, cmH ₂ O @ 20°C, MH ₂ O @ 4°C, mmHg @ 0°C, cmHg @ 0°C, hPa, kPa, Pa, MPa kg/cm ² , msw@°C.
Resolution		5 digits on display; 6 digits over serial port
Overpressure limit		150% FS or greater, depending on range
Compensated temperature	°C	0...50
Storage temperature	°C	-20...70
Warm-up	min	< 1 to rated accuracy
Battery life	hr.	20
Recharge time	hr.	< 8
Reading rate	1/sec	~4.6
Response time	ms	<250 for FS pressure step
Communications		RS-232, 9600 baud, N, 8, 1
Case size	in.	T-Shaped, 8.6 H x 4.3 W x 1.6 D
Weight	lb.	Approximately 1.5
Media compatibility		Pressure port: Clean, dry, non-corrosive, non-combustible, non-oxidizing gases for all rated ranges. Ranges ≥ 5 psi: All other media compatible with aluminum, 316 stainless steel, brass, Buna N, Viton, sealant, silicone grease and RTV. Not designed for oxygen service. Cannot guarantee accuracy on media other than gases. Reference port: Clean, dry, non-corrosive gases.
Fittings		1/4 inch FNPT pressure ports, nom.
Power		+9 to +14.5 VDC, 830 mA max for battery recharge.
Display		Monochrome 128 x64 LCD with white LCD backlight.
CE		Compliant to EN50081 and EN50082.

(1) Accuracy is defined by the total measurement uncertainty, which is expressed with the coverage factor (k=2) and includes the following factors: the intrinsic performance of the instrument, the measurement uncertainty of the reference instrument, long-term stability, influence of ambient conditions, drift and temperature effects over the compensated range during a periodic zero point adjustment.

The calibration program at Mensor, LP is accredited by A2LA as complying with both the ISO/IEC 17025:2005 and the ANSI/NCSL Z540-1-1994 standards. All Mensor primary standards are traceable to NIST. Mensor is registered to ISO9001:2008.



Since product innovation is a continuous process at Mensor, we reserve the right to change specifications without notice.



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