

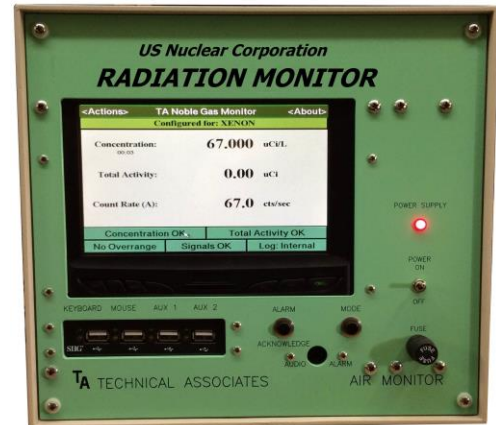
LOW BACKGROUND GAS FLOW ALPHA - BETA COUNTING SYSTEM

Model ~ SFM-9V Series

Model ~ SFM-9V-1 - Model ~ SFM-9V-2

FEATURES:

- EXCEPTIONAL PLATEAU & HIGH EFFICIENCY
- PROPORTIONAL OPERATION
- BUILT-IN HIGH SENSITIVITY PREAMPLIFIER
- **INCLUDES:** SAMPLE DETECTOR & GUARD DETECTOR
- 1" DIAMETER SAMPLE CAPACITY -SFM-9V-1
- 2" DIAMETER SAMPLE CAPACITY -SFM-9V-2
- MANUAL OR OPTIONAL PRESET COUNT TIME
- SELECTABLE ALARM
- WINDOWLESS – STANDARD
- (OPTIONAL) ULTRA-THIN MYLAR WINDOW
- FM-9 SMART ELECTRONICS & COLOR MONITOR
 - DIGITAL, BENCH TOP
 - SERIAL RS-232 OR USB OUTPUT



SFM-9V ELECTRONICS

APPLICATION:

- Model SFM-9V Low Background Gas Flow Counting System is engineered to produce high counting efficiencies where extremely low levels of Alpha and 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 sample tray holders that will accept samples up to 1" or 2" in diameter.
- This instrument is designed for ease of maintenance.

DESCRIPTION:

Model **SFM-9V** Includes:

- Guard Detector
- Adjustable power supplies
- Preset time mode with auto-cycling capacity
- Gas flow proportional detector
- Two single channel analyzers
- On-screen scaler read-out
- All cabling & hoses included
- Pre-settable relays feature operating alarm, interlock, flow deflector, or other external control.
- Lead shield around detectors to reduce background



SFM-9V PROPORTIONAL DETECTOR ASSEMBLY



TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY

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Divisions of  **US NUCLEAR CORP**
OTCQB - UCLE

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The combination of the full 2π detectors and the precision collector wires provide the key to the high counting efficiency.

Discriminator mode & Dual Single Channel Analyzer module have built in pre-amplifiers for Beta counting.

An optional window allows counting of volatile samples. removal and disassembly of the chamber in event that decontamination becomes necessary is rapid and simple.

Counting may be in window or windowless mode. In the latter case, 51% alpha geometry and 60-70% beta geometry (including backscatter) are normally realized.

SPECIFICATIONS:

- Sample Size:** 1" (26mm) Diameter, Depth to 1/4" (6mm). **(SFM-9V-1)**
- Sample Chamber:** 1 1/8" (28.6 mm) diameter Low Background Gas Flow Detector Probe with Drawer.
- Sample Holder Size:** Accepts conventional planchette
- Sample Size:** 2" (51mm) Diameter, Depth to 1/4" (6mm). **(SFM-9V-2)**
- Sample Chamber:** 2 3/8" (60.3mm) diameter Low Background Gas Flow Detector Probe with Drawer.
- Guard Chamber:** Gas Flow Proportional Detector, used in Coincidence Mode with Sample Chamber to detect-and-reject Cosmic ray counts.
- Collector:** 1mil stainless steel loop.
- Counting Gas:** P-10 proportional gas.
- Count Yield:** Windowless - Standard: **(SFM-9V-1)**
Betas of K-40 30% to 50%
Gamma sensitivity is low and is inversely proportional to Gamma energy.
Window: Approximately 85% of windowless yield.
- Count Yield:** Windowless - Standard: **(SFM-9V-2)**
Alpha 51%; Beta of C-14 60%; K-40 40%
Window: Approximately 85% of windowless yield.
- Background:** <3 cpm
- Efficiency:** 30% (K-40 Beta) or better
- High Voltage:** 0-2500 V with adjustable potentiometer.
- Coincidence Analyzer:** Coincidence & Anticoincidence Modules.
- Shielding:** 1" lead shielding in all directions, 4 π .

FM-9 SMART ELECTRONICS:

- Display Range:** Digital. Benchtop
0-20,000 counts, positive & negative polarity.
On-board counters, discriminator
Computer interface RS232 or USB
- Dimensions:** **Electronics:** 11" W x 11" H x 11" D (28 cm x 28cm x 28 cm).
Weight: 12 lbs (5.4 kg)



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LOW BACKGROUND GAS FLOW ALPHA - BETA COUNTING SYSTEM

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Detectors, Drawer and Shield: 18"W x 15"H x 12"D (45 cm x 38cm x 30.5 cm)
Weight: 60lbs (27 kg)

Power Requirements: 115V 50-60 Hz (**Optional** 230V 50 or 60 Hz).

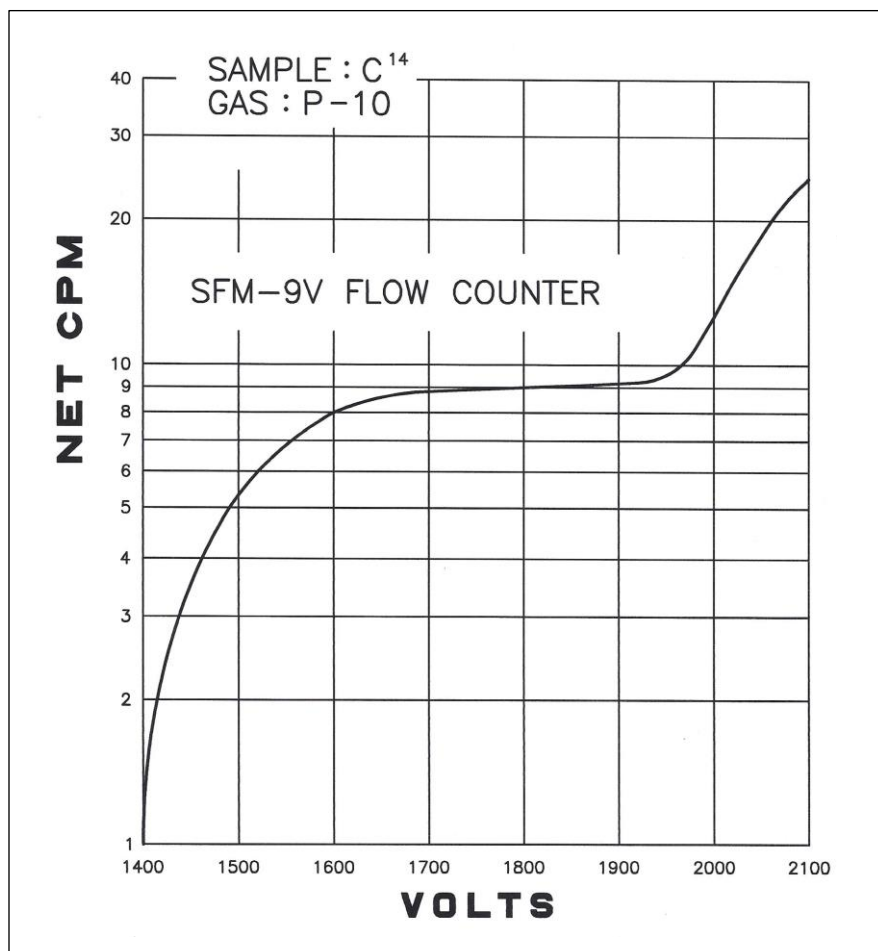
Readout: 7" Color Monitor.

Needle Valve: Needle Valve for Flow Control

Interface: Serial RS-232 or USB output.

Warranty: 1 year

Accessories: Shipment includes all cables and hoses for standard operation.



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