



# AIRDATA™ MULTIMETER

ELECTRONIC MICROMANOMETER

# ADM-860C

AIRFLOW • VELOCITY • PRESSURE • TEMPERATURE



- AIR BALANCE MODEL
- MEMORY AND AVERAGING
- SERIAL OUTPUT TO PRINTER OR COMPUTER
- VELGRID AND AIRFOIL
- VELOCITY AND PRESSURE
- FLOW AND TEMPERATURE
- SUPPLY AND EXHAUST
- AIR DENSITY CORRECTED
- ENGLISH AND METRIC

## ADM-860C AIRDATA MULTIMETER

The **ADM-860C** AirData Multimeter was developed for the unique needs of the air balancing specialist. The keypad has been simplified for rapid selection of routine air balance functions. The versatile **VelGrid** and **AirFoil** probes are included in this meter kit and provide improved speed and flexibility in the measurement of airflow and velocity.

The **memory** function allows the sequential storage and recall of up to 100 measurements, with display of the sum and average at any point. This is a real time saver for duct traverses.

The **RS232 communications port** allows the user to download readings to a printer or computer. Readings can be downloaded either individually or as a sequence from memory. Optional user-friendly software allows readings to be automatically inserted into an Excel™ or similar spreadsheet.

A standard **pitot tube**, or the straight **AirFoil** probe can be used for duct traverses and air velocity readings at exhaust hoods and laminar flow applications. No leveling, zeroing or range selection is necessary.

Velocity and flow readings are **local density corrected** for variations in temperature and barometric pressure.

The Shortridge Instruments AirData Multimeter design combines **digital electronics** with convenience and flexibility in the measurement of airflow, velocity, pressure, and temperature.



BACKPRESSURE COMPENSATED  
AIR BALANCE SYSTEM



This meter can be installed on the **FlowHood** in less than 60 seconds. Airflow readings are automatically corrected for air density and backpressure at supply or exhaust outlets.

## Shortridge Instruments, Inc.

7855 East Redfield Road • Scottsdale, Arizona 85260  
Phone (480)991-6744 • Fax (480)443-1267 • [www.shortridge.com](http://www.shortridge.com)

# S I AIRDATA™ MULTIMETER

ELECTRONIC MICROMANOMETER

## ADM-860C



The multifunction model ADM-860C provides digital display of readings in English and metric units corrected for **local density only**. Features include **TREND** mode, **memory** with total and average, and the versatile **VelGrid** and **AirFoil** probe. Measures air velocity, absolute and differential pressure, temperature, and backpressure compensated airflow when used with the series 8400 FlowHood.



### FAST ACCURATE DUCT VELOCITY TRAVERSES

One person can now perform **pitot tube** traverses in half the time previously required by two people. Each reading can be taken and entered into memory in about ten seconds. Each reading can be recalled, along with the sum and average of the readings, when the traverse is complete. The **AirFoil** probe is for general single point air velocity measurement. The straight shaft design permits easier use in ductwork.

### DIFFERENTIAL PRESSURE MEASUREMENT

The AirData Multimeter measures an extremely wide range of pressures from 0.0001 in wc to 60.00 in wc with very high accuracy. Despite its sensitivity, this meter can endure 20 psi differential pressure with no adverse effects. Absolutely no zero shift is caused by ranging or line pressure. Although designed for hand-held field use, this meter is as sensitive as some laboratory micromanometers.

### ACCURATE TEMPERATURE READINGS

The ADT440 **TemProbe** series is uniquely suited for wet bulb, dry bulb and water line temperatures. The optional eight point **AirData MultiTemp** is ideal for efficiency testing of air conditioning units and heat exchangers.

### AUTOMATIC ZERO AND RANGE SELECTION

Internal calibration, temperature compensation, range selection and zeroing are fully automatic with each reading. No external adjustments are ever needed.

### AIR DENSITY CORRECTED FLOW AND VELOCITY

Airflow and velocity readings are automatically corrected for the density effect of barometric pressure and temperature. Readings are displayed as local density, true air velocity or flow.

### FUME HOOD AND CLEAN ROOM TESTING

The **VelGrid** is an accessory designed especially for use in the measurement of general face velocity conditions such as exhaust hoods, HEPA clean room filter outlets, laminar flow work stations, and large filters and coils. Each reading represents the input of 16 velocity points over a one-square-foot area. A 54-inch adjustable extension handle and meter neckstrap allow convenient positioning and use of the VelGrid.

### STORE AND RECALL READINGS, AVERAGE AND TOTAL

The memory feature of the meter can store up to 100 readings for later recall of each reading, the total, and the average of the readings. This greatly simplifies pitot tube traverses, the averaging of face velocities, temperatures and static pressures, and the recording of outlet readings.

### NEW AIR BALANCE ACCURACY

The air delivery of an outlet is reduced when a capture hood is in place. This "backpressure" caused flow reduction varies from one outlet or damper setting to another. The 8400 series **FlowHood** represents a major breakthrough in direct airflow measurement at supply and exhaust outlets. Backpressure compensated and noncompensated readings are recorded separately in memory, with display of average and sum for each function. The AirData Multimeter is easily installed on the FlowHood unit and integrates its instant microprocessor calculating power with the unique flaps feature in the FlowHood base. Each airflow reading may be compensated for the backpressure effect of the FlowHood.

The **FlowHood** kits include the base metering section with velocity averaging grid, various top size combinations and rugged carrying case.

### SPECIFICATIONS

**AIR VELOCITY:**  $\pm 3\%$  of reading  $\pm 7$  fpm from 50 to 8000 fpm using standard Series 160 pitot tube (29,000 fpm FS); 50 to 5000 fpm AirFoil; 50 to 2500 fpm VelGrid.

**DIFFERENTIAL PRESSURE:**  $\pm 2\%$  of reading  $\pm 0.001$  in wc from 0.0500 to 50.00 in wc, (0.0001 to 60 in wc FS); 20 psid safe pressure.

**TEMPERATURE:**  $\pm 0.5^\circ\text{F}$  accuracy from  $32^\circ\text{F}$  to  $158^\circ\text{F}$  using ADT440 Series TemProbes ( $-67^\circ\text{F}$  to  $250^\circ\text{F}$  FS);  $0.1^\circ\text{F}$  resolution.

**AIRFLOW:** Accuracy is  $\pm 3\%$  of reading  $\pm 7$  cfm from 100 to 2000 cfm; range is 25 to 2500 supply, 25 to 1500 exhaust with 8400 **FlowHood**.

**ABSOLUTE PRESSURE:**  $\pm 2\%$  of reading  $\pm 0.1$  in Hg from 14 to 40 in Hg referenced to vacuum. 60 psia maximum safe pressure.

**OPERATIONAL TEMPERATURE LIMITS:**  $40^\circ\text{F}$  to  $140^\circ\text{F}$ .

**AIR DENSITY CORRECTION:** Local air density correction range is 14 to 40 in Hg and  $32^\circ\text{F}$  to  $158^\circ\text{F}$ .

**POSITION SENSITIVITY:** Unaffected by position.

**MEMORY:** 100 readings, sequence labeled, sum and average.

**CALIBRATION:** Calibration certified NIST traceable.

**READOUT:** 10 digit, 0.4", high contrast, liquid crystal display.

**METER HOUSING:** 6.0" x 6.4" x 2.7" high impact ABS. 36 oz.

**CONNECTIONS:** 1/4" OD slip-on for 3/16" ID soft tubing.

**BATTERY LIFE:** Up to 3000 readings/charge, 500 recharge cycles.

## Shortridge Instruments, Inc.

7855 East Redfield Road • Scottsdale, Arizona 85260

Phone (480)991-6744 • Fax (480)443-1267 • www.shortridge.com