



# F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

## DIGITAL AIR FLOW CALIBRATOR for AIR SAMPLERS

**Regular Line Power and with Battery Powered Option**

### NOTABLE FEATURES:

- Differential Pressure Flow Sensor
- Display of flow in CFM, LPM or M<sup>3</sup>/min. by operator selection
- Standard accuracy: ±2.0% Full Scale
- Flowrates displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
 

Classical STP	0°C, 1 Atm
Normal T and P	20°C, 1 Atm
Modified Normal T and P	70°F, 1 Atm
Standard Ambient T and P	25°C, 1 Atm
- Display of barometric pressure in metric or English units
- Display of temperature in metric or English units
- Portable battery operated unit is available
- Certified to UL, CSA and CE electrical safety standards
- NIST traceable calibration certificate
- Ambient or Reference flow is selectable by the operator



## — NEW ENHANCED DESIGN —

### Models Available

Basic Line Power Models		Units w/Battery option		AIR FLOW RANGE	
100 – 120VAC	220 – 240VAC	100 – 120VAC	220 – 240VAC	CFM	LPM
<u>MODEL NO.</u>	<u>MODEL NO.</u>	<u>MODEL NO.</u>	<u>MODEL NO.</u>		
D-801V.2	D-801EV.2	D-801BV.2	D-801BEV.2	0.1 – 1	3 – 30
D-802V.2	D-802EV.2	D-802BV.2	D-802BEV.2	0.2 – 2	6 – 56
D-812V.2	D-812EV.2	D-812BV.2	D-812BEV.2	0.5 – 4	14 – 115
D-828V.2	D-828EV.2	D-828BV.2	D-828BEV.2	1 – 9	28 – 250
D-814V.2	D-814EV.2	D-814BV.2	D-814BEV.2	2 – 14	56 – 400
D-530V.2	D-530EV.2	D-530BV.2	D-530BEV.2	5 – 30	140 – 850
D-540V.2	D-540EV.2	D-540BV.2	D-540BEV.2	5 – 40	140 – 1130
D-550V.2	D-550EV.2	D-550BV.2	D-550BEV.2	5 – 50	140 – 1400
D-870V.2	D-870EV.2	D-870BV.2	D-870BEV.2	10 – 70	280 – 1980

### Options:

- Battery Powered Operation (Denoted by 'B' in model number)
- 1.0% F.S. accuracy units available (add '-1' to model number); example: D-812EV.2-1

# DIGITAL AIR FLOW CALIBRATOR V.2

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## 1. MEASUREMENT PRINCIPLE

- 1.1 Flow Sensor: Differential pressure sensor
- 1.2 Standardization: Correction for standard temperature and barometric pressure
- 1.3 Curve linearization: Individually calibrated and software corrected

## 2. MEASUREMENT RANGES

- 2.1 Air flow: See Table on front page
- 2.2 Temperature:  $-4^{\circ}\text{F} - 122^{\circ}\text{F}$  ( $-20^{\circ}\text{C} - 50^{\circ}\text{C}$ )
- 2.3 Barometric pressure:  $30 - 24$  In-Hg ( $760 - 609$  mm-Hg)  
~ Sea level to 6000 ft. elevation above sea level

## 3. MEASUREMENT ACCURACY

- 3.1 Air flow:  $\pm 2.0\%$  of full scale (Optional  $\pm 1.0\%$  of full scale)
- 3.2 Temperature (Typical):  $1^{\circ}\text{C}$  over range  $-20^{\circ}\text{C}$  to  $50^{\circ}\text{C}$
- 3.3 Barometric pressure:  $\pm 1\%$  of reading over measurement range of 22.00-30.00 "Hg

## 4. DISPLAY 6 Digit LED 0.4" high

## 5. DISPLAYED PARAMETERS and RESOLUTIONS

	Parameter	Engineering Unit	Resolution	
5.1	CFM	Cubic feet per minute	0.01	CFM
5.2	LPM	Liter per minute	0.1 or 1	LPM*
5.3	M <sup>3</sup> /m	Cubic meter per minute	0.0001	M <sup>3</sup> /min
5.4	F	Degree Fahrenheit	0.1	° F
5.5	C	Degree Celsius	0.1	° C
5.6	In-Hg	Inches of Mercury	0.01	In-Hg
5.7	mm-Hg	Millimeters of Mercury	1	mm-Hg

\* A 0.1 LPM resolution applies to calibrators that have a maximum flow of 900 LPM

## 6. GENERAL

- 6.1 Power requirements:  $100-120$  VAC; 50/60Hz  $0.3$  Amps max;  $220-240$  VAC/50Hz
- 6.2 Operating temperature:  $-4^{\circ} - 122^{\circ}\text{F}$   $(-20^{\circ} - 50^{\circ}\text{C})$
- 6.3 Storage temperature:  $-20^{\circ} - 158^{\circ}\text{F}$   $(-28^{\circ} - 70^{\circ}\text{C})$
- 6.4 Dimension (L×W×H)  $9.75'' \times 8.25'' \times 10.75''$   $(248 \times 210 \times 273 \text{ mm})$
- 6.5 Weight:  $8$  lbs.  $6$  oz.  $(3.8 \text{ Kg})$
- 6.6 Installation Category: Pollution Degree 2
- 6.7 Enclosure Rating: IPX0

## 7. CALIBRATION

Factory calibration is recommended once per year

## 8. OPTIONS

- 8.1 RS-232 cable — All measured and calculated parameters are accessible through the RS-232 port to a computer.
- 8.2 Data acquisition and processing software is available upon request.
- 8.3 AC input of 230V, 50Hz is available upon request at no additional charge.