



# F&J SPECIALTY PRODUCTS, INC.

## F&J ELITE DIGITAL LIGHT (EDL) GLOBAL AIR SAMPLING SYSTEM

### Model GAS-EDL-22E

#### NOTABLE FEATURES:

- State-of-the-Art Electronics
- Powerful: Flow rate to 170 LPM\*
- Very low maintenance
- Automatic Flow Control
- Precision machined DP flow sensor
- Vacuum Fluorescent Display (VFD);  
4 line × 24 characters
- Dual RS-232 communication ports
- Flow rate accuracy:  $\pm 3.0\%$  Full Scale
- Auto zero calibration feature of flow sensor
- Multiple operator selectable data storage and data  
transmission frequency rates
- Wide temperature range electronics
- Brushless motor

\* Dependent upon filter paper dimensions and air  
flow resistance



#### GENERAL DESCRIPTION:

F&J Model GAS-EDL-22E is a powerful small foot print light weight AC/DC powered air sampling system operable from (1) line power or (2) as an option a 24VDC external power source. This powerful air sampler achieves flow rates  $> 100$  SLPM for typical NPP media and is mounted within an environmental weatherhouse, model WH-3 having an enclosure rating of IPX3.

The GAS-EDL-22E air sampler is well suited for various types of air sampling application such as REMF, plant emissions and area monitoring programs. It can also be utilized in remote air sampling applications powered from solar panels or wind turbines. The Global Air Sampler software provides the ultimate in end user customization including operator selectable alarm settings, Reference T and P values and engineering units.

The F&J technology provides maximum flexibility, data integrity automatic flow control and opportunities for control by a PC device through the RS232 communication port or a USB style connector port.

The GAS-EDL-22E environmental air sampling system is designed for continuous outdoor operation. Please consult the product specifications for the design temperature and the installation category. Standard product displays are flow rate, elapse time, and totalized volume by operator selection

The typical operating flow range is 20 - 170 SLPM (0.7 – 6 SCFM).

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# GLOBAL AIR SAMPLER SYSTEM FEATURES

## Operator Selectable Features in Setup Mode

Language Options:	English
Sampling Mode:	Volumetric Flow, Mass Flow, or Isokinetic Flow*
Gas Type:	Air, O <sub>2</sub> , N <sub>2</sub> , H <sub>2</sub> , CO, CO <sub>2</sub> , C <sub>3</sub> H <sub>6</sub> , He, NH <sub>3</sub>
Engineering Units	
Volumetric Flow:	sccm, SLPM, SCFM, sm <sup>3</sup> /min, sm <sup>3</sup> /hr
Mass Flow:	kg/hr, g/min, lbs/hr
Temperature:	°C, °F
Pressure:	In. Hg, mm Hg, bar, mbar, atm, kPa, hPa
Reference T and P	
Reference T:	0°C, 15°C, 20°C, 21.1°C (70°F), 25°C
Reference P:	101.325 kPa (760 mm Hg), 100 kPa (1bar)
RS232 Data Output Frequency:	1 sec, 1 min, 10 min, 20 min, 30 min, 1 hr
Data Storage Frequency:	1 min, 10 min, 20 min, 30 min, 1 hr
Operating Mode:	Continuous or Periodic
Periodic Sampling Options:	1 hr. (12 five minute periods), or weekly (24 one hour periods for each of the 7 days)
Ending Mode:	By time, By volume
Operator Selectable Passwords:	2 levels
Date and Time Setup	Input of real time and date
Alarm Settings	<ul style="list-style-type: none"><li>• Flow (<math>\pm 10\%</math>, <math>\pm 15\%</math>, <math>\pm 20\%</math>),</li><li>• Temperature (high and low),</li><li>• Inlet pressure drop (dust loading) and</li><li>• Inlet pressure (high and low),</li></ul>

\* Requires optional isokinetic functions to be installed to received data from F&J GAS-100/100E Duct Flow Monitor.

# GAS-EDL-22E Series Global Air Sampler Specifications

**Pump Type:** Centrifugal blower

**Maximum Flowrate:**

140 LPM - Typical w/47 mm FP47M glass fiber media

170+ LPM – Free air flow capacity

**Power Source:**

Line Power; 200VAC to 240VAC

External DC Source – 24VDC

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

**Standard Combination Filter Holders Available:**

<b>FILTER HOLDER MODEL</b>	<b>CHARCOAL CARTRIDGE DIMENSIONS</b>	<b>PARTICULATE PAPER DIAMETER</b>
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

**Filter Holder Fitting:**

3/8 FNPT quick disconnect

**Weight:** ~ 82 lbs. (37.3 kg)

**Dimensions:** 32" × 26" × 48¼"  
(81,3 × 66 × 122,6 cm)

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

**Display:** VFD, 4×24 characters

**Flow Control:**

Adjustable from keypad between 20-180 LPM

**Flow Accuracy:** ±3.0% of Full Scale

**Communication Interface:** Dual RS-232

**Operator Selectable Features**

Language Options: English

Sampling Mode: Volumetric Flow or Mass Flow

Gas Type: Air, O<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub>, CO, CO<sub>2</sub>, C<sub>3</sub>H<sub>6</sub>, He, NH<sub>3</sub>

**Engineering Units**

Volumetric Flow: sccm, SLPM, SCFM, sm<sup>3</sup>/min, sm<sup>3</sup>/hr

Mass Flow: kg/hr, g/min, 1 lbs/hr

Temperature: °C, °F

Pressure: In Hg, mm Hg, bar, atm, kPa, hPa

**Reference T and P**

Reference T: 0°C, 15°C, 20°C, 21.1°C (70°F), 25°C

Reference P: 101.325 kPa (760 mm Hg), 100 kPa (1 bar)

RS232 Data Output Frequency: 1 sec, 1 min, 10 min, 20 min, 30 min, 1 hr

Data Storage Frequency: 1 min, 10 min, 20 min, 30 min, 1 hr

Operating Mode: Continuous, Periodic

Periodic Sampling Options: 1 hr. (12 five minute periods), or weekly (24 one hour periods for 7 days)

Ending Mode: By time, By volume

Operator Selectable Passwords: 2 levels

Date and Time Setup: Input of real time and date

**Optional Items:**

- Air Sampler Data Acquisition Program  
P/N: GASdaq
- Isokinetic sampling mode configuration  
P/N: ISOKOPT

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## **GAS-EDL-22E Series Global Air Sampler Specifications**

### **Typical Maximum Flow Rates for Various Filter Media\***

<b>Filter Media</b>	<b>Flow Rate (SCFM)</b>	<b>Flow Rate (SLPM)</b>	<b>Media D.P.(“Hg)</b>	<b>Media D.P.(“H<sub>2</sub>O)</b>
FP47	3.49	98	3.22	43.78
FP47M	5.76	163	2.13	28.96
FP47M2	8.43	238	1.31	17.81
FP47 & TE2C	2.76	78.11	3.55	48.26
FP47M & TE3C	4.28	121	2.85	38.75
FP47M2 & TE1C	5.36	151.69	1.79	24.34
FP20M	5.40	152.82	1.80	24.47
FP20M & TE2C	3.83	108.39	2.95	40.11
FP20M & TE3C	4.22	119.43	2.67	36.30
FP40M	11	310	0.77	10.47

\* FJ200RB motor

### **Environmental Air Sampling System Designed for Continuous Outdoor Use**

1. Available in WH-3 or larger WH-3A enclosure

2. Air sampler component can be easily exchanged



3. Air sampler component can also be used as a light weight portable air sampler

4. Modem can be connected to instrument for periodic data transmission to a central location

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