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The Nucleus of Quality Air Monitoring Programs

BENCHTOP DIGITAL CALIBRATOR for AIR SAMPLERS

Regular Line Power and with Battery Powered Option

NOTABLE FEATURES:

- Flow measuring device: Venturi
- Display of flow in CFM, LPM and M³/min or M³/hr. by operator selection (LED display)
- Standard accuracy: ±2% 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
- Certified to UL, CSA and CE electrical safety standards for line power models
- Ambient or Reference flow is selectable by the operator
- 1 year warranty



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	.15 – 1	4 – 28
D-802V.2	D-802EV.2	D-802BV.2	D-802BEV.2	.25 – 2	7 – 56
D-812V.2	D-812EV.2	D-812BV.2	D-812BEV.2	.5 – 4	14 – 115
D-828V.2	D-828EV.2	D-828BV.2	D-828BEV.2	1 – 9	28 – 255
D-814V.2	D-814EV.2	D-814BV.2	D-814BEV.2	2 - 14	56 - 400

Options:

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

REV: 20 October 2020

BENCHTOP DIGITAL CALIBRATOR

1. MEASUREMENT PRINCIPLE

- 1.1 Flow Sensor: Venturi Tube
- 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)
approx. Sea level to 6000 ft. elevation above sea level

3. MEASUREMENT ACCURACY

- 3.1 Air flow: $\pm 2\%$ of Full Scale
- 3.2 Temperature (Typical): 1°C over range -20°C to 50°C
- 3.3 Barometric pressure: $\pm 1\%$ over measurement range

4. DISPLAY 6 Digit LED 0.4" high

5. DISPLAYED PARAMETERS and RESOLUTIONS

	Parameter	Engineering Unit	Resolution	Units of Measure
5.1	CFM	Cubic feet per minute	0.01	CFM
5.2	LPM	Liter per minute	0.1 or 1	LPM*
5.3	M ³ /m	Cubic meter per minute	0.0001	M ³ /min
5.4	M ³ /hr	Cubic meter per hour	0.1 or 0.01	M ³ /hr**
5.5	F	Degree Fahrenheit	0.1	$^{\circ}\text{F}$
5.6	C	Degree Celsius	0.1	$^{\circ}\text{C}$
5.7	In-Hg	Inches of Mercury	0.01	In-Hg
5.8	mm-Hg	Millimeters of Mercury	1	mm-Hg

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

** A 0.01 m³/hr resolution applies to calibrators that have a maximum flow rate of 54 M³/hr.

6. GENERAL

- 6.1 Power requirements: 100–120 VAC;50/60Hz 0.3 Amps max; 220-240 VAC/50Hz
- 6.2 Operating temperature: $-4^{\circ}\text{F} - 122^{\circ}\text{F}$ ($-20^{\circ}\text{C} - 50^{\circ}\text{C}$)
- 6.3 Storage temperature: $-20^{\circ}\text{F} - 158^{\circ}\text{F}$ ($-29^{\circ}\text{C} - 70^{\circ}\text{C}$)
- 6.4 Dimension (L×W×H) 9.75"×8.25"×10.75" (248 ×210 × 273 mm)
- 6.5 Weight: 8 lbs. 6 oz. (3.8 Kg)
- 6.6 Installation Category: Pollution Degree 2
- 6.7 Enclosure Rating: IPXO

7. CALIBRATION

Factory calibration is recommended once per year

8. OPTIONS

- 8.1 RS-232 interface, including cable — All measured and calculated parameters are accessible through an 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.