



Model T10010 UNIDOS® E Field-Class Electrometer/ Dosimeter

The Model T10010 UNIDOS® E is a high-precision, field-class electrometer/dosimeter ideally suited for daily measurement tasks in radiation therapy and diagnostic radiology. The UNIDOS® E measures current and charge, or dose and dose rate with a maximum resolution of 1 fA or 10 fC, features long term stability of 0.1% per year, and can be used with a wide variety of ion chambers and solid state detectors.

The UNIDOS® E is very easy to use; select the chamber or detector you wish to use from the 30 ion chamber library, connect the chamber, press the zero button, and you are ready to measure. Air density corrections can be made by entering air temperature and pressure for automatic correction of measured values. In addition, it is possible to switch the display between dose and dose rate during the measurement without affecting the measured data.

The memory-resident ion chamber library provides calibration parameters for up to 30 chambers with volumes ranging from 0.02 cc to 10 liters. An RS-232 communication port provides for transfer of data to any IBM-compatible computer.

The UNIDOS® E operates on AC or the internal rechargeable batteries, which provide 3–4 hours of continuous operation.

Features:

- ▶ High accuracy, excellent resolution, wide dynamic range
- ▶ Measures dose and dose rate simultaneously
- ▶ Timing function
- ▶ 30 ion chamber parameter library
- ▶ Air density correction
- ▶ AC or battery operation

Specifications

Measuring modes/range:

Charge (dose): 2 pC to 65 mC

Current (dose rate): 200 fA to 1 µA

Resolution:

Charge (dose): 1 fA to 10 pA

Current (dose rate): 10 fC to 100 pC

Measuring quantities and units:

..... absorbed dose to water (Gy), absorbed dose rate to air (Gy/min), air kerma (Gy, Gy/min), exposure (R), exposure rate (R/min), charge (C), current (A)

Interval time range: 1 to 9999 sec, 60 sec interval standard

Accuracy: $\pm 0.5\% + 1$ count

Zero drift: ± 10 fA

Linearity: $\pm 0.5\%$

Stability: $\pm 0.1\%$ per year

Display: 4-digit, electroluminescent

Offset current: ± 1 fA

Time constant, current or dose rate:

..... 200 to 350 ms

Zero: automatic, within 51 sec

Non-volatile memory: 10 year life, typical

Bias supply: ± 400 V, programmable in 50 V steps

Warm-up time: 15 minutes

Data link: RS-232, DB-9

Input connector: triaxial BNC (see options)

Power: 100/230 V, 50/60 Hz, rechargeable NiCd battery

Battery life: 3–4 hours operation

Dimensions: 25 cm wide, 16 cm long, 10 cm high
(10 in x 6.3 in x 4 in)

Weight: 4 kg (9 lbs)

Options

T10008 UNIDOS® E electrometer with PTW “M” input connector

T10009 UNIDOS® E electrometer with TNC input connector

UNIDOS® is a registered trademark of PTW-Freiburg and PTW-New York.

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