



VF NUCLEAR



NUCLEAR
POWER PLANTS



WASTE
MANAGEMENT



RESEARCH
CENTRES



INDUSTRY
& MANUFACTURING

CPM-300

CONTINUOUS PARTICULATE MONITOR



MAIN ADVANTAGES

- Adjustable mechanical layout
- The use of moving filter tape allows continuous measurement from 3 months to 1 year without the filter replacement (depending on the movement mode)
- Continuous or periodical movement of the filter tape
- Background compensation in real time
- Radon/Thoron compensation
- Adjustable alarm levels for alpha and beta channels
- Easy maintenance
- Compliant with IEC 60761, IEC 61172 and IEC 61578
- Various communications interfaces

PURPOSE

The CPM-300 monitor is designed to continuously measure concentration of alpha and beta particulates in the air. The air can be sampled directly from working environments, ventilation systems or the environment.

The CPM-300 monitor locally displays and archives the measured values and indicates exceeding preset alarm thresholds.

The CPM-300 monitor consists of three modules mounted on a metal frame:

- Continuous Particulate Detector CPD-14
- Display Unit RDU-22
- Vacuum Pump VP-30
- Ancillary switchboard for the control of the flow rate

The RDU-22 display unit with a user friendly touch-screen 7" display provides power for the system, displays the results of activity measurements, archives measured values and displays the status and other measured parameters of the monitor. It also visually and audibly indicates when the pre-set alarm levels have been exceeded.

The CPD-14 Continuous Particulate Detector performs measurement of the activity of alpha and beta particulates in the sampled air.

The air sample enters into the hermetically sealed box of the CPD-14 through the inlet fitting. The air flow passes through the filter tape, the slot flow meter and through the outlet fitting.

The filter tape collects the aerosol particles. Three silicon detectors measure the response to aerosols collected on the tape. These are located close to the filter tape to ensure maximum efficiency. A fourth detector is used for dynamic background compensation.

A LED check source is used to verify the correct functioning of the detector.

For work in increased radiation background, the CPD-14 detector can be equipped with an internal lead shield.

The device is equipped with a pressure gauge, to monitor the pressure loss on the tape, which signifies clogging or rupture of the tape.

The VP-30 Vacuum Pump ensures the required air flow.

The CPM-300 monitor can be connected to the host system via the Ethernet interface and control external technology via relay outputs.

Using the touch screen, it is possible to change the language and switch to service mode (basic device diagnostics and limited settings). A PC with VF-Setup service software, which is connected via the service connector, is used to set all parameters and perform full diagnostics.

CPM-300

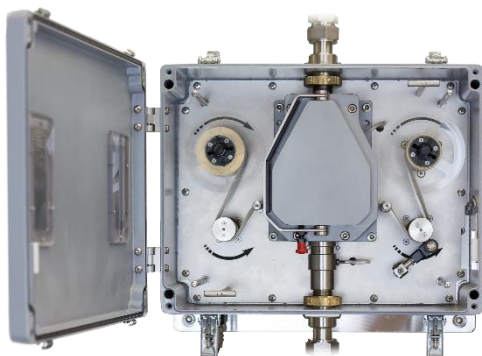
CONTINUOUS PARTICULATE MONITOR

SPECIFICATION

Detectors	4 × Si - PIN
Measuring range	
alpha (²⁴¹ Am)	0,05 to 3,9E+5 Bq/m ³
beta (³⁶ Cl)	0,5 to 5,0E+5 Bq/m ³
Filter tape	25 m × 50 mm
Nominal air flow (adjustable)	30 l/min
Communication interface	Ethernet, relay outputs
Service interface	RS-485
Power supply	230 V AC, max. 130 W
Dimensions (W × H × D)	(430 × 1727 × 501) mm
Weight	75 kg
Operational temperatures	from -10° to 60 °C

RELATED PRODUCTS

CPD-14	Continuous Particulate Detector
CPD-16	Continuous Particulate Detector
RDU-22	Radiation Display Unit
CID-03	Continuous Iodine Detector
ASU-50	Alarm Slave Unit
SW RMS	Radiation Monitoring System software



CPD-14 Continuous Particulate Detector

OPTIONAL FEATURES

- Intake and exhaust connections freely from the place / hose attached with a clip / pipe with a nut M30×1.5
- Additional shielding of the detector with 20 mm lead thickness
- Holes in the skid for mounting to the wall or floor / adjustable feet / wheels
- Wireless communication with the host system
- Displaying of the total activity on the filter
- Displaying of the total activity discharged from the ventilation stack
- Gamma detector for the measurement of the area gamma dose rate
- 115 VAC power supply
- UPS for backup monitor power supply (without the pump)
- Galvanically isolated analog inputs and outputs 0/4-20 mA, digital inputs and outputs, RS-232
- Qualification according to IEC 61226

OPTIONAL ACCESORIES

- 1-7002-00005 Aerosol filter tape 25 m long
- 51-A-0000259 Service USB cable, A / M connectors - Fischer 5 pin



RDU-22 Radiation Display Unit



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Specification subject to change without prior written notice.

VF1902040145 / 08 / 2023-10-05