RAD CHECK METERS
(INTERNAL DETECTOR & EXTERNAL DETECTOR PROBE)
TYPE: RC705 I & E)

CE

Technical Data

Rad Check MeterType:RC705 I&E manufactured by Nucleonix Systems is primarily designed to measure low level Gamma Contamination (RaC) in various commodities / products which may include food stuffs in solid form, minerals, engineering, steel and casting components etc. It is an ideal choice to measure increased natural background (BG) in houses, factories, buildings etc. in a nuclear disaster scenario. This Portable Meter uses a sensitive scintillator with PMT as the detector. This meter gives an optimum performance in counting Low-Level Gamma Radioactive Contamination (RaC) in a variety of situations.

RC705 I&Emeasures contamination in CPS, CPM and Doserate (μR/h, μSv/h) modes and has built in user presettable alarm facility to declare the product as contaminated. Unit gives audio /visual alarms once it exceeds preset level. It is advised to preset the alarm at least 1.5 times or more than background radiation level, at that place.

Unit can detect less than 0.05μSv/hr in a field of 0.2 μSv/hr during a period of 1 sec (when tested with Cs-137 and Co-60).

FEATURES :

- Ideal choice for checking Radioactive Contamination (RaC) in solid food stuffs. Steel, Foundry and engineering industrial products.
- It is an ideal choice to measure increased natural background (BG) in houses, factories, buildings etc. in a nuclear disaster scenario.
- Manufactured conforming to CE& ANSI N42.17A performance specifications for Health Physics instrumentation (portable)
- Has Four modes of measurement CPS,CPM μR/hr and nSv/hr.
- User settable alarm facility.
- Highly sensitive compared to other similar meters.
- Probability of detection the alarm condition is more than 99%.
- System designed to withstand Humidity, Shock / Vibration, Temperature (upto 55°C).
- Designed to comply EMI/EMC.

SPECIFICATIONS

Detector : Scintillator coupled to a Photo multiplier Tube.

Options :

A. Built in detector Scintillator size 1" x 1"

B. External detector with Scintillator size 1" x 1".

Acquisition Mode: CPS: (0-50000) or CPM : (0-5000)

Measurement Range :

Dose rate:(1-10000) μR/hr or (1-99999) nSv/hr

Range Changeover : Automatic

Accuracy : Better than +/-15% with Cs-137 (above 100μR/hr) Better than +/-25% with Cs-137 (upto 100μR/hr)

Over range: This instrument will show over range above the 10000 μR/hr

Alarms Facility: Provision for audio/visual alarms if it exceeds preset level.

Alarm Preset Level:
User selectable in all modes.

Sensitivity :
a. 0.1 μR/hr/1nSv/hr in termsof Radiation unit.
b. Interms of minimum measurable RaC, it Can detect 30 KBq of Co-60 contamination homogeneouslydistributed in a Steel sample upto 10 cm away with internal probe arrangement and upto 20 cm with external probe arrangement.

Display Indication :
Dot Matrix LCD display for dose rate

Time Constant (TC) :LOW, MED, HIGH

Audio Output :
Built-in piezo electric buzzer.

Serial Port / Data Communication : Built-in micro USB port facilitates data down loading into PC.

User Interface : i) Power ON/OFF Button.ii)START,STOP,PROG,STORE, INC, DEC command buttons for setting of parameters and operation of the instrument.

Fault Diagnostics: Low battery indication is provided.

Power : Operable on standard dry cells (1.5V x 4) 6 volts DC, Size AA, LR6 Alkaline cells AC adaptor working on 230VAC shall be supplied optionally.

Type test compliance : Manufactured conforming to CE& ANSI N42.17A performance specifications for Health Physics instrumentation (portable)

Dimensions :
106W x 196L x 100Ht in mm (Approx.)

Rad Check Internal Unit

Rad Check External Unit

Person Checking For Radioactive Contamination Using Radcheck Meter With 1”X 1” Nai External Detector Probe

Person Checking For Radioactive Contamination Using Radcheck Meter With 1”X 1” Nai Internal Detector