

ALPHA & BETA/GAMMA AIR MONITOR**SALIENT FEATURES**

- INDEPENDENTLY WORKING ALPHA & BETA CHANNELS
- RS-485 INTERFACE OR ETHERNET
- SMART COMMUNICATION PROTOCOLS
- MICROCONTROLLER BASED
- 0 CPM TO 50,000 CPM
- bq/m³ UNIT
- AUTORANGING
- DIGITAL DISPLAY
- QUICK RESPONSE
- STABLE READING
- CONTINUOUS HV & DETECTOR MONITORING
- DIGITAL ALARM SETTING
- 4 TO 20MA OUTPUT
- EASY ACCESSIBILITY FOR SERVICING
- PUMP WITH SILENCER

**I – ELECTRONIC UNIT SPECIFICATIONS**

DUAL CHANNEL ELECTRONICS	: Comprising of TWO SEPARATE MODULES for each of independently working α (alpha) & β (beta) channels
RANGE	: 50000 CPM & 999.99 bq/m ³ for each module
ACCURACY	: $\pm 10\%$ of full scale
TIME CONSTANT	: 1sec to 60sec automatically adjustable
DISPLAY	: 5 digit 7 segment LED & 16 x 2 alphanumeric LCD

for each module

KEYPAD : Detachable Keypad

Air Volume : Will be displayed on the LCD in m³

ALARM SETTING & INDICATION

Range : 1 to 50000 CPM

INDICATION	Red LED Cluster	Green LED Cluster	Speaker
Normal	OFF	ON	OFF
Alarm	FLASHING	OFF	ON
Acknowledge (Local / Remote)	ON	OFF	OFF
Reset after clear (Local / Remote)	OFF	ON	OFF

COMPUTER INTERFACE

Standard : RS485

Set : ID, alarm, range span

Read : ID, Alarms, Instrument type, range span, status, reading etc.

Control : Acknowledge, reset

OR

Optional : Ethernet 10/100 port (RJ 45)
Modbus /TCP

OTHER FACILITIES

Test Switch : To feed internal frequency to check functioning of instrument without source

Power ON Self Test : provided for certain peripherals.

Continuous Detector & EHT Monitoring : provided

Recorder o/p & Relay o/p : 4 to 20mA/ 0 to 5V & DPDT relay for each module
Alpha : 20mA corresponds to 1200CPM by default.
It can be changed by PC to any other value using serial port.
Beta : . 20mA corresponds to 6000CPM by default.
It can be changed by PC to any other value using serial port.
(Accuracy 1% of rdg. ±10CPM, supports 200m cable length)

Note : For bq/m³ calculation, flow rate (in lpm) is to be entered by keypad in case of analog air rotameter. Whereas in case of optional electronic flow rate meters, flow rate will be automatically taken.

EHT SPECIFICATIONS (for each module)

20V to 1200V, adjustable & displayed on demand.

EHT ON switch provided with LED indication, load current of 200µA

Power Supply : 230V AC ±10% 50Hz

PCB Mounting : Side by side for easy accessibility while servicing

Environment : Upto 60°C & 90% RH at 40°C in radiation areas

II - ESSENTIAL ACCESSORIES WITH THE INSTRUMENT

ALPHA AIR SAMPLER-DETECTOR ASSEMBLY

- The assembly consists of** :
- a) ZnS(Ag) screen ASP3 – 2” dia disc
 - b) Aluminium Mylar – 2” dia disc
 - c) PM Tube (52mm dia, 0.5×10^6 A/lm gain, 0.3nA dark current)
 - d) A filter holder (50mm dia.)
 - e) **Suction Chamber** : Suction chamber with dual nozzles as per Drg. No. 9606152-N (Rev-1)

Note: : Construction of air sampler assembly to be such that removal of nozzle connection is not required while replacement of filter paper.

BETA AIR SAMPLER-DETECTOR ASSEMBLY

- The assembly consists of** :
- a) GM Tube (**Wall:** effective length ≈ 1.45 ”) (**Window:** $\approx 1.5-2.0$ mg/cm², effective dia. ≈ 1.15 ”)
 - b) A Filter holder (50mm dia.)
 - c) S.S.Suction chamber: With dual nozzles, inlet & outlet as per Drg.No. 9606151N (Rev-1)
 - d) The GM tube is shielded by 50mm of lead in a manner that provides easy access for loading & unloading of the filter paper & removal of detector.

Note: : Construction of air sampler assembly to be such that removal of nozzle connection is not required while replacement of filter paper.

FLOW MEASUREMENT & REGULATION (ROTAMETER) (STANDARD)

Two Air rotameters (one for alpha , one for beta/gamma) 50 – 200LPM with serrated S.S. nozzles for connection to 12mm ID PVC / rubber tubing. Air flow control valve.

FLOW MEASUREMENT & REGULATION (OPTIONAL)

Two Electronic Air rotameters (one for alpha, one for beta) 0 to 165LPM

INSTRUMENTATION TROLLEY

The Instrumentation Panel : To accommodate Electronic instrument, Detector, Detector Housing, Suction Pump, Rotameter etc. Refer Drg.No. 200202131

AIR SUCTION PUMP

Dry type vacuum pump with silencer, capacity 150 LPM. Pump motor of $\frac{3}{4}$ HP, 1440 RPM rating suitable for regular air sampling duty with our air monitor.

Note : Optional items at an extra cost.

CAT.NO. PAM341AB /0416

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