



VF NUCLEAR



NUCLEAR
POWER PLANTS



WASTE
MANAGEMENT



CALIBRATION
LABORATORIES



RESEARCH
CENTRES



INDUSTRY
& MANUFACTURING



NUCLEAR
MEDICINE

SIM

SMALL ITEMS MONITORS



MAIN ADVANTAGES

- Easy installation, simple control
- Identification of the person making the measurements
- Entry and exit door interlocking
- Exit door blocking system to prevent the spread of contamination
- Archiving of measurement results
- The option of operating with only one door
- A communication port for remote status indication, instrument setup and servicing using the host system



SIM-17F with opened entry door

PURPOSE

The SIM series monitors, with plastic scintillators, are designed to check radiation contamination of small items. The G-Series monitors measure gamma and the F-series monitors measure beta and gamma contamination. The monitors are designed primarily for use in nuclear facilities where they prevent contaminated objects being taken out of radiation controlled areas.

The monitors contain two, four or six high-volume plastic scintillation detectors located on the sides of a stainless steel chamber. The number of detectors, the volume of the measuring chamber and the thickness of the lead shield vary, depending on the model of the monitor.

For the detection of beta contamination, it is possible to produce a measuring chamber with inner walls made of perforated stainless steel sheets penetrable for beta radiation. However, wet objects cannot be measured in such monitors.

The monitors have entry and exit doors to the measuring chamber. The exit door cannot be opened unless the monitor evaluates that the inserted items are not contaminated. Optionally, a monitor with only one door can be ordered.

Above both doors, there is a display, contamination warning lights and a door-opening button. The display shows the measured value of contamination in the selected unit. Exceeding the alarm level is also indicated audibly.

SIM

SMALL ITEMS MONITORS

SPECIFICATION

Detector type	plastic scintillator
Measuring volume	
- SIM-17	17 dm ³
- SIM-26	26 dm ³
- SIM-27	27 dm ³
- SIM-101	101 dm ³
Max. number of detection units	
- SIM-17	2
- SIM-26	2
- SIM-27	4
- SIM-101	6
Pb shielding	
- SIM-17	0 mm (optional 10 / 20 mm)
- SIM-26	0 mm (optional 10 / 20 mm)
- SIM-27	0 mm (optional 10 / 20 mm)
- SIM-101	0 mm (optional 10 / 25 mm)
Dimensions (W × H × D)	
- SIM-17	385 × 515 × 475 mm
- SIM-26	395 × 515 × 620 mm
- SIM-27	570 × 655 × 415 mm
- SIM-101	700 × 840 × 740 mm
Chamber dimensions (W × H × D)	
- SIM-17	230 × 230 × 320 mm
- SIM-26	240 × 240 × 460 mm
- SIM-27	300 × 300 × 300 mm
- SIM-101	450 × 500 × 460 mm
Weight (10 mm Pb shielding)	
- SIM-17	< 300 kg
- SIM-26	< 300 kg
- SIM-27	< 300 kg
- SIM-101	< 1000 kg
Power supply	100 - 240 V AC, 45 – 65 HZ
Temperature range	from 5 to 45 °C
Humidity range	max. 80 % non-condensing
Units	cps, Bq, %

EXAMPLE OF RADIOMETRIC PARAMETERS

Type	Radionuclide	Measuring range [Bq]
SIM-17	¹³⁷ Cs	from 100 to 1E+5
SIM-26	¹³⁷ Cs	from 100 to 1E+5
SIM-27	¹³⁷ Cs	from 120 to 3E+6
SIM-101	¹³⁷ Cs	from 65 to 3E+6

RELATED PRODUCTS

DCM-300	Documentation Contamination Monitor
MCM-300	Tools and Materials Contamination Monitor
ASU-50	Alarm Slave Unit
HF	Hand-Foot Contamination Monitor
ExitScan-2	Personnel Exit Monitor
PAM-100	Portable Activity Meters
PAM-170	Portable Activity Meters
PAM-525	Portable Activity Meters
FCM-11	Frisking Contamination Monitor
SFP-100	Smart Frisking Probe



DCM – 300 Documentation Contamination Monitor