

Model 23 Series Electronic Personal Dosimeter



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Introduction

The Model 23 Series Electronic Personal Dosimeters (EPD) are compact and lightweight (55.9 g / 2 oz) pen-type personal dosimeters. These units are 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. They are sensitive to a wide range of energies from 35 keV to 3 MeV, and are offered with rem (Model 23) or Sv (Model 23-1) units. 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.

The optional Model 23 Series Dosimeter Setting Device and Software Kit (see option below) can be used to configure the dosimeter settings and to quickly take data directly from the dosimeter via infrared communication to a PC. Up to 600 data points can be stored in the dosimeter. Note that all collected data is erased when the dosimeter is turned off, so the data must be transferred before the dosimeter is turned off in order to

Specifications

Model 23 PN 51-2958, **Model 23-1** PN 51-2961

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

DETECTOR: silicon semiconductor

MEASUREMENT AND DISPLAY RANGE:

Instrument	Accumulated Dose	Dose Rate*
Model 23	0.1 mrem to 99.99 rem	0.1 mrem/hr to 99.99 rem/hr
Model 23-1	0.001 mSv to 999.9 mSv	0.001 mSv/h to 999.9 mSv/h

Accumulated dose data is automatically deleted when the instrument is switched 'On'.

DISPLAY: 4-digit OLED with indicators for dose, dose rate, operating time, and alarm

ACCURACY: $\leq \pm 10\%$ (0.01 to 999.9 mSv (1.0 mrem to 99.99 rem), ^{137}Cs)

ENERGY RESPONSE: $\leq \pm 20\%$ (60 keV to 1.5 MeV, ^{137}Cs)

ANGULAR RESPONSE: $\leq \pm 20\%$ (Up to ± 60 degree vertical and horizontal, ^{137}Cs)

DOSE RATE LINEARITY*: $\leq \pm 10\%$ (^{137}Cs)

ALARM VOLUME: approximately 60 dB (at 20 cm)

DATA LOGGING: up to 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, P/N 21-8639)

BATTERY LIFE: 720 hours (without alarm / communication)

SIZE: 112.8 x 30 x 12 mm (4.4 x 1.2 x 0.5 in.) (H x W x D)

WEIGHT: 55.9 g (2 oz.)

*Note: The instrument indicates rough value for dose rate measurements in low radiation fields, such as less than 1 mSv/h (100 mrem/h), so it should only be used for reference.

Option: Dosimeter Setting Device and Software Kit - This kit includes an infrared reader and software that connects a Model 23 Series dosimeter to a PC in order to adjust the configuration and to transfer logged dose readings. (PN 51-2959)



Dosimeter Setting Device
PN: 51-2959