

Model 3002/FM Series Alpha-Beta Floor Monitor

Features

- Large Backlit and Auto-Ranging LCD
- Simultaneous Alpha-Beta Counting
- Gasless – Uses Scintillators and PMTs
- Dual-Tone Audio: Low-Pitch Beta Clicks and High Pitch Alpha Beeps
- 4-Button Interface for Easy Operation
- Height Above Floor Easily Adjusted
- Rate, Max, and Count Modes

Introduction

The Model 3002/FM Series Alpha-Beta Floor Monitors allow a user to quickly survey large areas for alpha-beta contamination. They combine the dependable Model 3002 Alpha-Beta Survey Meter with two alpha-beta scintillation detectors in configurations ideal for floor monitoring. The use of scintillation detectors creates an instrument that requires much less maintenance than traditional gas flow proportional detectors. See available detector configurations below.



Model 3002/FM1

Model 3002/FM2

Model	3002/FM1	3002/FM2	3002/FM3
Part Number	48-4037-1	48-4037-2	48-4037-3
Detector	2 ea. Model 43-147 alpha-beta scintillation detectors	2 ea. Model 43-147 alpha-beta scintillation detectors	2 ea. Model 43-204 alpha-beta scintillation detectors
Total Detector Area	Active: 400 cm ² (62 in ²) Open: 352 cm ² (54.6 in ²)	Active: 400 cm ² (62 in ²) Open: 352 cm ² (54.6 in ²)	Active: 1080 cm ² (167.4 in ²) Open: 756 cm ² (117.2 in ²)
Total Detector Window Width	22.4 cm (8.8 in)	40.9 cm (16.1 in)	65.7 cm (25.9 in)
Efficiency (4π)	²³⁹ Pu – 20%, ⁹⁹ Tc – 15%, ⁹⁰ Sr/ ⁹⁰ Y – 20%	²³⁹ Pu – 20%, ⁹⁹ Tc – 15%, ⁹⁰ Sr/ ⁹⁰ Y – 20%	²³⁹ Pu – 12%, ⁹⁹ Tc – 10%
Typical Background (10 μR/hr field)	Alpha: ≤ 5 cpm Beta: ≤ 800 cpm	Alpha: ≤ 5 cpm Beta: ≤ 800 cpm	Alpha: ≤ 10 cpm Beta: ≤ 2000 cpm
Detector Height	Adjustable from 0 to 16 mm (0.0 to 0.625 in.)	Adjustable from 0 to 16 mm (0.0 to 0.625 in.)	Adjustable from 0 to 16 mm (0.0 to 0.625 in.)

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

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Specifications

METER: Model 3002 alpha-beta survey meter

DISPLAY: 3-digit LCD with large 20 mm (0.8 in.) digits, low-battery indicator, MAX, ALARM, AUDIO, α icon, β icon, (k)cps, (k)cpm, (k)Bq, (k)dpm

DISPLAY RANGE:

- 0.0 cps to 99.9 kcps
- 0.00 cpm to 999 kcpm
- 0.00 Bq to 99.9 kBq
- 0.00 dpm to 999 kdpm

BACKLIGHT: Built-in ambient light sensor automatically activates low-power LED backlight, unless internal dipswitch is set to continuous-on (will reduce battery life)

CONTROLS:

- ON/OFF/ACK: Press to turn ON; Tap to acknowledge alarms and silence alarm tone; Press to reset Sigma audio alarm; Hold for OFF
- MODE: Alternates between NORMAL (count rate), MAX (captures peak rate), and COUNT (user-selectable preset count time from 0 to 10 min.). Number of modes can be reduced in setup.
- AUDIO: Turn "click" audio On/Off; Turn Sigma audio beep On/Off
- α - β : Changes the display between alpha, beta, and alpha + beta measurements

RESPONSE TIME: User-selectable from 1 to 60 seconds, or auto-response rate FAST or SLOW

ALARMS: Count rate and scaler alarm set-points adjustable over the display range with separate alpha and beta alarm LED indicators

LOSS OF COUNT PROTECTION: After a preselected time interval of no pulses from detector (default 60 seconds), audible and visual alarms will be activated

OVERLOAD: High count rate saturation protection prevents false display of lower count rates

AUDIO: Alarm audio greater than 80 dB at 0.6 m (2 ft.), higher pitched alpha beeps distinguished from lower pitched beta clicks

POWER: Four alkaline or four rechargeable "AA" batteries (instrument does not support in-device charging)

BATTERY LIFE: Approximately 750 hours of operation (as low as 100 hours with backlight configured for continuous-on), 16-hour low battery warning

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122°F)

CONSTRUCTION:

Meter: High-impact plastic with water-resistant rubber seals and separate battery compartment

Detector & Pole: Aluminum with beige powder coat

OVERALL SIZE (H x W x L):

3002/FM1: 76 x 40 x 137 cm (30 x 16 x 54 in.)

3002/FM2: 76 x 60 x 137 cm (30 x 23.6 x 54 in.)

3002/FM3: 76 x 86 x 154 cm (30 x 34 x 61 in.)

OVERALL WEIGHT:

3002/FM1: 5 kg (11 lb.)

3002/FM2: 5.6 kg (12.4 lb.)

3002/FM3: 9.9 kg (21.8 lb.)