

# F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

## EMERGENCY RESPONSE SAMPLING SYSTEM DIGITAL FLOW METER TECHNOLOGY F&J MODEL DF-AB-40L-5Li

### NOTABLE FEATURES:

- State-of-the-Art Electronics
- Operating Modes
  - Line Power (100VAC – 250VAC)
  - On-Board LiFePO<sub>4</sub> Battery
  - Automobile Cigarette Lighter
  - LIBATBANK-12V
- Long-lasting LiFePO<sub>4</sub> Battery
- Battery Charging Circuit operable from Line Power Input
- Lightweight — ~13 lbs. (5.9 kg)
- Maximum Flow 30 to 35 LPM Maximum; typical
- Bright OLED Display
- Automatic Flow Control Feature
- Flowrate and Volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Auto shut-off on time or volume
- Battery Life Indicator



### NOTABLE FEATURES:

F&J Model DF-AB-40L-5Li is a lightweight, small footprint, DC voltage powered air sampling system operable from (1) on-board LiFePO<sub>4</sub> battery, (2) line power, (3) vehicle cigarette lighter socket or (4) from the F&J LIBATBANK-12V.

The DF-AB-40L-5Li is well suited for emergency response sampling activities where users do not know whether line power will be available. Typical operating time from on-board batteries is approximately 6 hours utilizing F&J FP47M (47 mm) glass fiber filter paper.

The automatic flow control feature with the F&J Digital Flowmeter technology provides maximum flexibility for emergency response sampling responsibilities. The set flowrate is maintained automatically in case of dust loading and does not require operator attention. The air sampler is contained in a lightweight small dimensioned enclosure which is water tight. The unit can be carried very easily by its large, rugged plastic handle.

Typical flow range is 10 - 35 SLPM (0.3 -1.24 SCFM).

REV: 10 October 2023

# DF-AB-40L-5Li Battery Powered Air Sampler Specifications

**Pump Type:** dual diaphragm high efficiency

**Maximum Flowrate:** 35 LPM typical  
with FP47M glass fiber media (98% DOP efficiency)

**Power Source:**

Internal –

12VDC Battery Pack  
LiFePO<sub>4</sub>; 12VDC / 5 Ah

External –

Line Power; 100VAC or 250VAC  
Vehicle Cigarette Lighter – 12VDC  
LIBATBANK-12V

**Battery Charging System:**

Internal System charges from line power.

**Operating Time on Batteries:**

~ 6 hours w/FP47M glass fiber paper

**Current Draw:** 0.6 A maximum

**Filter Holder Fitting:** 3/8 FNPT quick disconnect

**Handle:** Durable plastic

**Weight:** 13 lbs. (5.9 kg)

**Dimensions:** 14.5”L × 8”W × 10” H  
(36,8 × 20,3 × 25 4 cm)

**Noise Level:** Average dB 64.3 @ 1 meter

**Operating Temperature:** 14°F to 122°F (-10°C to 50°C)

**Display:** Bright LED (6 character, 1,2 cm H)

**Elapsed Time:** DD:HH:MM up to 168 hours

**Flow Control:**

Adjustable from keypad between 10-30 LPM

**Flow Accuracy:** ±4.0% of Full Scale

**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

**OPTIONS:**

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

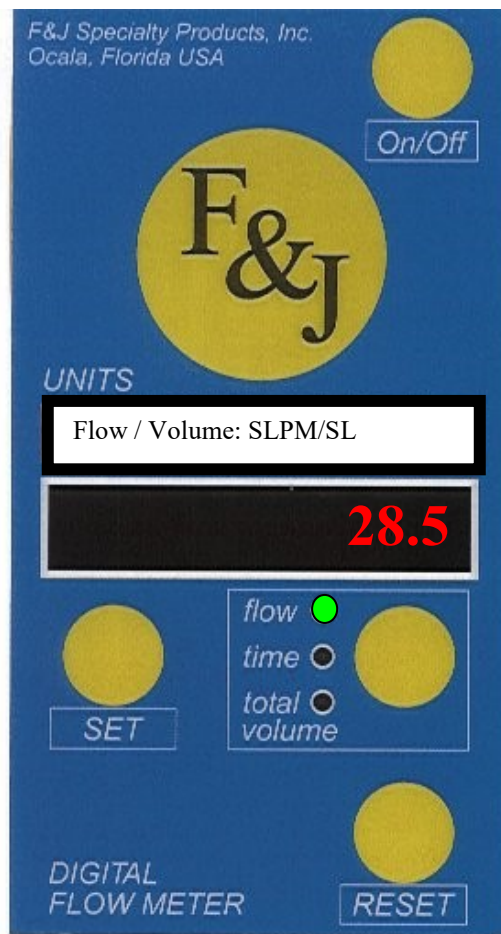
**Standard Combination Filter Holders Available:**

FILTER HOLDER MODEL	CHARCOAL CARTRIDGE DIMENSIONS	PARTICULATE PAPER 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
FJ-53P	F&J Model M	47 mm

**Available Engineering Units for Flow and Volume:**

SLPM / SLP  
SCFM / SCF  
SCMH / SCM

**Digital Flowmeter Keypad/Display**



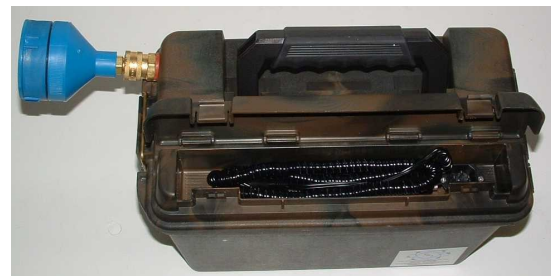
# DF-AB-40L-5Li Battery Powered Air Sampler Specifications



**Front View**



**Side View**



**Cord Storage**

Cigarette Lighter Cord stores in  
Compartment accessible from outside



**Connection to vehicle cigarette lighter  
for 12VDC or sampling applications**

## PORTABLE 12V EXTERNAL BATTERY BANK FOR F&J AC/DC AIR SAMPLERS

### Model: LIBATBANK-12V

- Battery Type:**
- Lithiom Iron Phosphate (LiFePO<sub>4</sub>)
  - 12V 35 Ah Battery Pack
  - Built-in Battery Management System
- Battery Charging System:**
- Internal battery charging system operable from line power (100—240VAC, 50/60Hz)
  - Short circuit / Reverse Polarity Protector
- Enclosure:** Rugged water tight plastic enclosure with a large durable handle
- Weight:** 20.5 lbs (~9.29 kgs)
- Dimensions:** 16.8”L x 9.0”W x 14.0”H  
(42.7 x 22.9 x 35.6 cm)
- Display:** Bright OLED battery capacity indicator



**Battery Capacity Indicator View**



**Air Sampler Connected  
to a Portable Battery Bank**