

# Model 4901P

## Hand & Shoe Contamination Monitor



Ludlum Measurements, Inc.

### Features

- Affordable
- Simple to Use
- Automatic Background Subtract
- Password-Protected Parameters
- Alarm Audio Volume Adjustment
- Non-Volatile Memory Requires No Battery Backup



### Introduction

The Model 4901P Beta/Gamma Hand & Shoe Monitor is intended for use as a medium-level beta and gamma contamination monitor. Four count channels are in the standard configuration for monitoring the palm of each hand and the sole of each shoe. The Model 4901P employs a total of 22 pancake Geiger-Mueller (GM) type detectors: five in each hand detector (palm side only) and six in each foot detector.

LED indicators show status and alarm location. The Model 4901P allows parameter updating by viewing the built-in, 16-character LCD display. Detector counts, background, alarm set points, and all parameters may be viewed on the LCD display. Switches at each hand detector initiate an interrogation (both switches must activate). Audible alarm and status change indications are standard.

### Specifications

Part Number: 48-3009

**INDICATED USE:** personnel monitoring

**DETECTORS:** pancake-type, halogen-quenched GM

**WINDOW:**  $1.7 \pm 0.3$  mg/cm<sup>2</sup> mica

**ENERGY RESPONSE:** energy dependent

**HANDS:** 10 (five per hand) pancake detectors

**Active Area:** approximately 155 cm<sup>2</sup> (24 in<sup>2</sup>)

**Open Area:** approximately 122 cm<sup>2</sup> (18.9 in<sup>2</sup>)

**Efficiency (4π):** 3%<sup>-14</sup>C, 12%<sup>-99</sup>Tc, 12%<sup>-137</sup>Cs

**SHOES:** 12 (six per shoe) pancake detectors

**Active:** approximately 185 cm<sup>2</sup> (28.7 in<sup>2</sup>)

**Open:** approximately 146 cm<sup>2</sup> (22.6 in<sup>2</sup>)

**Efficiency (4π):** 3%<sup>-14</sup>C, 10%<sup>-99</sup>Tc, 10%<sup>-137</sup>Cs

**AUDIO:** built-in, unimorph-type speaker (greater than 68 dB at 0.6 m [2 ft])

**ALARM:** indicated by red LED and audible signal (each hand and shoe area has alarm indicators)

**COUNTING CAPACITY:** 9999 counts per minute

**COUNT TIME:** adjustable from 1–99 seconds

**ALARM HOLD TIME:** adjustable from 1–99 seconds

**BACKGROUND ACCUMULATE TIME:** adjustable from 1–99 seconds

**BACKGROUND UPDATE INTERVAL:** adjustable from 1–99 minutes, the system will automatically update background if instrument is not in use

**FORCE UPDATE:** timed function to force background update if regular update interval is exceeded

#### STATUS INDICATORS

**READY:** (green LED) indicates instrument is ready to monitor personnel

**COUNTING:** (green LED) indicates count is in process (activated by switches on hand probes)

**CHECK OK:** (green LED) indicates person being monitored is clean

**SHORT COUNT:** (yellow LED and continuous audible) before count is complete or count is attempted during background update

**POWER:** 95–135 Vac (178–240 Vac available), 50–60 Hz

**TEMPERATURE RANGE:** 0 to 50 °C (32 to 122 °F) (LCD limits temperature range)

**SIZE:** 101.6 x 74.9 x 38.1 cm (40 x 29.5 x 15 in.) (H x W x L)

**WEIGHT:** 20.5 kg (45 lb)

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

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