Thermo Scientific IPM9X utilizes 24 gas-sealed detectors in monitoring the body, hands, and feet. Each of the body detectors and the overhead detector is split into four detection zones, resulting in 96 detection zones in total. Detection zones minimize the background during monitoring, and achieve the best detection limits.

There are three vertical arrays of six detectors (18 in total) for monitoring contamination on the body and clothing. Each detector has an active area of 600 cm². Four detectors monitor the hands. Each detector has an active area of 460 cm². One foot detector has an active area of 570 cm². One overhead detector with an optional manual pull-down mechanism is identical to a body detector. The instrument may be used with a selection of gas fillings, such as Argon/Methane(P10). Each detector is sealed with a titanium window of thickness 5.5 mg/cm².

Multi-language voice prompts provide verbal instructions during monitoring to ensure correct positioning and actions required following an alarm. Alarms may be set on individual detection zones, or across multiple zones, known as sum zones. This leads to greater sensitivity to distributed contamination. In the event of an alarm, a large touchscreen monitor displays the location of the contamination. The USB security dongle allows supervisors three levels of access to diagnostic modes to further investigate the results.

The software is based on an embedded Windows™ XP platform, found in the 12 Series instruments. Results are stored in a SQL database, providing both local and remote access. A QuickScan algorithm significantly reduces the counting time, without compromising the statistical probabilities of detection or false alarm.

The IPM9X-SG monitor combines the architecture of the IPM9A with the breakthrough electronics of the Series 12 monitors to allow for fast and accurate scanning for beta contamination on the surface of body, hands, head and feet.

### Product Specifications

**Thermo Scientific IPM9X-SG**

**Personnel Contamination Monitor**

- Excellent geometry for beta detection
- Improved performance and a lower cost of ownership
- Improved sensitivity due to smaller detector size
- Sum zones for distributed contamination
- QuickScan technology to reduce count times
- PC-controlled, with embedded Windows XP operating system
- Monitor changing background and conditions
- ViewPoint™ capable to allow connectivity with other systems and monitoring capabilities from a central location
- Optional EPD reader, overhead pull-down detector, electrically powered exit door, and an entry barrier.

**Key Features**

- Excellent geometry for beta detection
- Improved performance and a lower cost of ownership
- Improved sensitivity due to smaller detector size
- Sum zones for distributed contamination
- QuickScan technology to reduce count times
- PC-controlled, with embedded Windows XP operating system
- Monitor changing background and conditions
- ViewPoint™ capable to allow connectivity with other systems and monitoring capabilities from a central location
- Optional EPD reader, overhead pull-down detector, electrically powered exit door, and an entry barrier.
General Specifications

Monitor has 24 gas-sealed ArCh4 (P10) detectors

Dimensions
- Height: up to 240 cm
- Weight: 430kg (945 lbs)
- Operating Voltage: 120/220 Vac 50/60Hz

Radiological

Sensitivity: Gamma radiation; 33 cps/uSv/hr 137Cs
Minimum Detectable Activity: 10 second measurement time for 90Sr + 90Y
Background: 1μSv/h
- Contact: 25 mm (1 inch)
- 14 Bq
- 25 Bq
- 45 Bq
- 70 Bq

Environmental

Operational Temperature Range: +5° C to +45° C (41° F to 113° F)
Storage Temperature Range: -30° C to +55° C (-22° F to 131° F)
Humidity Range: up to 95% RH non-condensing

Features

- Excellent beta detection geometry
- Frame design is the same as that used for the IPM9A, successfully used worldwide for 15 years
- Alarms may be set on single detectors, or sum zones, leading to very low detection limits for distributed contamination
- Quickscan may be used, significantly reducing counting time, without compromising the statistical probabilities of detection or false alarm
- Changing background indication signal will highlight significant changes in background radiation
- Rapid recovery from background changes with a dynamic background counting time
- Changing conditions alarm indicates if there is a significant change in the count rate during the monitoring period, invalidating the measurement
- All background, measurement, source checking, event log, voltage scanning is stored to an SQL database within the monitor
- Each measurement result may be stored against a personnel identifier
- Set-up, configuration and diagnostic information is accessed via a touchscreen LCD
- User screens and voice prompts in user-selectable language
- Dongle security, with three security levels
- Calibration integrity checking
- Windows XP operating system and Series 12 Software based upon that in iPCM12, SAM12 and PM12
- USB and Ethernet connectivity; ViewPoint™ Enterprise compatible

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