



UNIDOS® E Universal Dosemeter

Easy to use reference class or field class dosemeter for routine dosimetry

Features

- ▶ An economical high quality dosemeter for universal use in radiation therapy and diagnostic radiology
- ▶ Complies with the following standards:
 - IEC 60731¹⁾ as a field class dosemeter
 - IEC 60731¹⁾ as a reference class dosemeter (option)
 - IPEM guidelines on dosimetry transfer instruments as a secondary standard dosemeter (option)
 - IEC 61674²⁾ as a diagnostic dosemeter
- ▶ High accuracy, excellent resolution (1fA) and wide dynamic measuring ranges
- ▶ HV power supply (0 ... ±400)V in increments of ±50V
- ▶ Measures integrated dose (or charge) and dose rate (or current) simultaneously

The lightweight and compact UNIDOS E is an easy to use dosemeter, mainly used for daily routine dosimetry in radiation therapy. Ion chambers and solid-state detectors can be connected. A chamber library makes it possible to store calibration data. Air density corrections are done by keying in air pressure and temperature. UNIDOS E displays the measured values of dose and dose rate in Gy, R, Gy/min, R/min or Gy·m. The electrical values charge and current are measured in C and A. The large, high-contrast LC display enables the user easy to read the measuring results. The device includes automatic leakage compensation and an RS232 interface. The high voltage between the ion chamber electrodes is checked automatically. UNIDOS E features both mains and battery operation. The delivery includes a manual in English.

Ordering Information

T10010 UNIDOS E, connecting system BNT, 115/230 V
 T10009 UNIDOS E, connection system TNC, 115/230 V
 T10008 UNIDOS E, connection system M, 115/230 V

Options

E10101 Reference class certificate according to IEC 60731
 T11003.1.020 UNIDOS E Carrying case
 Additional accessories upon request

¹⁾IEC 60731: "Medical electrical equipment - Dosimeters with ionization chambers as used in radiotherapy"

²⁾IEC 61674: "Medical electrical equipment - Dosimeters with ionization chambers and/or semi-conductor detectors as used in X-ray diagnostic imaging"

Specification

- ▶ Type of product High precision dosemeter according to IEC 60731¹⁾ and IEC 61674²⁾
- ▶ Application Dose and dose rate measurements (charge and current measurements) in radiation therapy and X-ray diagnostics
- ▶ Measuring quantities and units
 - Absorbed dose to water (Gy)
 - Air Kerma (Gy)
 - Absorbed dose rate to water (Gy/min)
 - Air kerma rate (Gy/min)
 - Exposure (R)
 - Exposure rate (R/min)
 - Dose length product (Gy·cm)
 - Charge (C)
 - Current (A)
- ▶ Measuring ranges:
 - Charge 2 pC ... 65 mC
 - Current 200 fA ... 1 µA
- ▶ Resolution:
 - Charge 10 fC
 - Current 1 fA
- ▶ Long-term stability < ± 0.5 % according to IEC
- ▶ Non-linearity:
 - Dose < ± 0.5 % according to IEC
 - Dose rate < ± 1 % according to IEC
- ▶ Accuracy of the C and A measurement < ± 0.5 % ± 1 digit
- ▶ Interval time (1 ... 9999) s
- ▶ Temperature range (10 ... 40) °C, (50 ... 104) °F
- ▶ Relative humidity (10 ... 80) %, max 20 g/m³ range
- ▶ Air pressure range (700 ... 1060) hPa
- ▶ Leakage current < ± 1 fA
- ▶ Amplifier zeroing automatically within approx. 50 s
- ▶ Chamber voltage (0 ... ± 400) V in 50 V increments
- ▶ Interface RS232
- ▶ Power supply (90 ... 240) VAC, (50 ... 60) Hz resp. rechargeable NiCd batteries
- ▶ Dimensions (H x W x D) 100 mm x 250 mm x 260 mm
3.94 in x 9.84 in x 10.24 in
- ▶ Weight approx. 3 kg, 6.6 lbs