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Технические характеристики на дозиметры для измерения радиации 451Р компании **FLUKE BIOMEDICAL**

451P Radiation Detector - Pressurized

Ensure radiation safety using our lightweight 451P ionization chamber survey meter

Originally designed to measure leakage and scatter around diagnostic X-ray and radiation therapy suites, the 451P's radiation measurement surveying capabilities make it well-suited for a wide range of end users, including X-ray manufacturers, government agencies, state inspectors, biomedical technicians, and maintenance technicians for airport baggage scanners.



Key Features

- High sensitivity μR measurements of rate and dose simultaneously, with the capability to record peak dose rate
- Ergonomic, anti-fatigue handle with replaceable grip, wrist strap and tripod mount
- Programmable flashing LCD display and audible alarm
- Easily-accessible battery door (operated by one or two 9-volt alkaline batteries) on the outside of the bottom case
- RS-232 communications interface with optional Windows based Excel add-in for data logging
- Available with ambient dose equivalent energy response (SI units)
- CE tested. Meets applicable standards



451P Pressurized μR Ion Chamber Radiation Survey Meter

The auto-ranging 451P ion chamber radiation survey meter features a pressurized ionization chamber, providing enhanced sensitivity (μR resolution) and improved energy response to measure radiation rate and dose from X-ray and gamma sources.

The ion chamber detector allows for a fast response time to radiation from leakage, scatter beams and pinholes. Additionally, the low noise ionization chamber bias supply provides for fast background settling time.

The digital display features an analog bar graph, 2.5-digit digital readout, low battery and freeze ("peak hold") mode indicators, and an automatic backlight function. User controls consist of an ON/OFF button and a MODE button. The case is constructed of lightweight, high strength materials and is sealed against moisture. The RS-232 interface can be connected directly to a computer for use with the Excel add-in for Windows (451EXL), enhancing the functionality of the instrument. This software allows for data retrieval, user parameter selection and provides a virtual instrument display with audible and visual alarm indication.

Model Name	Part Number	Description
451P-DE-SI-RYR	2550239	Pressurized Ion Chamber Survey Meter (Sv and Sv/h)
451P-RYR	2550256	Pressurized Ion Chamber Survey Meter (R and R/h)

451P Radiation Detector - Pressurized Ion Chamber Survey Meter

Dimensions

4 (w) x 8 (d) x 6 in (h) (10 x 20 x 15 cm)

Weight

2.4 lb (1.07 kg)

Radiation detected

Beta above 1 MeV, Gamma and x-rays above 25 keV

Operating ranges, typical response time

Röntgen (R)	Sievert (Sv) Model	Time
0 to 500 μ R/h	0 to 5 μ Sv/h	8 sec
0 to 5 mR/h	0 to 50 μ Sv/h	2 sec
0 to 50 mR/h	0 to 500 μ Sv/h	1.8 sec
0 to 500 mR/h	0 to 5 mSv/h	1.8 sec
0 to 5 R/h	0 to 50 mSv/h	1.8 sec

Accuracy

Within 10% of reading between 10% and 100% of full-scale indication on any range, exclusive of energy response. Calibration source is Cs -137

Detector

Chamber: 230 cc volume pressurized air ionization chamber to 8 atmospheres or 125 psi

Controls

ON/OFF and MODE

Automatic features

Auto-zeroing, auto-ranging, and auto-backlight

Power requirements

Two 9 V alkaline, 200 hours operation

Warm-up time

Less than two minutes for initial operation when the instrument is in equilibrium with ambient temperature

Display LCD analog/digital with backlight

Analog

100 element bar graph 2.5 inch (6.4 cm) long. Bar graph is divided into five major segments, each labeled with the appropriate value for the range of the instrument

Digital

2.5 digit display is followed by a significant zero digit depending on the operating range of the instrument. The units of measurement are indicated on the display at all times. Digits are 0.25 inches (6.4 mm) high. Low battery and freeze indicators are also provided on the display

Modes

Integrate mode

Operates continuously 30 seconds after the instrument has been turned on. Integration is performed even if the instrument is displaying in mR/h, R/h, μ Sv/h or mSv/h

Freeze mode

Will place a tick mark on the bar graph display to hold on the peak displayed value. The unit will continue to read and display current radiation values

Environmental

Temperature range

- 4° to 122° F (- 20° to 50° C)

Relative humidity

0 to 100%

Geotropism

Negligible

Standard Accessories

62-103 Check Source

Check Source, ^{137}Cs , 10 μCi . Flat disc, 1 inch diameter(part# 62-103)

451 Assistant for Excel

The 451 Assistant provides user configurable audible and visual alarms for the real time logged data, including the color-coding of each data entry for quick identification for radiation levels and alarm acknowledgment status.

Single Unit Carrying Case

Single Unit Carrying Case (part# 190HPS)

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