

Meri-Cal II

Model 3600 & 3610 Pressure Calibrator



Model 3600 Meri-Cal II is a microprocessor based pressure calibrator with 5 digit resolution and NIST traceability. Two pressure sensors and one electrical sensor installed in the Meri-Cal II will allow measurement of differential and static pressure, plus current and voltage in one unit. Any two of these measurements are displayed on a 4 line by 20 character alphanumeric display, making calibration of transmitters and transducers easy.

The Model 3610 Meri-Cal II incorporates a convenient Data Logging mode and on-board memory to provide calibration documentation at the stroke of a key. Calibration procedures can be set up quickly using the Windows '95 Data Logging Program. Up to 20 PC Calibration files of up to 20 points each can be downloaded from a PC. This allows the 3610 to prompt the user with required calibration points. Another 20 Manual Calibrations files can be stored directly through the keypad.

Specifications

- **Approvals:** CE compliant (Optional)
- **Display:** 4 line x 20 character alpha-numeric 5 full digit resolution
- **NIST traceability:** NIST certificate supplied for all models.
- **Power:** 9-volt alkaline battery with user enabled automatic shut-off.
- Optional 9 volt lithium batteries can also be used and are recommended below 32° F (0° C).
- **Temperature:**
Storage: -40°F to 140°F (-40 to 60°C)
Operating: 23°F to 122°F (-5 to 50°C)
- **Process connection:** 1/8" female NPT, 316ss
- **Media compatibility:** Non-isolated sensor (DN) for clean, dry, non-corrosive gases. Isolated sensor (GI and AI) for fluids compatible with 316ss.
- **Pressure limits:** Twice range on GI/AI units. Twice range on DN units when pressurized on high side only and 150 PSI (10.5 Kg/cm²) static when applied to both sides of the sensor simultaneously.
- **Enclosure:** 30 ounces. (8.5"L x 5.2"W x 3.0"D) ABS plastic case
- **Accuracy:** Pressure sensor ± 0.05% of F.S. or optional ± 0.025% of F.S. Electrical measurements ± 0.025% of F.S. Accuracy includes all effects of linearity, repeatability, hysteresis and temperature over the range 23°F to 122°F

3600 Standard Features

- **Selectable Engineering Units** - PSI, inches H₂O (4°C, 20°C, and 60°F references), kg/cm², Kilopascals, mBars, Bars, mm Hg, inches Hg, cm H₂O, user definable units.
- **Auto Shut-off** - occurs after 10 minutes without a new keystroke. User can disable this feature.
- **DAMPING** (averaging) - selectable from 0.1 to 25 seconds to dampen pulsation and stabilize the display.
- **MIN/MAX** capture - minimum and maximum measured values are captured. Capture speed is equal to the selected damping rate.
- **HOLD** - toggle on/off function freezes display.
- **ZERO** - provides automatic re-zeroing of the sensors. Soft Carrying Case with adjustable shoulder strap.

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3610 Features (Additional to 3600)

- **Memory** - Non-volatile data-logging memory for 40 calibration files with up to 20 points per file.
- **PC Data Logging Mode** - prompts user to follow calibration procedures downloaded from a PC (Requires Optional Software). Stores AS FOUND and AS LEFT data in memory.
- **Manual Data Logging Mode** - field defined data logging for transmitter or transducer calibrations or documentation of local indicators or flow computers.
- **DB-9 serial connector** - used for downloading calibration files from a PC to the 3610 and for uploading stored calibration results to the PC (Requires Optional Software)

Ordering Information

MERI-CAL II (includes current / voltage sensor):

3600 Select one or optionally two sensors from selection below. Order same accuracy for units with two sensors.

3610 Adds onboard memory card and PC Data logging to the model 3600(Requires software and cable- see accessories)

SENSORS:

.05%	DN0200	0-200" H ₂ O	Differential	.025%	DN0200	0-200" H ₂ O	Differential
	DN2000	0-2000" H ₂ O	Differential		DN2000	0-2000" H ₂ O	Differential
	GI0020	0-20 PSI	Gauge		GI0020	0-20 PSI	Gauge
	GI0200	0-200 PSI	Gauge		GI0200	0-200 PSI	Gauge
	GI2000	0-2000 PSI	Gauge		GI2000	0-2000 PSI	Gauge
	AI2000	0-2000 mm Hg	Absolute		AI2000	0-2000 mm Hg	Absolute
	.1%	DN0020	0-20" H ₂ O	Differential			

To Order a Meri-Cal II with 200" Differential and 2000 PSI sensor with .025% accuracy. The order code is as follows: 3600-DN0200-GI2000-025 (add "-025" extension for accuracy).

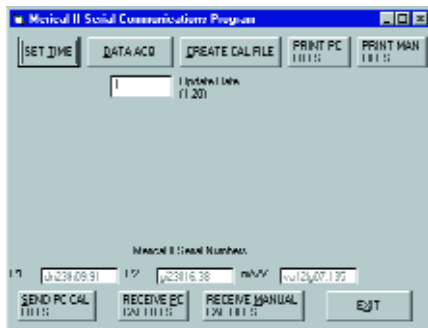
Consult factory or your local Meriam Representative for Pricing

MERI-CAL II MODEL 3610 DATA LOGGING and COMMUNICATIONS SOFTWARE for PC's

The Data Logging and Communications Software for the Meri-Cal II is Windows '95 compatible.

Features for the program include:

- SET TIME button to synchronize the Meri-Cal II real time clock with the PC's.
- DATA ACQ provides automated data acquisition (10Hz rate) using the PC with the Meri-Cal II. The Meri-Cal II Model 3610 will function as a data logging calibrator for pressure and electrical signal in the PC Data Logging Mode.
- CREATE CAL FILE facilitates the uniform creation of individual calibration files for each transmitter or transducer ID number. After entering a Serial/Tag # of up to 15 characters, Channel 1 and 2 Sensors are defined by clicking on the sensor type and desired units for each. The software allows up to 20 PC Calibration and 20 manual (20 points each) calibration files to be uploaded to the 3610.
- SEND PC CAL FILES downloads selected files to the Meri-Cal II.
- RECEIVE PC (and MANUAL) CAL FILES uploads stored calibration data from the Meri-Cal II to the PC.
- PRINT commands allow printing of calibration data previously uploaded to the PC.



The Meri-Cal II guides the user through the calibration procedure. The PC interface option allows for the display of PREV: the most recent as left data, FOND: the present as found data, and NOML: The desired present point to calibrate as programmed through the PC interface. With a simple keystroke this information is stored in non-volatile memory. The Meri-Cal II is then interfaced with the host PC for long-term information storage and printing of calibration certificates.

Meri-Cal Digital Manometer/Calibrator



The Meri-Cal is a portable digital manometer / calibrator for pressure and differential pressure measurement. It features high accuracy and rugged design that brings laboratory test and calibration capability to the field.

Meri-Cal's display simultaneously indicates pressure (or differential pressure) and electronic transducer/transmitter output in any of eight key selectable engineering units. Meri-Cal continues to provide the most cost effective and useful method of precise measurements.

Standard Features on the Meri-Cal Digital Manometer/Calibrator

- **Approvals:** CSA certification for intrinsic safety use in Class 1, Groups A, B, C and D areas. CE and CENELEC approvals. (Both Optional)
- **Display:** 8 digit (4 pressure or DP and 4 voltage or current) LCD type with .3" high (7.6 mm) digits.
- **NIST traceability:** NIST certificate supplied for all models.
- **Power:** NI-CAD Rechargeable, Minimum of 40 Hrs @ 70°F (21°C); 20 Hrs @ -20°F (-29°C)
- **Temperature:**
Storage: -40°F to 140°F (-40°C to 60°C)
Operating: -20°F to 122°F (-6.7°C to 50°C)
Effect: None within the calibrated range of -4° to 104°F
- **Process connection:** 1/8" OD Presto-lok
- **Enclosure:** 1.1 pounds (0.5 kg) 4 x 7.5 x 1.9 (102mm x 191mm x 48mm). Impact resistant ABS material.
- **Pressure limits:** Twice range on Gauge (LP) units. Twice range on Differential (DP) units when pressurized on high side only and 150 PSI (10.5 Kg/cm²) static when applied to both sides of the sensor simultaneously.
- **Media compatibility:** Non-isolated sensor for clean, dry, non-corrosive gases.
- **Auto Zero:** A push of a button automatically establishes zero. There is no need to compute compensation factors for local gravity, temperature, or head difference due to the location of the tester vs. the unit under test.
- **Engineering units:** in H₂O at 20°C, cm H₂O, PSI, in Hg at 0°C, mm Hg, Kg/cm², kPa, mBar and user scaled.
- **Resolution:** Auto-ranging for optimal accuracy and resolution of the display for both pressure and electrical inputs.
- **Electrical Measurement:**
Voltage: 0 to 30 Vdc
Current: 0 to 30 mAdc
- **Accuracy:** Pressure: ± 0.1% of reading, ± 1 count, Voltage/Current: ± 0.1% of reading, ± 2 counts. Optional ± 0.05% of reading, ±1 count on pressure sensors. Accuracy includes the combined effects of linearity, hysteresis, repeatability and temperature over the calibrated range.

MODEL*	INCHES		PSIG	INCHES		KG/CM ²	kPa	mBar
	H ₂ O	CM H ₂ O		HG	MM HG			
LP200I	200.0	508.0	7.21	14.68	373.0	0.507	49.70	497.0
DP200I	200.0	508.0	7.21	14.68	373.0	0.507	49.70	497.0
LP2000I	2000.	5080.	72.10	146.8	3730.	5.070	497.0	4970.
DP2000I	2000.	5080.	72.10	146.8	3730.	5.070	497.0	4970.

LP models measure gauge pressure only. DP models can be used to measure differential pressure, gauge pressure and vacuum.
* For CSA approved models change the "I" suffix to "C" For CENELEC approved models change the "I" suffix to "E"