

# Model PSAM-1 – Plastic Scintillator based Area Monitor

(Ideal for metal fabricators for material inspection)

(Preliminary Information)



Para Plastic Scintillator Monitor Model PSAM-1 is designed to detect low activity nuclear contamination monitor. It employs two plastic scintillators for detection of gamma activity in the surrounding. Automatic measurement of background activity enables Model PSAM-1 to set lowest possible detection limit. Periodical measurement of background activity automatically sets new level of threshold above which aural and visual alarms are activated.

## Plastic Scintillator Based Area Monitor PSAM-1

Model Simple to use, yet powerful enough to detect low level nuclear contamination, enables Model PSAM-1 to be used in applications like Nuclear Contamination in Steel. Model PSAM-1 contains a main readout unit with two plastic scintillator detectors coupled through two composite cables to the main readout unit. The signals generated by the detectors are continuously monitored by the microcontroller based circuitry used in the readout unit. Two 7 segment LED displays on the readout unit indicate the instantaneous values of counts (proportional to the incident nuclear radiation) from the two detectors. Audio and Visual Alarm indicators are turned on as soon as the set alarm limit is crossed by the incident radiation. Setting up of Alarm Level and Detection Time (Integration Time) is done through the keyboard and the 16x2 line LCD display. This LCD is also used for indicating various messages and menus.



**Readout Unit**

## Typical Applications

- Area Monitoring
- Contamination Measurement in Steel or any material
- Portal Monitor
- Gate Monitor



**Detector Head**

# Specifications (PSAM-1 System)

(PRELIMINARY INFORMATION)



<b>Detector Heads</b>	
<b>Detectors</b>	2 nos of 50 mm dia x 600 mm thick plastic scintillator with PMT Integral assemblies
<b>Front End Modules</b>	2 nos of preamp, amplifier, SCA and HV circuit
<b>HV Supply</b>	2 nos, 0 to 1200V settable as per detector specification
<b>Interface Cables</b>	2 nos Composite cables max length 5 meter each
<b>Readout Unit</b>	
<b>Counters</b>	2 nos of counters to give 999999 counts display
<b>Displays</b>	a. 2 nos of 7 segment LED displays for counts b. 16 x 2 characters LCD display for menus and messages
<b>Alarms</b>	Cluster LED Red and Green for indication of Alarm and Normal Piezoelectric buzzer for Alarm Indication
<b>Set Up</b>	Counting Time interval – 0.5, 1.0 and 2 seconds Alarm Level (sigma value) – 1 to 20
<b>Background</b>	Automatic measurement of background radiation
<b>Supply Voltage</b>	240V/50 Hz AC mains ( $\pm 10\%$ )
<b>Enclosure</b>	ABS plastic box with transparent door, wall mounting arrangement

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

## Manufactured By :

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