

Model APCM-1

Wall Mountable Alpha Palm Contamination Monitor



Model APCM-1 is a wall mountable Alpha Palm Contamination Monitor developed for measurement and detection of alpha contamination on Palm. APCM-1 is designed and manufactured indigenously by Para Electronics Mfg. Division of Electronic Enterprises (I) Pvt. Ltd., Mumbai, India.

Model APCM-1 uses of 180 x 115 mm² ZnS(Ag) based Alpha Scintillator mounted on 78 mm dia PMT for detection of Alpha Particles on palm/hand. This detector is covered with Mylar layers to protect it from ambient light. A demountable hexagonal SS mesh is provided on the Mylar layer to protect it from accidental touching and damaging it. It is also possible to remove this SS mesh for decontamination if required.

Alpha Palm Contamination Monitor

The detector is mounted upside down so that the palm can be held below the SS mesh, thereby reducing the chances of alpha particles falling on active area of the detector. One IR sensor and other touch switch sensor detect the presence of palm automatically. This will automatically start the measurement for preset time. At the end of measurement, if the measured value is greater than the set alarm value, appropriate message, and audio, visual alarm indications are provided. Should the palm moves during the measurement time, the measurement is aborted with message on LCD.

Model APCM-1 is a mains operated unit which includes the HV supply for detector, front end electronics and micro controller for all the operations. Setup mode allows user to set the counting time, alarm level (CPS) and background subtraction ON or OFF. While there is no palm under the detector, instrument measures the background level which is used for getting the net counts in CPS for alarm activation.



Hexagonal Removable Stainless Steel Mesh

Model APCM-1 is useful for detection of alpha contamination on palms. It is designed for ease of measurement to be used for health physics application in nuclear facilities like R&D labs, nuclear power plants etc.

Specifications : Wall Mountable Alpha Palm Contamination Monitor



Parameter	APCM-1
Contamination detected	Alpha
Detector	128 mm (L) x 118 mm (W), ZnS(Ag) Scintillator on 78 mm dia PMT with Perspex light guide
SS Mesh Arrangement	Removable Hexagonal SS mesh for decontamination
Display	2 x 16 char. LCD for menu and other messages
Keypad	4 Keys to set the parameters
Palm Detection	Automatic using one IR switch and one touch switch
Efficiency	Better than 25% at all locations
Background Subtraction	ON or OFF, software settable
HV supply	0 to 1000 V internally preset
Counting Time	Settable between 1 and 999 seconds
Alarms	Green / Red bright LEDs with audio buzzer
Alarm Setting	Level - 1 to 999 CPS, software settable
Mechanical Enclosure	Powder coated Wall Mountable Steel housing Dimensions: 220 W x 360 H x 260 D mm
Power	230V / 50 Hz AC Mains

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

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