



## F&J SPECIALTY PRODUCTS, INC.

# DIGITAL AIR MONITORING SYSTEM F&J MODEL DF-604DE

### NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:
  - 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  $\pm 4.0\%$  F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- Powerful 1100 W brushless motor
- 220 – 240 VAC, 50/60Hz; single phase



### GENERAL DESCRIPTION:

The DF-604DE Series Air Sampling Systems are designed for remote unattended continuous air sampling applications. The DF-604DE Series Air Samplers feature an 1100 watt high efficiency brushless motor with electronic motor speed control that maintains a user selectable flowrate. The flowrate range attainable through the filter media is dependent upon the air porosity of the filter media. The DF-604DE 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-604DE 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 10 and 50 CFM (17 - 85 m<sup>3</sup>/hr) 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-604DE model utilizes a 4 inch (102 mm) diameter filter.

## DF-604DE (220 – 240VAC)

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### Performance:

Basic components of the system are modular and independently serviceable. Sample flow rate can be set between 10 to 50 CFM (17 to 85 m<sup>3</sup>/hr). Filter holder is a 4 inch (102 mm) diameter standard.

**Technology:** Microprocessor controlled state of the art electronics

**Operating Temperature Range:** -20°F\* to 122°F (-29°C\* to 50°C)  
\* Warm start/continuous operation

**Operating Relative Humidity:** 0 – 95% RH

**Typical Flow Rate Range:\*** 10 – 50 CFM (17 to 85 m<sup>3</sup>/hr)  
\* Approximate value for FP40M glass fiber filter media

**Motor:** Brushless: 1.5 H.P. (1100 Watt) motor with electronic motor speed control

**Power Requirements:** 220-240VAC; 50/60Hz; 10 amperes; single phase.

**Housing:** Powder coat painted aluminum      Locking hinged cover  
Removable hinged cover      Locking swing door with key

**Dimensions:** 57,5”H × 21,5”W × 21,5”D (146H × 54,6W × 54,6 cm D)

**Weight:** Approximately 98 lbs. (44,5 kg)

**Shipping Weight:** Approximately 150 lbs. (68,2 kg)

**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% 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	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

### Other System Features:

- Automatic shut off of system on totalized volume or elapsed time
- RS-232 port for real-time data download
- Utilization of 4 inch (102 mm) diameter filters
- Bright LED display
- Automatic flow control

### OPTIONS:

- Data Storage Device (P/N: 232FCDS)
- 2 GB Secure Digital Card (P/N: 372239)
- Flash card Reader (P/N: SDDR-199-A20)