



**F&J SPECIALTY PRODUCTS, INC.**

*The Nucleus of Quality Air Monitoring Programs*

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# PORTABLE DIGITAL FLOWMETER KIT for ENVIRONMENTAL STYLE AIR SAMPLERS DF-100E SERIES



## GENERAL DESCRIPTION:

The DF-100E Series portable flowmeter upgrade kits are designed to upgrade existing air sampling systems utilizing motors of 1/3 HP or less. The DF-100E units are connected in-line between the pump inlet and the filter holder. The DF-100E Series upgrade eliminates the need to engage in expensive conversions of equipment or the need to purchase new air sampling systems.

The typical operating flow ranges vary from 1 CFM to 9 CFM (30 – 255 LPM). Custom higher flow ranges with exterior mounted flow sensors are available upon request.

## OPTIONS:

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

REV: 05 June 2018

## 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
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
  - Classical STP                      0°C, 760 mmHg
  - Normal T and P                      20°C, 760 mmHg
  - Modified Normal T and P          21,1°C, 760 mmHg
  - Standard Ambient T and P        25°C, 760 mmHg
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flow rate accuracy within  $\pm 4\%$  F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- Auto Shut-off on time or volume
- 220 – 240VAC, 50/60Hz; single phase; < 3.24 FLA\*

\* FLA = Full Load Amps

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**Tel: (352) 680-1177 / Fax: (352) 680-1454 / Email: [fandj@fjspecialty.com](mailto:fandj@fjspecialty.com)**

## DF-100E SERIES Portable Digital Flow Meter Kit for Air Samplers

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### SPECIFICATIONS:

#### Flow Range Available:

| Model        | Flow Range |          |
|--------------|------------|----------|
|              | (CFM)      | (LPM)    |
| 220-240 VAC  |            |          |
| DF-100-30LE  | 0.1 – 1    | 3 – 30   |
| DF-100-60LE  | 0.2 – 2    | 6 – 60   |
| DF-100-115LE | 0.5 – 4    | 14 – 115 |
| DF-100-250LE | 1 – 9      | 30 – 255 |

#### Power Requirements:

**DF-100E Series:** 220 – 240 VAC, 47-63 Hz; 0.2 amperes

#### Maximum Motor Rating:

| Model   | HP  | FLA  |
|---------|-----|------|
| DF-100E | 1/3 | 3.24 |

**Fuse Protection (for plugged in sample):** 8 amp, slow blow

**Electrical Cord:** 3 wire, 16 gauge

**Dimensions:** 8" L x 8" W x 12" H. (20,3L x 20,3W x 30,5 cm H)

**Weight:** 4.1 lbs. (1864 gms.)

**Installation Category:** Pollution Degree 2

### ELECTRONIC SPECIFICATIONS:

|                              |                     |                        |
|------------------------------|---------------------|------------------------|
| <b>Measurement Accuracy:</b> | Air flow            | ± 4% of full scale     |
|                              | Temperature         | ± 2.0° F (1.1° C)      |
|                              | Barometric Pressure | 2% over measured range |

**Operating Temperatures:** 0° to 122° F (-17° to 50° C)

**Storage Temperature:** 0° to 158° F (-17° to 70° C)

**Calibration:** Calibration-Verification once per year

**Communications Interface:** RS-232 (comma delimited text file)

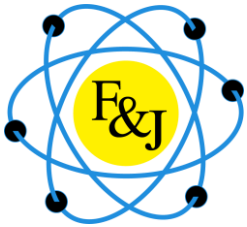
**Display:** LED; 6 character

### On-Board Calculations:

- Flow calculation from differential pressure value using best-fit curve method.
- Flow correction for standard temperature and pressure
- Auto-zero correction utilizing electro-pneumatic method to compensate for offset and drift (automatic once every minute).

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## PRODUCT PROFILE

### Air Sampling Systems

- ❖ High Volume Air Samplers
  - Portable Grab Samplers
  - Environmental Systems
  - Enzyme Dust Samplers
  - PM10 Systems
- ❖ Continuous Air Samplers
  - Environmental Systems
  - Portable
  - Fixed Station
- ❖ Personal Air Samplers
- ❖ Emergency Response DC Powered Air Sampling Systems

### Filter Paper

- ❖ Glass Fiber
- ❖ Cellulose
- ❖ Membrane
- ❖ Quartz

### Filter Holders

- ❖ Open face
- ❖ In-Line
- ❖ PAS Filter Holders
- ❖ Materials
  - Plastic
  - Aluminum
  - Stainless Steel

### Radon Detection Devices

- ❖ 2-Day Passive Charcoal Canisters
- ❖ 7-Day Passive Charcoal Canisters
- ❖ Continuous Radon Monitors

### Tritium Detection Systems

- ❖ Portable and Fixed Station Collection Systems utilizing Silica Gel or Molecular Sieve Absorbents
- ❖ Continuous Tritium Monitors

### New Products

- ❖ Global Air Sampling Systems
- ❖ Digital Flowmeter Air Samplers
- ❖ C-14 Collection Systems
- ❖ ELITE DIGITAL LIGHT (EDL) Air Samplers
- ❖ Isokinetic Air Sampling Systems
- ❖ MEGA High Volume Air Samplers
- ❖ ULTRA High Volume (CTBTO) Air Samplers

### Radioiodine Collection Cartridges

- ❖ TEDA Impregnated Charcoal
- ❖ Silver Zeolite
- ❖ Custom Cartridges
- ❖ Bulk Silver Zeolite

### Air Flow Calibrators

- ❖ World Calibrator Series
- ❖ Compact Digital V.2 Series
- ❖ Mini-Calibrator