



Design varies for different models

Features

- ▶ Measures kV_p , relative mAs¹⁾ and time non-invasively
- ▶ Includes display of the new quantity ppv (practical peak voltage) according to IEC 61676²⁾
- ▶ Available in different models depending on your requirements
- ▶ Can be used both for acceptance tests and routine quality control

The DIAVOLT meter family was developed to combine easy performance with high accuracy of measurements in different X-ray applications. Its multipurpose design enables the user to measure the new IEC quantity "practical peak voltage" as well as kV_p , relative mAs¹⁾ and irradiation time. Depending on your needs you can choose from a range of models.

The key features that provide easy handling are the built-in automatic functions like autostart, autostop, autorange and a display reading that automatically rotates by 180° depending on the orientation of the device; so it does not matter if the device is used for over-couch or under-couch applications.

In addition to the readings on the built-in display, the unit communicates with a PC via an RS232 interface. It also has an analog output¹⁾, which can be connected to an oscilloscope for displaying the voltage waveform. The delivery includes a manual in English.

Ordering Information

- T43014 DIAVOLT UNIVERSAL
covers the applications RAD, FLU, DENT, CT and MAM
- T43016 DIAVOLT MULTI
covers the applications RAD, FLU, DENT and CT
- T43017 DIAVOLT RAD/FLU
- T43018 DIAVOLT DENT
- T43019 DIAVOLT CT
- T43020 DIAVOLT MAM
- L991041 Power supply (100 ... 240) V, (50 ... 60) Hz

¹⁾mAs measurements and analog kV waveform output are not features of the models DIAVOLT RAD/FLU, DIAVOLT DENT and DIAVOLT CT

²⁾IEC 61676: "Medical electrical equipment - Dosimetric instruments used for non-invasive measurement of X-ray tube potential in diagnostic radiology"

DIAVOLT kV_p and ppv Meter

Non-invasive kV_p , ppv, mAs and time meter for acceptance tests and quality control of diagnostic X-ray equipment

Specification

- ▶ Type of product Non-invasive kV_p , ppv, mAs¹⁾ and time meter
- ▶ Application Measurements for acceptance test and quality control in (depending on the chosen model): radiography, fluoroscopy, dental X-ray, CT and mammography
- ▶ Measuring quantities and units
 - Maximum peak voltage (kV)
 - Mean maximum peak voltage (kV)
 - Practical peak voltage (kV)
 - Rel. current time product (mAs)¹⁾
 - Irradiation time (s)
- ▶ Measuring ranges:
 - Tube voltage (40 ... 150) kV (conventional)
 - (22 ... 40) kV (MAM)
 - Rel. mAs product¹⁾ (5 ... 999) mAs
 - Time 0.3 ms ... 999 s
 - for kV measurements a minimum measuring time of 5 ms is necessary
- ▶ Digital resolution:
 - Tube voltage 0.1 kV
 - Rel. mAs product¹⁾ 0.1 mAs
 - Time 300 μ s
- ▶ Accuracy:
 - Tube voltage $\leq \pm 1 \%$ or ± 0.7 kV (IEC 61676²⁾)
 - Rel. mAs product¹⁾ $\leq \pm 2 \%$
 - Time $\leq \pm 0.3$ ms
- ▶ Minimum field size 34 x 34 mm² (RAD, FLU, DENT, MAM)
- 34 x 3 mm² (CT, DENT-PANORAMIC)
- ▶ Ranges of use:
 - Dose rate (1 ... 200) mGy/s
 - Temperature (15 ... 35) °C, (59 ... 95) °F
 - Relative humidity (20 ... 80) %, max. 20 g/m³
 - Air pressure (700 ... 1060) hPa
- ▶ Display 4-line LCD, automatic display flip
- ▶ Interface RS232 and analogue kV waveform¹⁾
- ▶ Power supply 4 NiMH batteries (AA) 1.2 V charged by external power supply
- ▶ Dimensions 45 mm x 95 mm x 155 mm
- (H x W x D) 1.77 in x 3.74 in x 6.10 in
- ▶ Weight approx. 770 g, 1.70 lbs without batteries