

F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

F&J ELITE DIGITAL LIGHT (EDL) AIR SAMPLER Model DF-EDL-500-10Li

NOTABLE FEATURES:

- State-of-the-Art Electronics
- Lightweight: 35.2 lbs. (15.9 kg)
- Powerful: Flow rate to 160 LPM
- Very low maintenance
- Automatic Flow Control
- Operator selectable Ambient or Reference flow T and P Conditions
- Auto shut-off on time or volume
- RS232 Communication port
- Brushless motor
- Optional 24 VDC input connector for external DC Power operation
- Optional rain shielded filter holder
- On-board 10 Ah Li-ion battery



**Illustrated with optional
Filter Holder and Rain Hood**

GENERAL DESCRIPTION:

F&J Model DF-EDL-500-10Li is a powerful portable DC powered air sampling system operable from (1) line power (2) a 10 Ah Li-ion battery or (3) an optional 24VDC external power source.

This powerful unit is a low volume air sampler enclosed in a solid wall, strong, water tight enclosure. It has double throw latches for easy access with three comfortable rubber over-molded handles and a retractable extension handle with strong polyurethane wheels for easy transport.

The DF-EDL-500-10Li air sampler is well suited for various types of air sampling applications such as emergency response and work area monitoring programs. It can also be utilized in remote air sampling applications powered from solar panels or wind turbines if the optional 24VDC input is installed.

The F&J Digital Flowmeter technology provides maximum flexibility, flow rate normalization, automatic flow control and opportunities for control by a PC device through the RS232 communication port and or data collection.

The typical operating flow range is 20 - 160 SLPM (0.7 – 5.65 SCFM). Actual flow range implemented will depend on the air flow resistance of the filter(s) utilized by the customer and the dimensions of the filter media.

Rev.: 11 October 2023

DF-EDL-500-10Li DC Air Sampler Specifications

Pump Type: Centrifugal blower

Maximum Flowrate:

120 LPM - Typical w/47 mm FP47M glass fiber media
160.0 + LPM – Free air flow capacity

Power Source:

Line Power: 100VAC to 240VAC
Internal 10 Ah Li-ion – 24VDC
Optional External 24VDC

Maximum Current Draw: 4 A maximum on line power
10 A maximum on 24 VDC

Filter Holder Fitting:

3/8 FNPT quick disconnect

Handle: Durable rubber

Weight without Rain Hood: 35.2 lbs. (15.9 kg)

Weight with Rain Hood: 37 lbs. (16.7 kg)

Installation Category: Pollution Degree 2

Enclosure Rating: IPX2

Average dB: 74.6 at 3.53 CFM using FP-47M

Dimensions: 19.7" × 13" × 18" (50 × 33.1 × 46 cm)

Dimensions with Rain Hood:

19.7" × 13" × 29.2" (50 × 33.1 × 74.2 cm)

Operating Temperature Range:

14°F to 104°F (-10°C to 40°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 20-140 LPM
(Depending on filter media being used)

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)
- External DC Input (P/N: 24VDCOPT)
- Rain Hood Filter Holder (P/N: FJ-47RH)
- Combination Filter Holder with Rain Hood
 - 47mm Particulate / C Geometry – FJ-47RH
 - 50mm Particulate / C Geometry – FJ-50RH

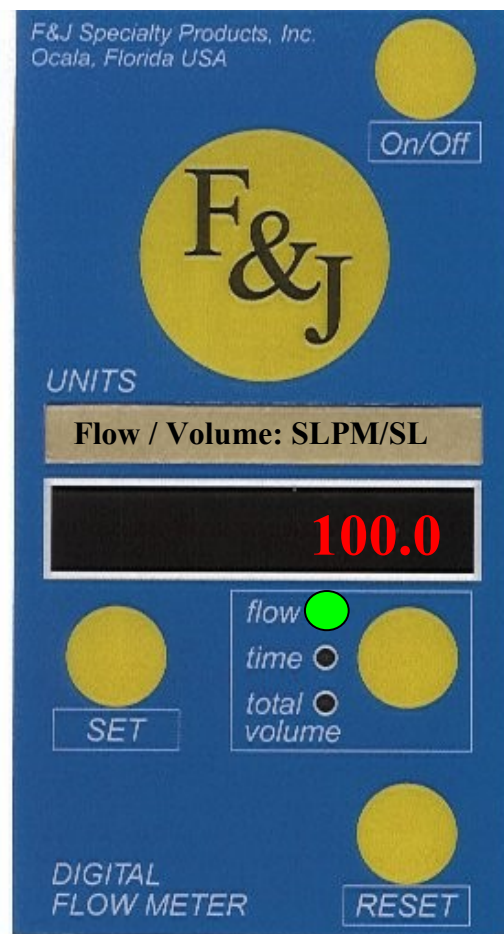
Standard Combination Filter Holders Available:

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:

sccm / scc
SLPM / SLP
SCFM / SCF
SCMH / SCM
SCMM/SCM

Digital Flowmeter Keypad/Display



Flow Rate Values at Battery Voltage ≥ 23.5 VDC

DF-EDL-500		
<i>Filter Media Combination</i>	<i>Maximum Flow (L/min)</i>	<i>Maximum Flow (ft³/min)</i>
FP-47	84.1	2.97
FP-47 + TE3C	74.5	2.63
FP-47 + TE2C	73.0	2.58
FP-47M	132.8	4.69
FP-47M + TE2C	102.0	3.60
FP-47M + TE3C	106.1	3.75
521147	89.3	3.15
521147 + TE2C	73.3	2.59
521147 + TE3C	75.5	2.67
AE-47	76.2	2.69
AE-47 + TE2C	68.2	2.41
AE-47 + TE3C	67.3	2.38
FP-2.0	94.6	3.34
FP-2.0 + TE2C	76.7	2.71
FP-2.0 + TE3C	79.8	2.82
521120	89.7	3.17
521120 + TE2C	73.8	2.61
521120 + TE3C	76.3	2.69
AE-2.0	84.6	2.99
AE-2.0 + TE2C	70.2	2.48
AE-2.0 + TE3C	73.3	2.59
HE-40T	130.5	4.61
HE-40T + AGZC164	81.7	2.89
HE-40T + AGZC35	74.6	2.63
HE-40T + CHC-50	111.7	3.94

DF-EDL-500-10Li DC Air Sampler Specifications

