

Model 334AB Alpha/Beta Particulate Monitor

Features

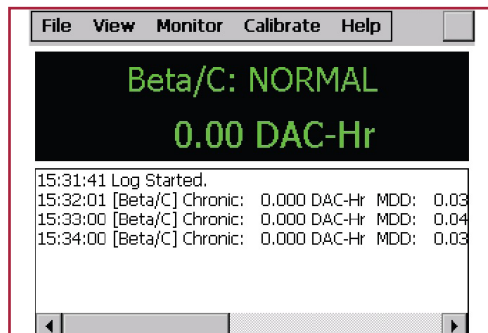
- Integrated LCD and Touch Screen Display
- Acute and Chronic Dose, Concentration, and Flow Logging Measurements
- Radon Compensation
- Built-In Gamma Guard Detector



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 mm² 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)

Ludlum Measurements, Inc. P.O. Box 810, Sweetwater, Texas 79556

Web: ludlums.com Tel: 800-622-0828 / 325-235-5494 Fax: 325-235-4672 Email: sales@ludlums.com

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