

# CPG2300 Portable Digital Pressure Gauge

Data Sheet CPG2300



## Applications

- Portable Field Calibration
- Calibration Labs
- Semiconductor Manufacturers
- Utilities
- Pharmaceutical / Medical / Health Care

## Features

- Ranges to 6000 psi
- Absolute, gauge, bi-directional or vacuum
- Accuracy: 0.015%FS
- Dual sensor
- Dynamic Temperature Compensation from 0-50°C



CPG2300 Portable Digital Pressure Gauge

## Description

### Applications

The CPG2300 Portable Digital Pressure Gauge is used in diverse applications from rugged field calibration of pressure transmitters used in gas transmission, to testing and calibration of transducers in clean rooms and nuclear power plants. Wherever there is a need for a high level of accuracy in a handheld pressure calibration device.

### Functional Flexibility

The CPG2300 Portable Digital Pressure Gauge has one of the best uncertainty specifications of any portable pressure calibration instrument. With an uncertainty of 0.015% FS, technicians are able to achieve the test uncertainty ratios required for modern transmitters. 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 when calibrating.

The CPG2300 Portable Digital Pressure Gauge can have one or two independent precision pressure sensors which can be displayed simultaneously. Channel A can be ordered with full scale ranges up to 6015 psi. Channel B can be ordered with ranges from 3 to 1000 psig or 7.5 to 1000 psia.

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. Options to display range A and B, or range A or B and the analog measurement channel (mA), plus the ability to power a control loop make the CPG2300 ideal for field calibration of pressure and differential pressure transmitters. 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 trouble shooting process pressure transmitters or monitoring barometric pressure.

## Specifications

<b>Accuracy<sup>(1)</sup></b>	FS	Ranges $\geq 1$ psig 0.015% FS Ranges $< 1$ psig 0.030% FS
<b>Calibration Stability (after warm up)</b>		Better than 0.015% FS (0.03% for FS ranges $< 5$ psig) for 180 days with periodic re-zeroing.
<b>Calibration interval</b>		180 days
<b>Calibration adjustment</b>		Zero and Span may be reset without affecting linearity.
<b>Channel A pressure ranges:</b>		0 ... 0.36 up to 0 ... 6000 psig 0 ... 7.5 up to 0 ... 6015 psia
<b>Channel B pressure ranges:</b>		0 ... 5 up to 0 ... 1000 psig 0 ... 7.5 up to 0 ... 1000 psia
<b>Bidirectional pressure range:</b>		-0.18 ... +0.18 up to -atm ... 6,000 psig
<b>Pressure units</b>		psi, in.Hg @ 0°C and 60°F, in.H <sub>2</sub> O @ 4°C and 20°C, ft.H <sub>2</sub> O @ 4°C, 20°C and 60°F, mTorr, inSW @ 0°C, ftSW @ 0°C, atm, bars, mbars, mmH <sub>2</sub> O @ 4°C, cmH <sub>2</sub> O @ 4°C, MH <sub>2</sub> O @ 4°C, mmHg @ 0°C, cmHg @ 0°C, Torr, hPa, mPa, kPa, Pa, D/cmsq, g/cmsq, kg/cmsq, mSW @ 0°C, PSI, PSF, TSF, TSI, mHg @ 0°C, %FS. All seawater units are 3.5% salinity.
<b>Resolution</b>		5 digits on display; 6 digits over serial port
<b>Overpressure limit</b>		150% FS or greater, depending on range limit
<b>Compensated temperature</b>	°C	0 ... 50
<b>Operating temp.</b>	°C	0...50
<b>Storage temp.</b>	°C	-20 ... 70
<b>Warm-up</b>	min	< 1 to rated accuracy
<b>Battery life</b>	hr.	20
<b>Recharge time</b>	hr.	< 8
<b>Reading rate</b>	1/sec	~4.6
<b>Response time</b>	ms	<250 for FS pressure step
<b>Communications</b>		RS-232, 9600 baud, N, 8, 1
<b>Case size</b>	in.	T-Shaped, 8.6 H x 4.3 W x 1.6 D
<b>Weight</b>	lb.	Approximately 1.5
<b>Media compatibility</b>		<b>Pressure port:</b> Clean, dry, non-corrosive, non-combustible, non-oxidizing gases for all rated ranges. Ranges $\geq 5$ 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. <b>Reference port:</b> Clean, dry, non-corrosive gases.

<b>Fittings</b>		1/4 inch FNPT pressure ports, nom. 1/16 inch hose barb for ref ports.
<b>Power</b>		+9 to +14.5 VDC, 830 mA max for battery recharge.
<b>Options</b>		Relief valves (mounted externally). 4-20 mA measurement with 24 VDC loop power source; current measurement accuracy 0.015%R.
<b>Display</b>		Monochrome 128 x64 LCD with white LCD backlight.

(1) It 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.

## Accessories



Hand pump



Canvas case with belt clip



Analog cables

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

The calibration program at Mensor 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.



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