

MODULAR GAS FLOW COUNTING SYSTEM

Model # SFM-5V
Model # SFM-5V-3

FEATURES:

- EXCEPTIONAL PLATEAU AND HIGH EFFICIENCY
- PROPORTIONAL OR GEIGER OPERATION
- **OPTIONAL** ULTRA-THIN MYLAR WINDOW
- STANDARD FM-7 MODULAR SYSTEM
- 2" DIAMETER SAMPLE CAPACITY
- MANUAL AND PRESET TIME (PRESET COUNT **OPTIONAL**)
- SELECTABLE OUTPUT SCALING FACTOR
- SELECTABLE ALARM
- OUTPUT FOR PRINTER

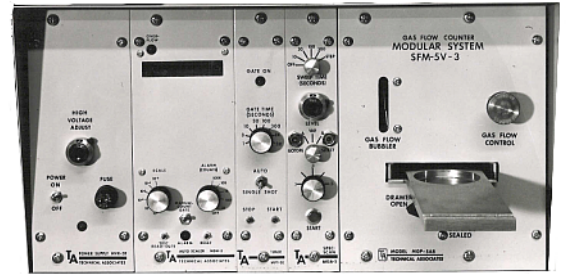


Figure 1: SFM-5V-3

APPLICATION: Model **SFM-5V** Flow Counting System is engineered to produce high counting efficiencies where extremely low levels of alpha or beta radioactivity are being measured. It is ideal for applications in biological, physical, and chemical research, or in environmental sampling for health physics and public health services. The instrument includes a sample tray holder which accepts samples up to 2" in diameter. An **optional** window allows counting of volatile samples. Removal and disassembly of the chamber in event that decontamination becomes necessary is rapid and simple.

Model **SFM-5V** Modular Gas Flow Counting System incorporates an adjustable power supply module, a preset time module with autocycling capacity, a gas flow detector module, a scanning single channel analyzer module, and a scaler module mounted in a case and complete with cabling. This unit has a presettable relay feature which is capable of operating alarm, interlock, flow deflector, or other external control.

Model SFM-5V-3 adds a lead shield about the detector to reduce background.

Another unique feature is the ability of the **SFM-5V** to function as a Digital Ratemeter.

The combination of the full 2π hemisphere and the precision collector wire provide the key to the high counting efficiency of the **MGS-5AB** Flow Counter Module. Counting may be in window or windowless mode. In the latter case, 51% alpha geometry and 60-70% beta geometry (including backscatter) based on full 4π geometry are normally realized for thin samples.

The Single Channel Analyzer module has a built in solid state preamplifier which is available for beta counting.

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\$Revision: 1.1 \$

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SPECIFICATIONS:

Sample Pan or Papers Accepted: Diameter to 2", Depth to 1/4".

Chamber: 2 1/8" diameter stainless steel hemisphere..

Collector: 1mil stainless steel loop.

Window: 2 1/8" diameter, 90-125 $\mu\text{g}/\text{cm}^2$ thick.
Use of Window is Optional.

Count Yield: Windowless:
Alphas of Pu^{239} 51%
Betas of C^{14} 60%
Gamma sensitivity is low and is
inversely proportional to gamma energy.

Shielding: Model **SFM-5V-3** 1" lead 4π .

Dimensions: 21" W x 12" H x 16" D.

Power Requirements: 115V 50-60 Hz (**Optional** 220V 50 or 60 Hz).

Readout: **SFM-5V** and **SFM-5V-3**: 5 Digit plus overflow.

Interface: Serial RS-232 output is included.

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