



F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

ENVIRONMENTAL LOW VOLUME AIR SAMPLER with DIGITAL FLOW METER MODEL DF-2234E

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
- Flowrate and volume totalizations 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
- Ambient or reference flow is selectable by operator
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flow rate accuracy within $\pm 4.0\%$ 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
- **OPTIONS**

232FCDS	Data Storage Device
372239	Secure Digital Card
SDDR-199-A20	FlashCard Reader

View inside weatherhouse illustrating digital flowmeter



Full view illustrating the optional exterior gooseneck sampling system



GENERAL DESCRIPTION:

The Model DF-2234E environmental air sampling system with digital flow meter is a low-volume air sampler consisting of an oil-less, carbon vane vacuum pump, with a constant air flow regulator for use where a nearly constant air flow is desirable. The regulator holds a constant pressure drop across an in-line orifice, by varying the flow through a bypass valve into the pump. This system allows the pump to work at a minimum head drop at all times, permitting it to run cooler, thus extending its service life. The oil-less pump requires no lubrication to maintain optimal efficiency during its service life. The pump is mounted on a removable base plate, which can be secured within the WH-3 weatherhouse.

The DF-2234E environmental air sampling system is designed for continuous outdoor use. Please consult the product specifications for the design temperature range and the installation category. Standard product displays flow rate, elapsed time and totalized volume by operator selection.

The typical operating range is 1 to 8 CFM (28 – 226 LPM).

MODEL DF-2234E LOW VOLUME AIR SAMPLER (220-240VAC)

SPECIFICATIONS:

PUMP TYPE: Oil-less, carbon vane, ¾ HP, 1725 RPM @ 60 Hz

MAXIMUM CAPACITY: 8 CFM (226 LPM) at 0" Hg Pressure drop.

ULTIMATE VACUUM: 25" (635 mm) Hg at sea level.

POWER REQUIREMENTS: 220-240VAC; 50/60 Hz @ 6 amperes; single phase

ELECTRICAL CORD: All-temperature, 3-wire, 16 gauge

FUSE PROTECTION: 8 Amperes

THERMAL OVERLOAD PROTECTION: Furnished as an integral part of the motor

CONSTANT AIRFLOW REGULATOR: Aluminum construction with silicone diaphragm; adjustable from 1 to 8 CFM (28 - 226 LPM).

HANDLES: 2-steel, on base plate

DIMENSIONS: 81,3L × 66,0W × 61,6 cm H (32"L × 26"W × 48 ¼") with Legs

WEIGHT: 61 kg (135 lbs.)

VOLUME TOTALIZER: Volume totalizations corrected to STP. Units are factory set.

ELECTRONIC SPECIFICATIONS:

MEASUREMENT ACCURACY:

Air flow +/- 4.0% of full scale

Temperature +/- 2° F (1,1° C)

Barometric Pressure 2% over measured range

OPERATING TEMPERATURES: 32°-104° F (0°- 40° C)

STORAGE TEMPERATURE: 32°-122° F (0°-50° C)

CALIBRATION: Factory calibration 1 per year

OPTIONS:

SAMPLING HEAD: External gooseneck sampling head mounted to weatherhouse

COMMUNICATIONS INTERFACE: RS-232

ON-BOARD CALCULATIONS:

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

COMBINATION FILTER HOLDER: Durable plastic combination filter holders for F&J Model B, C or M charcoal cartridges and 47 mm, 2" or 50 mm diameter particulate filter paper are available. All models have quick-disconnect function.

STANDARD COMBINATION FILTER HOLDERS:

FILTER HOLDER	CHARCOAL CARTRIDGE	PARTICULATE PAPER
MODEL	DIMENSIONS	DIAMETER
FJ-05P	F&J MODEL B	2" or 50 mm
FJ-21P	F&J MODEL C	2" or 50 mm
FJ-35P	F&J MODEL B	47 mm
FJ-46P	F&J MODEL C	47 mm
FJ-51P	F&J MODEL M	2" or 50 mm

PUMP CURVE

Top line on curve is for 60-cycle performance.

Bottom line on curve is for 50-cycle performance.

