

# Model 23-1

## mSv Electronic Personal Dosimeter



Ludlum Measurements, Inc.



Part Number: 51-2961  
(front and back views)

### Introduction

The Model 23-1 mSv Electronic Personal Dosimeter is a compact and lightweight (55.9 g / 2 oz) pen-type personal dosimeter. It is ideal for the measurement and general monitoring of gamma and X-ray radiation in medical and laboratory environments, as well as any controlled or restricted area where personal radiation monitoring is required or desired. The unit is sensitive to a wide range of energies from 35 keV to 3 MeV. Dose, Dose Equivalent Rate, and alarm values are easily seen on the four-digit

LCD screen. An audible alarm is activated if the dose or dose rate exceeds the preset value of the dosimeter. The alarm set points are adjustable from the face of the EPD unit.

**Warning:** this dosimeter may not measure pulsed radiation accurately. For users with multiple EPD units the optional Model 23-1 mrem Reader/Software Kit can be used to quickly take data directly from the dosimeter via infrared communication to the user's PC. The software also allows the user to set or change alarm set points quickly.

### Specifications

**INDICATED USE:** dosimetry monitoring of personnel

**DOSE AND DOSE RATE MEASUREMENT DISPLAY RANGE:**

0.001 mSv to 999.9 mSv (0.1 mrem to 99.99 rem)  
0.001 mSv/h to 999.9 mSv/h (0.1 mrem/hr to 99.99 rem/hr)

Accumulated dose data is automatically deleted when Model 23 EPD is switched 'On'.

**DETECTOR:** silicon semiconductor

**RADIATION DETECTED:** gamma and X-ray (35 keV to 3 MeV)

**DISPLAY:** 4-digit liquid crystal display, with dose rate, low battery, overflow

**ACCURACY/LINEARITY:** +/- 10% from 0.01 to 999.9 mSv; 1.0 mrem to 99.99 rem (<sup>137</sup>Cs)

**ALARM OUTPUT:** low, medium, high user-settable volume, and OFF

**ALARM VOLUME:** approximately 60 dB

**SENSITIVITY:** approximately 2 cpm/ $\mu$ Sv/h (20 cpm/mR/hr) (<sup>137</sup>Cs gamma)

**DATA LOGGING:** 600 records (optional IR reader required for data transmission to PC)

**ENVIRONMENT:** -10 to 40 °C (14 to 104 °F);  $\leq$  90% relative humidity (non-condensing)

**POWER:** one each coin-type lithium battery (CR2450) Part Number 21-8639

**BATTERY LIFE:** typically one month at eight hours per day in non-alarm status

**SIZE:** 110 x 30 x 12 mm (4.3 x 1.8 x 0.5 in.) (H x W x D) without clip

**WEIGHT:** 55.9 g (2 oz.)

**Option:** The IR Reader, shown above, allows the user to grab collected radiation dose information and send the data to a PC. Included software allows the data to be placed into a retrievable file. Simple display and alarm changes on the dosimeter are also enabled. Part Number 51-2959



Optional IR Reader for  
Model 23-1 PN: 51-2959

**ALSO AVAILABLE:** Model 23 as above, but measures in mrem [Part Number 51-2958]

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

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