



FM-9W-HUB Display

Features

- Creates a System Wide Detection Monitoring Hierarchy
- Accommodates Complete Range of Detectors and Monitors Including Air, Stack, Liquid Effluent, and Particulate
- Alpha, Beta, Gamma, Noble Gas, Tritium, Neutron
- Two Way Communication with the Control Room CPU /Server
- **FM-9W-HUB** Incorporates 20 or More Discrete Counters.
- Operator Display and Controls:
 - » Clear and Accurate
 - » Easy to Understand and Use
- System Changes Do Not Require Programmer
- Real-time, In-Line, Continuous Monitoring
- Fail Safe Alarms, Modular Design
- Location Specific Alarms and Settings
- Data Archive and Retrieval
- Report Generation
- IP 65

Nuclear Power Plant Radiation Monitoring System

Model: RMS-TA

Technical Associates provides standard and custom designed radiation monitoring equipment to the nuclear power plants globally.

The United States, Canada, United Kingdom, Sweden, France, Korea, Japan, China, to name a few.

TA Digital RMS Radiation Monitoring Instrumentation for Nuclear Power Plants is a complete line of radiation monitors including but not limited to:

- Noble Gas monitors
- Off-line and In-line Liquid Effluent Monitors
- Particulate and Iodine Monitors
- Area, CAMs Stack Monitors, and Atmosphere monitors
- Accident and Post-Accident monitors.

System Wide Monitoring Hierarchy:

- Facility Wide
- Building Specific
- Individual Area or Lab

Description

The **RMS-TA System** is a multi-function, real-time, distributed, radiation detection system that monitors changes in radiation fields and radioactivity in and around a nuclear power plant.

Multi-Detector systems such as Area Monitor systems, Perimeter Monitors or even a Sorting Table style Trash or Laundry monitors feed their detector pulses directly into the **FM-9W-Hub**, a local RMS computer and Ethernet port with 20 or more built-in counters.

RMS-TA operates as an Ethernet system with central control in the plant control room. **RMS-TA** communicates with a wide variety of detectors and sub- systems and accomplishes diverse measurement and control tasks.



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Nuclear Power Plant Radiation Monitoring System

Model: RMS-TA

Description Specifics

The RMS-TA System provides a single monitoring solution for multiple systems within a Nuclear Power Plant. An advanced built-in, computer network centered on the FM-9W-Hub which serve as an Ethernet node that communicates with the control room CPU /server.

Powerful, self-contained, multi-channel Stack detector-systems

Simpler systems including single channel Air Monitors as well as some stand-alone Area Monitors have fully-addressable, two-way USB-ports that communicate with the control room CPU /server.

Large numbers of Gamma and Neutron Area Monitor Detectors disbursed throughout most plants have local pre-amplifiers, line-drivers and high-voltage-supplies; feed their pulses into the **FM-9W-Hub**, a specialized computer, containing 20 or more simultaneous and independent counters. The **FM-9W-Hub** analyzes these detector signals, and sends back signals to trip the local alarms as needed.

Central Control

The control room CPU /server has authority and capability to change:

- Local Alarm Settings
- Baseline Zero Settings
- Counting Time Constants
- Calibration Factors and Other Parameters

Options

- Acknowledge Local Alarms
- Activate Solenoid Check Sources

Detector Type

- | | | |
|-----------------------|--|-----------------------------------|
| - Noble Gas Monitors | - Off-Line and In-Line Liquid Monitors | - Particulate and Iodine Monitors |
| - Gamma Area Monitors | - Neutron Area Monitors | - Perimeter Monitors |
| - Accident Monitors | - Post-Accident Monitors | - N-16 Leak Monitors |
| - Tritium Monitors | - Alpha Beta Gamma | - CAMs Stack Monitors and More |

Software Description

Reporting

RMS-TA Overview Software is straight forward, robust, easy to use, and accomplishes a wide variety of measurement and control tasks. Status Reporting and readings of all RMS detectors up-the-line to the Control Room CPU /server console. High capacity hard drive, and CD-writer make it easy to archive data for later analysis.

Data Analysis, Display, Hard-Drive, Hard-Copy, and Data Archive

RMS-TA Overview Software provides for each data collection channel, the net counts are automatically converted to suitable engineering units. For example: Air and Stack monitors typically read out in uCi on the filter or in concentration units, such as uCi/ml or Bq/m3 or other units of users choosing.

This real time information can activate door-locks, effluent-control-valves as well as triggering the alarms. Also, all data is saved to the hard drive in spreadsheet format. Historical data is easily displayed on-screen (and/or printed out on the included printer) in tabular format, showing quantitative information. Data is recorded frequently so time-resolution is excellent.

System Flexibility

Addition of new detectors as well as new calculations or functions can be made easily by user.



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Model: RMS-TA

Hardware Description

Model **RMS-TA** is a multi-function, real-time, distributed, detection system. The electronics are microprocessor with color LCD display. Plug in modules allow change or addition of functions at a later date, and allow rapid repair by module replacement in the field.

The modular system is covered by both TA's unique exchange warranty system and the full one year warranty.

RMS-TA System Includes:

- High Capacity Memory
- High Speed Processor
- 17" LCD Monitors, Keyboard, Mouse
- Data Storage and Archive
- Full Graphics Printer
- Ethernet and USB ports
- Options: Solenoid check sources

Data Analysis, Control, Display, Archiving, optional Report Generation

The **FM-9W-Hub** sets Count Times, Alarm Trigger Levels, Alarm Mode (Latching or Non-Latching) and Other Parameters.

All data is automatically displayed, archived and available for graph / trend plotting. **FM-9W-Hub** and the detectors become a complete, user-friendly, 20+ channel, Area-Monitor System capable of handling GM, Scintillation, Proportional, Ion Chambers, and Solid State Detectors for Beta-Gamma and Neutron monitoring.

Data Transmission

For Ethernet based RMS systems with more than 20 Area Monitor Detectors and for systems including other detectors such as Air and Stack Monitors, Liquid Effluent Monitors, etc., the **FM-9W-Hub** serves as an Ethernet node which allows two way data flow to the main **RMS-TA** CPU /server and operators console, even over very long distances.




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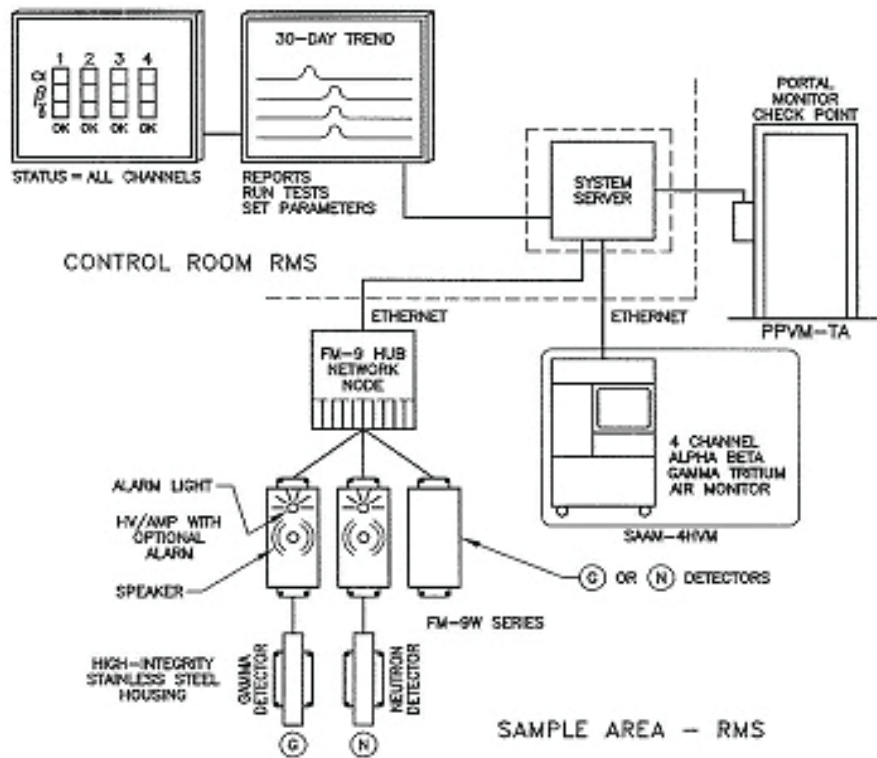
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Nuclear Power Plant Radiation Monitoring System

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Sample Control Room and
Distributed Radiation Monitoring System



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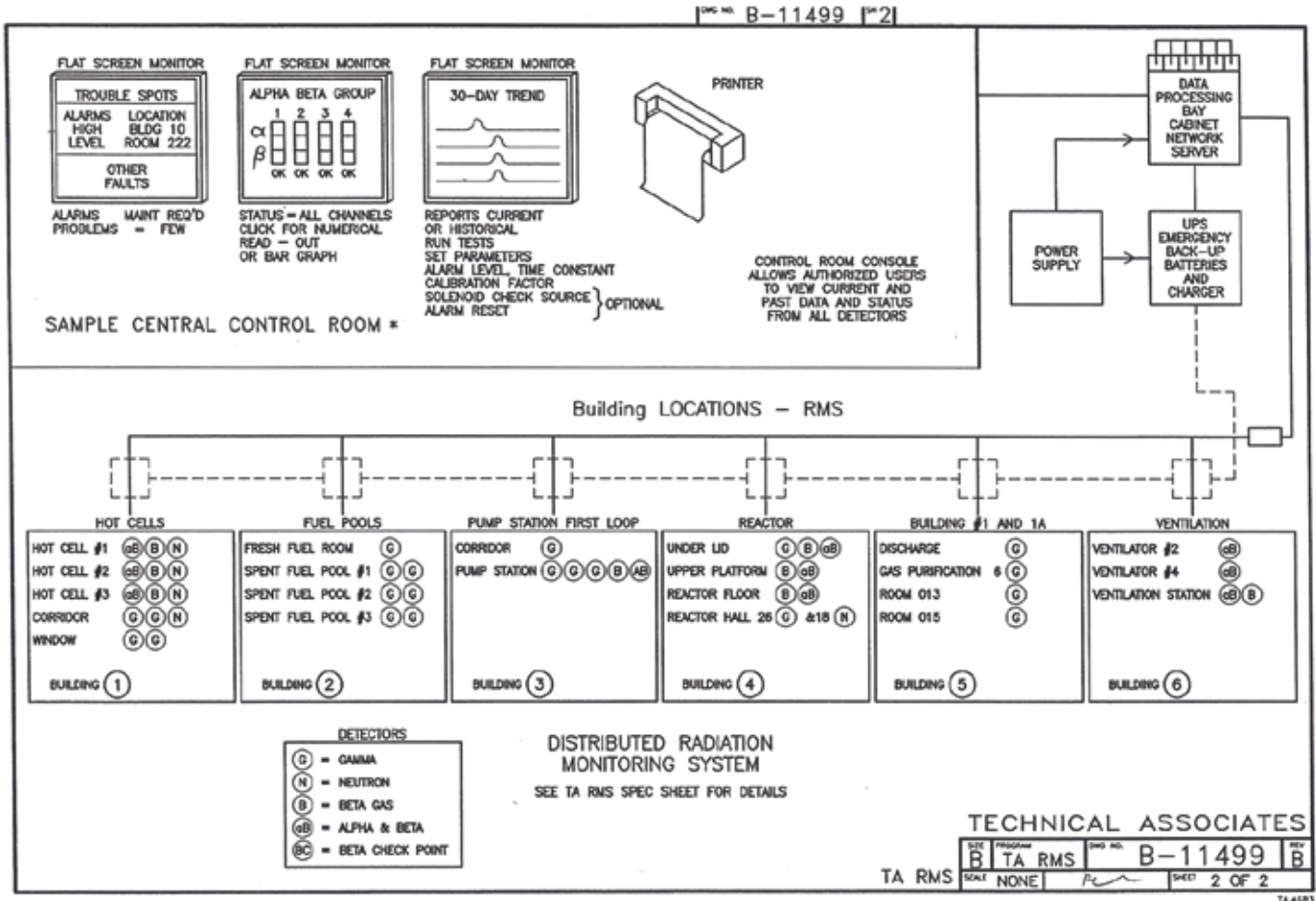


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Nuclear Power Plant Radiation Monitoring System

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Sample Master Control Room and Distributed Radiation Monitoring System




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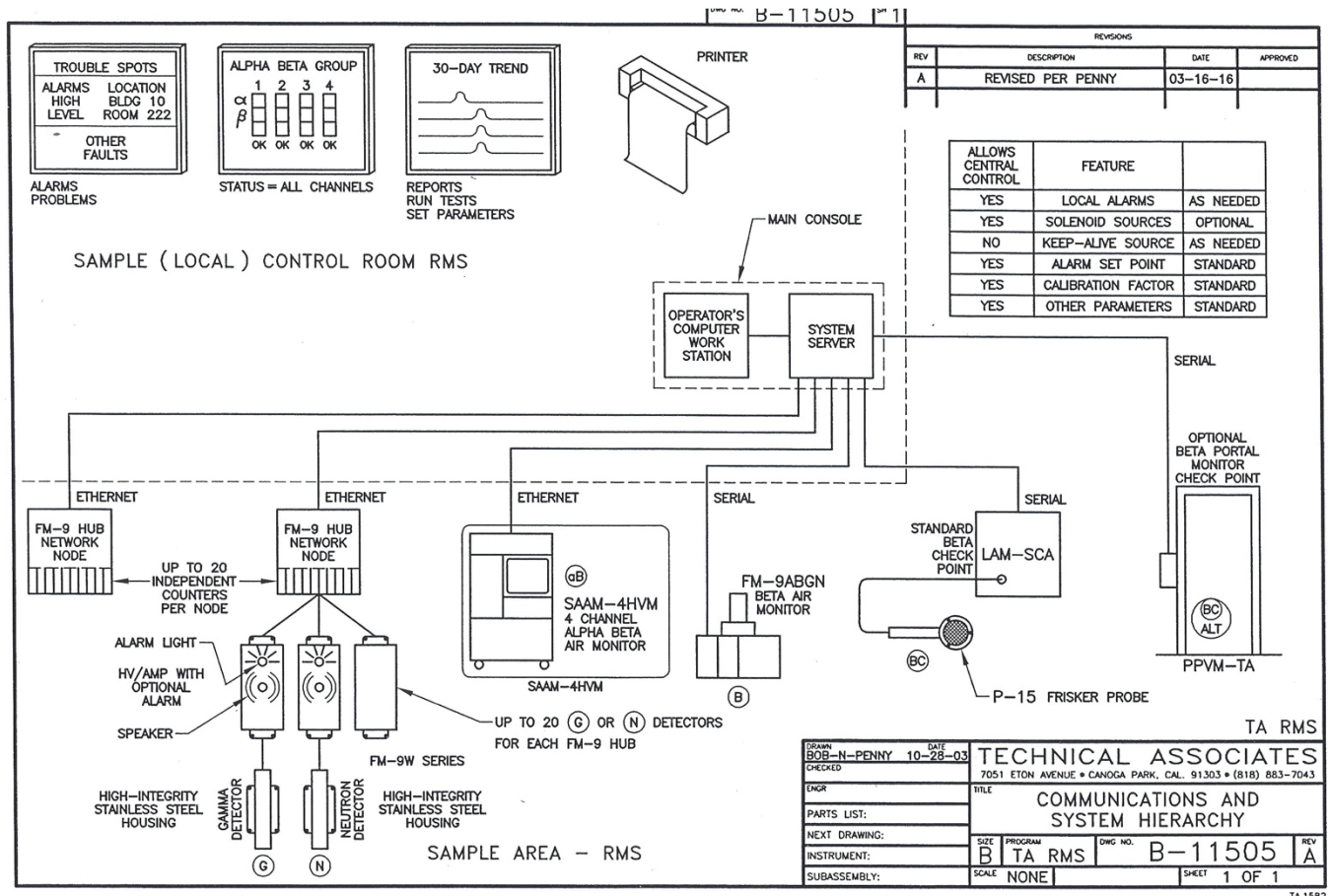
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Nuclear Power Plant Radiation Monitoring System

Model: RMS-TA



Sample Local Control Room and
Local Portion Of The Distributed Radiation Monitoring System



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