

Model CAM C – Continuous Air Monitoring System with composite detector (Alpha & Beta channels, Bq/M³, CPM Display)



Model CAM C

Model CAM C is a Continuous Air Monitoring system with plastic scintillator based composite detector for simultaneous measurement of Alpha and Beta Channels. CAM C is designed and manufactured indigenously by Para Electronics Mfg. Division of Electronic Enterprises (I) Pvt. Ltd. for Continuous Monitoring of Alpha and Beta activity in the surrounding atmosphere.

Electronic flow measurement enables user to get the activity reading in Bq/M³, Time totalized air flow measurement provides information on the amount of air sampled in the given time. However, Model CAM C system is also available with standard Rotameter type air flow measurement providing only CPM Display. The major advantage of CAM C is use of single detector and hence single air sampling, air flow measurement system.

Use of single composite detector makes the system economical, easy to maintain, yet it offers all the advantages of independent Alpha and Beta detectors. The Composite detector offers excellent isolation between Alpha and Beta channels.

Connectivity of CAM to network or PC is provided through ETHERNET. Modbus based Data Transfer software is supplied as an option.

Model CAM C is housed in 19" mechanical trolley with two compartments. These compartments house the main electronic Instrument on the top side. Composite detector with lead shield, Flow measurement, Sample Changing mechanism and one Air Sampling Pump.

Elegant yet simple, design of CAM C enables user to change the filter paper without disturbing the detector mounting arrangement. Air Sampling Pump is rated for continuous operation. Rotameter flow measurement is also possible as an alternative to electronic flow measurement.

Model CAM C includes

2" Plastic Scintillator coated with ZnS(Ag) scintillation detector mounted on 2" dia PMT, Air Sampling System with electronic flow meter, **Easy-to- Replace** Filter Paper Arrangement, 100 LPM air sampling pump of continuous rating.

Electronic Microcontroller unit with independent HV supplies, Pulse Processing Circuits, Counters, Flow Measurement and Display of Air Flow, CPM and Bq/M³ for each channel. 6 digit LED display for CPM and 4 x 20 Char LCD for menu, Bq/M³, Flow and other menus

Low and High Level Count Rate Alarms, 4-20mA outputs, Relay Contact outputs, Green, Red Tower Lamps with Flasher and Audio Alarms for each channel

Specifications (CAM C System)



Parameter	CAM C	
	ALPHA CHANNEL	BETA CHANNEL
No. of Channels	One	One
Detector	2" dia ZnS(Ag) Scintillator coated on 2" dia 0.1" thick plastic scintillator mounted on 2" dia PMT, Lead Shield 25 mm thick around. Typical specifications are as below	
Efficiency	20 ~ 25% for Am ²⁴¹	Better than 12 % for Sr ⁹⁰
Crosstalk	Beta to Alpha: <1%	Alpha to Beta <10%
Background	5~10 CPH	5~10 CPM
Filter Paper Arrangement	2" dia filter paper mounting, with easy-to-replace filter holder in sampling system	
Flow Measurement	Electronic or by Rotameter (0 to 100 LPM Range)	
Air Sampling	Continuous rated air sampling pump (100 LPM) for Alpha and Beta channels	
HV supply	0 to 1000V preset for alpha channel	0 to 1000V preset for beta channel
Display	6 digit LED for CPM 4 x 20 Char large LCD for Bq/M ³ Flow, Alarm Levels	6 digit LED for CPM 4 x 20 Char large LCD for Bq/M ³ Flow, Alarm Levels
Ranges	50, 500, 5000 or 50000 CPM settable	50, 500, 5000 or 50000 CPM settable
Calibration	Air Flow and Counting Efficiency	Air Flow and Counting Efficiency
Alarms	Green / Red Tower Lamps with audio alarm	Green / Red Tower Lamps with audio alarm
Alarm Setting	Warning and High CPM Alarm	Warning and High CPM Alarm
	Low and High for Air Flow	Low and High for Air Flow
Outputs	Potential free Relay contacts, 4-20mA Output Ethernet	Potential free Relay contacts, 4-20mA Output Ethernet
Software	Networking MODBUS protocol base software is optionally available	
Air Flow Pump	Single pump (126 LPM open flow) with silencer	
Flow Control	By Vent Valve with inlet air filter	
Mechanical Enclosure	Powder coated MS Trolley on caster wheels	
Power	230V / 50 Hz AC Mains	

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

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