Model 3019

Digital Background Survey Meter

Radiation Detection for a Safer World

Features

- Large Backlit LCD for Ease of Reading
- Autoranging - Hands Free
- Sigma Audio and Bright LED Simplifies Searching
- Light Weight and Ruggedly Built
- Splash-Resistant Construction for Outdoor Use
- 4-Button Intuitive Interface for Easy Operation
- All-Digital Calibration
- USB Port
- Rate, Max, and Count Modes of Operation

Part Number: 48-4091

Introduction

The Model 3019 is Ludlum's lightweight, ergonomically-designed instrument with an internal detector used for gamma radiation survey for background to 500 µSv/hr (50 mR/hr). This instrument features alarm points that can be set through Setup Mode using the onboard keypad, or alternately via the optional software by USB connection. The Sigma Audio feature assists search efforts by responding with an audible alarm detected radiation outside the set parameters.

An internal switch is used to enable or disable the front-panel setup feature to protect desired settings from inadvertent modification. Setup is also available via software available from Ludlum Measurements. User-adjustable settings include calibration constant, dead time correction, efficiency, high voltage, pulse threshold, response time (fast or slow), count time, operational modes, HV current overload level, operational mode (Rate, Max, or Count), and minimum and maximum display levels. The user may also set Primary and Secondary units, unit alarm levels, count units, count alarm levels, and zero pulse protection time limit.

This instrument features a large, easily-readable LCD (liquid crystal display), a piercing audio warning tone, and easy, intuitive, user-friendly design. Splash-resistant construction allows the Model 3019 to be used outdoors. The unit body is made of lightweight, durable, high-impact plastic. The Model 3019 is shipped ready to use with batteries and calibration certificate.

Specifications

DETECTOR: internal CsI, scintillator with 175 cpm/µR/hr sensitivity
ALARMS: alarm setpoints adjustable over the display range
SIGMA: sigma audio beeps when radiation level changes
LOSS OF COUNT ALARM PROTECTION: after preselected time interval (default 60 seconds) of no pulses from detector, audible and visual alarms will be activated
LCD DISPLAY: 3 digit LCD with large 20 mm (0.8 in.) digits, (k)cps, (k)cpm, (k)Bq, (k)dpm, (µ)(m)R(/h), (µ)(m)Sv(/h), low-battery indicator, MAX, ALARM, AUDIO
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; 0.00 µR/h to 999 R/h; 0.00 µSv/h to 999 Sv/h
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/QUIET - press to turn ON, tap to acknowledge alarms and silence alarm tone, hold for OFF
- MODE - alternates between NORMAL (count rate), MAX (captures peak rate), and COUNT (user-selectable preset count time from 0 to 10 minutes)
- AUDIO - turn audio On/Off
- UNITS - changes the units between count rate (cpm, cps), dose/exposure (µSv/h, mR/h), or disintegration (dpm, Bq)

RESPONSE TIME: user-selectable from 1 to 60 seconds, or Auto-Response Rate FAST or SLOW
AUDIO: greater than 75 dB at 0.6 (2 ft), approximately 4.5 kHz
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 RATING: NEMA (National Electrical Manufacturers Association) rating of 4x or IP (Ingress Protection) rating of 65
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: 1.06 kg (2.3 lb)

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