

Model 3002

Alpha-Beta Datalogger



Ludlum Measurements, Inc.

Features

- Large Backlit LCD for Ease of Reading
- Autoranging, Dual Tone Audio Clicks
- All-Digital Calibration
- Rate, Max, and Count Modes of Operation
- Alpha, Beta, or Alpha + Beta Measurements
- 4-Button Intuitive Interface for Easy Operation
- Splash-Resistant Construction for Outdoor Use



Part Number 48-4037

Introduction

The Ludlum Model 3002 is a lightweight, ergonomically-designed instrument with an external detector used for alpha and beta survey. Three modes of operation – RATE, MAX, and COUNT – are available. Measurements can be collected in cps, cpm, Bq, or dpm units. Measurements are time-stamped and stored in internal non-volatile flash memory. The user can switch between alpha, beta, or alpha + beta units by simply pressing the α - β button.

The handle has a Log pushbutton and comes ready to log up to 1000 alpha and beta measurements. Setup is

available via front panel controls or via software from Ludlum Measurements. An internal switch is used to enable or disable the front-panel setup feature to protect desired settings from inadvertent modification.

Features of the Model 3002 include a large, easily-readable LCD (liquid crystal display), piercing audio warningtone, easy, intuitive, user-friendly design, all-digital calibration, and splash-resistant construction for outdoor use. The Model 3002 Alpha-Beta Datalogger is shipped ready to use with batteries and calibration certificate.

Specifications

DETECTOR: alpha-beta scintillation, gas proportional

ALARMS: count rate and scaler alarm setpoints adjustable over the display range; separate alpha and beta alarm LEDs

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

LOSS OF COUNT PROTECTION: audible and visual alarms activated after pre-selected time intervals with no detected pulses

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

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)

USER CONTROLS:

- **ON/OFF/ACK** - press to turn ON, tap to acknowledge alarms and silence alarm tone, hold for OFF
- **MODE** - alternates between RATE (count rate), MAX (captures peak rate), and COUNT (user-selectable preset count time from 0 to 10 minutes). Number of modes can be reduced in setup.
- **AUDIO** - turns "click" audio 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

AUDIO: alarm audio greater than 80 dB at 0.6 m (2 ft), higher pitch alpha tones 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

CONSTRUCTION: high-impact plastic with water-resistant rubber seals and separate battery compartment

TEMPERATURE RANGE: -20 to 50 °C (-5 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)

ENVIRONMENTAL: NEMA (National Electrical Manufacturers Association) rating of 4x or IP (Ingress Protection) rating of 65

PHYSICAL: SIZE: 16.5 x 11.4 x 21.6 cm (6.5 x 4.5 x 8.5 in.) (H x W x L); WEIGHT: 0.9 kg (2.0 lb)

OPTIONS: **Triad Datalog Kit:** includes data logging software plus required cable [Part Number 4498-775]

Triad Calibration Kit: includes calibration software plus required cable [Part Number 4498-578]

Headphone Option: provides the Model 3000-Series of instruments with a jack and circuitry required so a standard headphone plug may be used with the instrument [Part Number 4498-555]

Shoulder Strap: adjustable, padded shoulder strap with kit to attach to Model 3000-series instruments [Part Number 4498-868]

Storage/Transport Case: rugged, foam-padded case properly sized for Model 3000-series instruments [Part Number 2312958]