

## Model 334AB Alpha/Beta Particulate Monitor

### Features

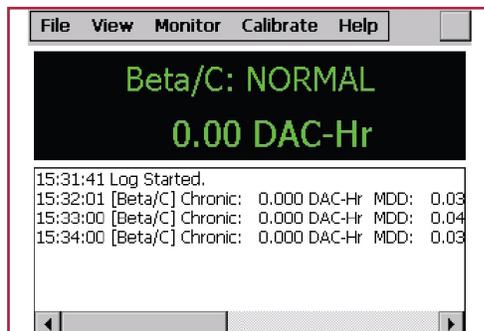
- Integrated LCD and Touch Screen Display
- Acute and Chronic Dose, Concentration, and Flow Logging Measurements
- Radon Compensation
- Built-In Gamma Guard Detector



### Introduction

The Model 334AB is a lightweight, battery-powered, alpha-beta air monitor that can be used as a portable workplace monitor or a portable CAM (continuous air monitor) for emergency-response assessments. It is designed to provide workers with an early warning of an airborne release of alpha and beta emitting particulates. The instrument can monitor up to two alpha isotopes of interest, simultaneously with beta monitoring. It also has radon compensation and a built-in gamma guard detector to compensate for changing ambient gamma background levels.

The Model 334AB has an integrated LCD and touchscreen that displays information on instrument status and readings during operation. The estimated dose of the isotope(s) of interest and the instrument status are displayed at all times. An ion-implanted silicon detector and 1024-channel multi-channel analyzer feed data to the embedded processor board. Operations include beta detection and alpha spectral analysis for radon compensation. Acquired data may be saved in the instrument's internal memory, or alternately may be written to an SD card for later retrieval and review. It is stored in comma-separated-variable (\*.csv) format that is recognized by most spreadsheet and database software.



### Specifications

Part Number: 48-3864-G

#### SAMPLING HEAD and FLOW

**DETECTOR:** Solid-state ion-implanted silicon (450 mm<sup>2</sup> active area, 300 μm depletion)

**PUMP:** Diaphragm-type, 7.0 LPM max flow rate

**FILTER:** 37 mm (1.5 in.) PTFE membrane (25 mm [1 in.] collection area)

#### DATA ANALYSIS

**BETA:** Single beta channel with upper/lower discriminator setting

**ALPHA MCA:** 1024-channel ADC binned to 256 channel alpha spectrum

**BACKGROUND COMPENSATION:** Radon plus gamma guard detector

**MEASUREMENTS:** Acute (120 sec. window) and Chronic (240 min. window) sensitivities, plus net count rate alarm

**PROCESSOR:** Windows CE-based

**MAX COUNT RATE:** 600,000 (beta + alpha)

**DIAGNOSTICS:** Source Response Check diagnostic

**CALIBRATION:** Electro-plated stainless steel sources required for efficiency calibration, 32 mm dia. with 25 mm active area

**ALPHA ENERGY RANGE:** 1.0 - 9.0 MeV

**BETA EFFICIENCY:** 10 - 22%, energy dependent

#### PHYSICAL

**TEMPERATURE RANGE:** -20 to 50 °C (0 to 122 °F)

**HUMIDITY:** 5% to 100% (non-condensing)

**ENVIRONMENTAL RATING:** IP rating of 53

**POWER:** 8.4 V Li-Ion battery, 6.6 Ah, 8-hour run-time, 4-hour charge time

**SIZE (W x H x D):** 25 x 30 x 13 cm (10 x 12 x 5 in.)

**WEIGHT:** 3.8 kg (8.3 lb)

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Note: specifications subject to change without notification. We are not responsible for errors or omissions.