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SUN NUCLEAR corporation

PC Electrometer™

The Ultimate in Portable Reference Dosimetry

PC Electrometer is a dual channel reference class electrometer for absolute dose calibration. The system is designed for accuracy and convenience. It offers small size (0.4 kg), near no warm-up time (< 1 minute), and complete operation through USB, with no batteries or external power connections.

Features and Benefits

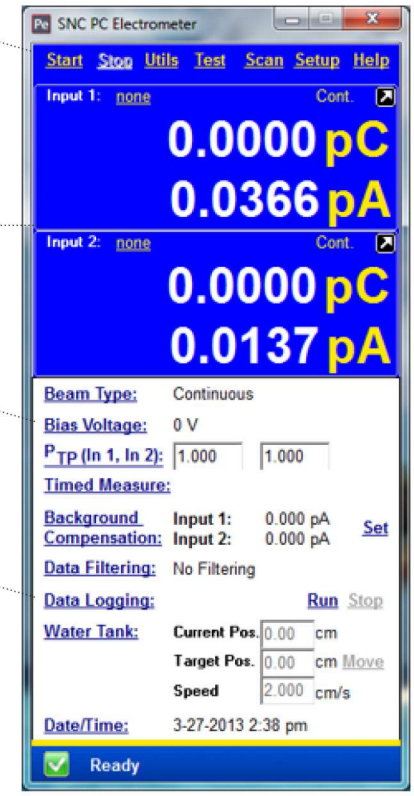
- Reference class dosimetry for absolute dose calibration
- Two independent measurement channels
- Lightweight and portable; only 0.4 kg
- USB powered — no batteries or power cord
- Intuitive user interface
- Interfaces with the 1D SCANNER™
- Less than 1-minute warm-up time
- Single USB cable connection
- Fast sampling interval of 500 ms
- Detector library

Automatic start/stop with threshold detection

Data display with configurable units and detector calibration library

Fully configurable interface and parameter options

Data logging capability



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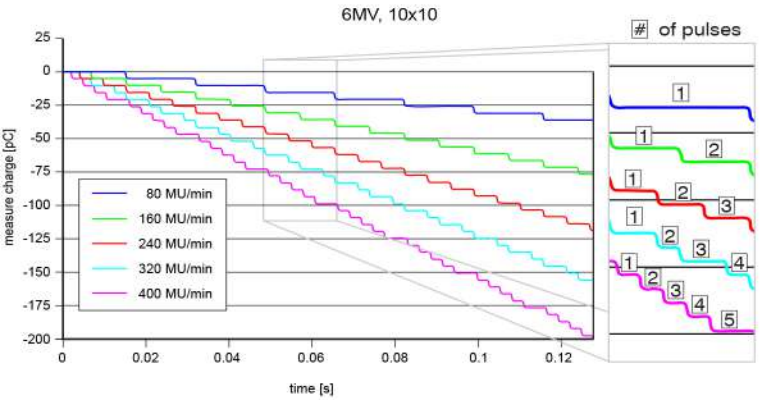
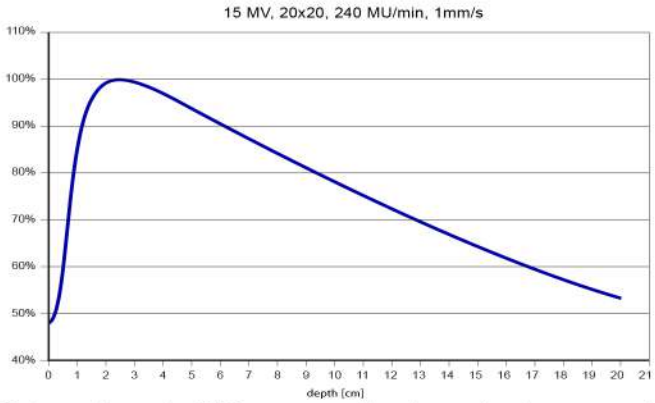
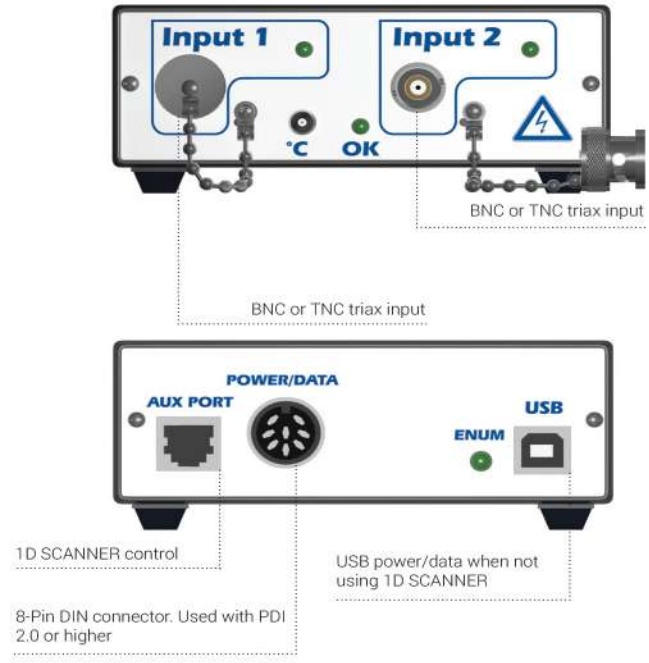
Features



PC Electrometer sampling is every 500 ms. This graph represents the dynamic range of the PC Electrometer when sampling is lowered to 100 ms (not available in commercial systems). Each step in this graph of total charge indicates a linac pulse as measured with a 0.6 cc chamber. PC Electrometer clearly shows the increase in linac pulse frequency as a function of dose rate. From 80 MU/min, the additional pulses are 1, 2, 3, and 4 for the respective rates of 160, 240, 320, 400.



Fast sampling makes PDD curves smooth and accurate when measured with the PC Electrometer and 1D SCANNER. The PDD curve above is an un-smoothed ratio of Field to Reference, using 0.6 cc Farmer type chambers.



1D SCANNER™

The PC Electrometer directly connects to the 1D SCANNER for monthly and annual QA.

Specifications

Warm Up Time:	< 1.0 min
Charge Range:	2 pC – 10 mC, 15 fC resolution
Current Range (Continuous):	Low: 2 pA – 50 nA
Current Range (Pulsed):	0 -105 pC/pulse
Leakage Drift:	±0.001 pA
Display Update Frequency(s):	500 ms
Bias Voltage:	Adjustable, 0 to ±400 V
Non-linearity:	± 0.1% of full scale

Long Term Stability:	< ± 0.5%
Measurement Repeatability:	± 0.25% of full scale
A/D Converter:	16 bit
Operating System:	Windows 10, Windows 8.1 or Windows 7 (32 or 64 bit)
Dimensions / Weight:	10.6 x 14.8 x 4.5 cm / 0.46 kg
Compatibility:	SNC Dosimetry
Conformity:	Reference class according to IEC 60731

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