F&J SPECIALTY PRODUCTS, INC.

DIGITAL AIR MONITORING SYSTEM F&J MODEL DF-804E

NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:

sccm	scc
SLPM	SL
SCMH	SCM
SCFM	SCF

- State of the Art microprocessor electronics
- Automatic flow control
- Auto Shut-off on time or volume
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flowrate accuracy within ± 4.0% F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- 200 – 240 VAC, 50/60Hz; single phase

GENERAL DESCRIPTION:

The DF-804E Series Air Sampling Systems are designed for remote unattended continuous air sampling applications. The DF-804E Series Air Samplers feature a brushless motor with electronic motor speed control that maintains a user selectable flow rate. The flowrate range attainable through the filter media is dependent upon the air porosity of the filter media. The DF-804E Series design accommodates rapid field service and component replacement.

The basic components of the system are assembled in a modular fashion so that each component can be readily and independently removed for service.

For durability and weather resistance, the system is housed in a freestanding powder coat painted aluminum enclosure. The sample air is drawn in under the eaves of the hinged lid from all four sides and is exhausted near the bottom of the enclosure. The locking swing door on the enclosure provides convenient access for servicing the equipment inside. A lockable latch on the top cover restricts unauthorized tampering with the filter holder.

The electronic flow control measurement sub-system of the DF-804E Series provides a standard flow measurement and a constant flow of air through the filter medium. The air flow is measured by a precision-machined differential pressure sensor. The controller can be readily set to any sampling flow rate between 5 and 50 CFM (141-1415 LPM) depending on the filter paper air resistance and dimensions. The bright LED readout displays multiple air sampling information including current flow rate, current elapsed sample time and totalized volume. The filter holder can be custom designed to accommodate any filter size and type. The DF-804E model utilizes a 102 mm (4 inch) diameter filter.

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DF-804E (200 – 240VAC)

Performance:
Basic components of the system are modular and independently serviceable. Sample flow rate can be set between 5 and 50 CFM (141 and 1415 LPM). Filter holder is a 102 mm (4 inch) diameter standard.

Technology:	Microprocessor controlled state of the art electronics
Operating Temperature Range:	-31ºF* to 122ºF (-35ºC* to 50ºC) * warm start/continuous operation
Operating Relative Humidity:	0 – 95% RH
Typical Flow Rate Range:	5 – 50 CFM (141 to 1415 LPM) (Depending on filter paper dimensions and air resistance).
Motor:	Brushless: 1 H.P.(1200 Watt) motor with electronic motor speed control
Power:	200-240VAC; 50/60Hz; 15 amperes; single phase.
Housing:	Powder coat painted aluminum Locking hinged cover Removable hinged cover Locking swing door with key
Dimensions:	66H × 67W × 41 cm D (26”H × 26.5”W × 16.5”D)
Noise Level:	Average dB 83.5 @ 1 meter
Weight:	Approximately 27,2 kg (60 lbs.)
Shipping Weight:	Approximately 45,5 kg (100 lbs.)
Installation Category:	Pollution Degree 3
Enclosure Rating:	IPX3

Automatic Flow Control:
The system microprocessor monitors flow rate relative to the preset STP flow rate established during the setup procedure and electronically adjusts the electronic motor speed adjustment, if necessary, to maintain the flow within ± 4.0% of setting. The microprocessor computes the STP flow rate by correcting for temperature and pressure.

On-Board Measurement, Calculations and Other System Features

Measurements:
- Temperature of air flow through system
- Inlet pressure to the flow sensor
- Differential Pressure of the flow sensor

Calculations/Determinations:
- Totalized volume, STP
- Current flow rate, STP
- Elapsed time

Factory Settable Reference T and P

Classical STP	0ºC, 1 ATM
Normal T and P	20ºC, 1 ATM
Modified Normal T and P	70ºF, 1 ATM
Standard Ambient T and P	25ºC, 1 ATM

Other System Features:
- Automatic shut off of system on totalized volume or elapsed time
- RS-232 port for communication with computer
- Utilization of 102 mm (4 inch) diameter filters
- Bright LED display

OPTIONS:
- Data Storage Device (P/N: 232FCDSD)
- 2 GB Secure Digital Card (P/N: 372239)
- FlashCard Reader (P/N: SDDR-199-A20)

Tel: 352/680-1177 • Fax: 352/680-1454 • Email: fandj@fjspecialty.com