ATMOSPHERIC PMx PARTICLES MONITOR - SAMPLER

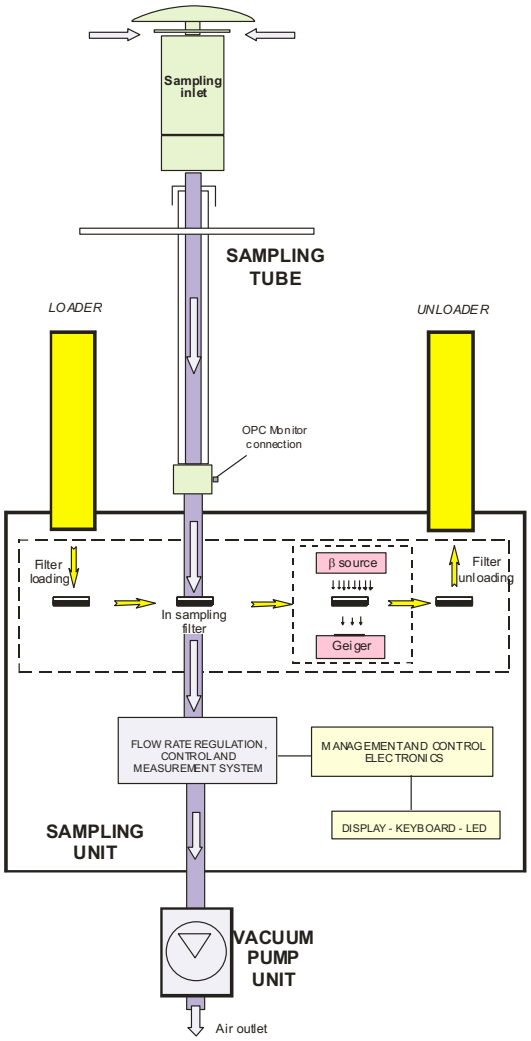
SWAM 5A Monitor

MAIN FEATURES

1. Swam 5A Monitor **can work with any sampling inlet** (for example: PM_{10}, $PM_{2.5}$, PM_1) within the operating flow rate range 0.8 ÷ 2.5m^3/h
2. **Sampling at ambient temperature** with measurement of the external temperature and of the temperature near the filter
3. Sampling on **Ø 47mm filter membranes**, exploitable for further analysis
4. **Mass measurement** using the ß attenuation method
5. Completely automatic management of sampling and measurement **quality controls** with immediate validation of the PMx concentration data
6. **On line monitoring** of all parameters characterizing the sampling process, with diagnostic warnings. These warnings can be automatically sent to the operator via SMS.
7. **Storage of sampling and measurement data** on the internal buffer
8. **Local control** with RS232 serial interface
9. **Complete remote instrumental control** via Modem/GSM

APPLICATIONS

- **PTS, PM_{10}, $PM_{2.5}$, PM_1 particulate matter sampling and measurement in compliance with EN 1234.1 and USEPA standards**



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SAMPLER - MONITOR
OF PARTICULATE MATTER
SWAM 5A Monitor

TECHNICAL SPECIFICATIONS

Sampled mass measurement range	0 ÷ 50 mg	
Mass measurement precision (expressed as standard deviation)	*β equivalent spot area 11.95 cm²* : 33 µg *β equivalent spot area 7.07 cm²* : 20 µg *β equivalent spot area 5.20 cm²* : 15 µg	
Mass concentration measurement precision:	± 0.3 µg/ m³ *(24 hours cycle 2,3 m³/h operating flow rate)*	
Mass concentration measurement detection limit:	1 µg/ m³ *(24 hours cycle 2,3 m³/h operating flow rate)*	
^{14}C radioactive source	*activity* ≤ 100 µCurie	
Filter cartridges	*β equivalent spot area 11.95 cm²* *(standard – supplied with the instrument)* *β equivalent spot area 7.07 cm²* *(supplied on demand)* *β equivalent spot area 5.20 cm²* *(supplied on demand)*	
Filters Loader/Unloader capacity	*No. 36 filter cartridges (or 72 on demand)*	
Filter membranes	*size ∅ 47 mm (not supplied with the instrument)*	
Operating flow rate	*Programmable in the range* 0.8 – 2.5 m³/h	
Usable sampling inlet	*The instrument can work with any sampling inlet within the instrument operating flow rate range*	
Supplied sampling inlet	*The instrument is usually supplied with a sampling inlet for PM_{10} cut size (LVS-PM_{10} model in compliance with the EN 1234-1 standard, working at* 2.3 m³/h)	
Max allowed pressure drop	*40 kPa at 2.3 m³/h*	
Flow rate measurement precision	*± 1% of the measured value*	
Flow rate measurement accuracy	*< 2% of the measured value*	
Power supply	*230 Vac (± 10%) 50 Hz single-phase 5 A*	
Absorbed electric power	*1000 W (max)*	
Compressed air feeding	*200 ÷ 300 kPa*	
Power supply continuity in direct current	*2 Floating batteries 12 V 3.5 Ah - 4 hours endurance to complete mass measurements and filters handling*	
Operating conditions (inside the installation cabinet)	*Temperature between + 5 and + 35 °C (within this cabinet internal temperature range, specified precision and accuracy values are guaranteed)*	
	Relative Humidity lower than 85% (with no condensation)	
Non operating or storage conditions	*Temperature between - 10 and + 55 °C*	
	Relative Humidity lower than 85% (with no condensation)	

Sizes and Weights	***(W x D x H)***	***Weight (kg)***
Sampling unit:	*430 x 540 x 240 mm*	*38 kg*
Vacuum pump unit:	*200 x 320 x 200 mm*	*10 kg*
Sampling inlet	*∅ 145 mm H 200 mm*	*1 kg*
Sampling tube	*∅ 100 mm H 1500 mm*	*4.5 kg*
Service air compressor unit	*180 x 420 x 240 mm*	*18 kg*

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