



Atmospheric Particulate Sampler

ECHO^{PM} *Radio*

ECHO PM Radio is an automatic sampler with constant flow and high prevalence designed for the monitoring and control of environmental radioactivity.

The environmental contamination is detected by monitoring the main environmental and food chains.

When radioactive substances, in the form of aeriform products (gases, vapors, etc.), are released into the atmosphere, they can give rise to radiation and / or internal radiation as a result of individual's inhalation.

ECHO PM Radio meets the features required for monitoring the radioactivity of airborne non-gaseous material, on membranes with diameters from 47 to 150 mm.

It can be used both for routine sampling at low flow rate (30-140 l/min) and in radiological emergencies with flow rates higher than 140 l/min that allow to obtain high measurement sensitivities and to sample large volumes in a short time.



The instrument features are in compliance with those indicated in the **RESORAD** Network Manual (thermostatically controlled filter holder, suction pump with flow regulator, volumetric meter, filter).





The external sampling line ends with a filter holder and is equipped with a PTS head (Optional).

While most radionuclides are fixed to airborne particles, some volatile radionuclides such as ^3H and ^{131}I are not sufficiently retained by filters.

Echo Radio PM can be used to sample ^{131}I using special activated carbon traps located downstream of the filter, which contain an iodine-specific adsorbent surface.

Alternatively, the sampling line can be equipped with a cartridge for PUF (polyurethane sponge) or XAD2 resin for the sampling of polycyclic aromatic hydrocarbons.



PTS Head



The instrument is equipped with a color touch screen display and dedicated software for environmental sampling. It allows visualizing the flow parameters (air flow, volume, elapsed time, pressure, temperature, real time dust (optional), wind speed and direction (optional), real time CO₂ (optional), alarms and to adjust the operating parameters through an easy icon-based menu system.

The instrument is supplied with a stand (not installed on the instrument) for correct positioning on the ground and reaching the height of the standard sampling point.



TECHNICAL FEATURES

Pump type	16 m ³ /h dry rotary vane
Flow rate at inlet	300 l/min
Flow measurement	Electronics Resolution 0.01 l/min.
Flow control	Electronically controlled flux rate sampling
Volumetric measurement	With calibrated orifice flow meter (UNI EN 5167) and electronic integration
Data interface	USB
Data storage	Non-volatile, about 30 measures-log (1000 days)
Display	LCD Color HD 5" Touch screen
Keyboard	Membrane, tactile effect
Cooling circuit	Thermostatically forced ventilation
Housing	Anodized aluminium - for outdoor use
Dimensions	340 x 443 x 275 mm (LxAxP) (without stand)
Weight	19 Kg
Power supply and consumption	230 Vac 50 Hz 10 A max





CODES

ECHO PM RADIO	AA99-009-0215SP
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Accessories

Echo PM Stand f/floor install.	AA99-009-9910SP
OPC Real Time PM Value + 24 Dim Class Emerg	AA99-100-0000SP
Dir/Speed Wind Interface Vers. Ultrasonic	AA99-009-9920SP
Dir/Speed Wind Sensors Vers. Ultrasonic	AA99-009-9921SP
Modem Router UMTS for Remote Conn. Vers. 2020	AA99-020-9913SP
PTS Sampling Head	AA99-010-0015SP
PM10 (EN12341) Sampling Head	AA99-010-0020SP
PM2.5 (EN12341) Sampling Head	AA99-010-0025SP
PM1 (EN12341) Sampling Head	AA99-010-0027SP
Sampling Cartridge with for IPA/PCDD/PCDF + Filter Holder 142 mm	AA99-020-0110SP
Sampling Cartridge with for IPA/PCDD/PCDF + Filter Holder 47 mm	AA99-009-0004SP
Borosil. Glass Spare Cartridge for Puf Mod	AA99-020-0011SP
Aluminium Shipping Container for Puf	AA99-020-0019SR

Consumables

PUF h75 mm X 62 mm "NON-WASHED" - 10 Pcs	AA99-016-9955CR
PUF h50 mm X 62 mm "NON-WASHED" - 10 Pcs	AA99-016-9956CR
PUF for 47 mm cartridge "NON-WASHED" - 10 Pcs	AB99-000-3022CR
Quartz Fiber Filters w/o Binder D47 MK360 - 25 Pcs	AA99-010-9907CR
Glass Fiber Filters w/o Binder D47 MGA - 100 Pcs	AD99-007-0018CR
Quartz Fiber Filters w/o Binder D102 MK360 - 25 Pcs	AA99-016-9950CR
Glass Fiber Filters w/o Binder D100 MGA - 100 Pcs	AA99-016-9951CR
Quartz Fiber Filters w/o Binder D150 MK360 - 25 Pcs	BA23-002-0412CR
Glass Fiber Filters w/o Binder D150 MGA - 100 Pcs	AD99-007-0018CR

Accessories



Consumables

