Model PNC-1G
GM Tube based Gamma Counting System

Para Nuclear Counter, **Model PNC-1G** is a micro controller based, economical, stand alone, portable mains operated instrument for Nuclear Counting application. It is a versatile instrument can be programmed as Preset Timer.

Model PNC-1G uses GM tube as nuclear radiation detector. Necessary electronics & high voltage supply are housed in the equipment. Coaxial cable with UHF connector connects the GM tube to Model PNC-1G.**PNC-1G** can store 1000 readings in a non-volatile memory. These readings can be downloaded to PC via USB interface. These readings can also be scanned on LCD display after the counting experiment.

PNC-1G is also equipped with special Plateau Mode. In this mode, HV is automatically increased in steps of 50 Volts. For each HV setting, average counts reading is stored in the memory. These readings are recalled to view them on LCD. User can transfer these readings to PC using data transfer software which will generate plateau graph indicating Plateau slope.

PNC-1G is ideally suited for Nuclear Experiments carried out in Universities and colleges. It is also useful for (Gamma / Beta) radiation counting for Health Physics applications in radioisotope laboratories, nuclear reactors, nuclear power plants, nuclear medicine centers etc. End window GM tube Model 712 or equivalent can be supplied along with a planchet holder as an accessory for Model PNC-1G. Any other End Window GM tube can also be supplied as an option. Appropriate GM tube is selected, depending upon the application.

Lead Shield with door assembly is available as optional accessory for low level counting applications. It houses the GM Tube and planchet holder. Shield dimensions are development on the selected GM Tube.

Specifications (PNC-1G)

PNC-1G with Planchet Holder Assembly

Counter

❖ Electronics	All solid state, Micro-Controller based design
❖ Preset Time	Time settable between 1 and 9999 seconds in Step of 1 second or in HH:MM:SS format
❖ No. of Runs	Settable between 1 to 1000
❖ Display	Counts : 999999 Time : 9999 or in HH:MM:SS format Runs : 1000
❖ HV Supply	Adjustable to 1500V (±5V), settable through feather touch keypad on front panel.
❖ Data Storage	Store and recall facility for counts data up to 1000 readings and for the plateau readings
❖ User Interface	4 keys keypad with 16x2 line LCD for displaying Key function
❖ Data Transfer	To PC USB Port

GM Detector

(Select from following, standard price includes Model 712, other GM tube(s) at extra cost)

- ❖ Model 712 (gamma sensitivity : 18 CPS/mR/Hr) mounted on Acrylic Planchet Holder
- ❖ Model 7224 / 72314 mounted Acrylic Planchet Holder (for beta measurement)
- ❖ Any other GM detector specified by user

Power Supply

- ❖ 240 V (±10%), 50 Hz Ac Mains Through 12V battery charger

Mechanical

- ❖ Dimensions : 200 L x 220 D x 70 H mm
- ❖ Weight : Approximately 1 Kg

Accessories (optional)

- ❖ Lead Shield with door arrangement for GM tube
- ❖ Aluminum Absorber Kit
- ❖ Radioactive Sources (on request, if available from BRIT, Mumbai)

Due to continuous R&D, specifications and illustrations are likely to change without notice.

Manufactured by :

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