RSDetection™

Next generation Reuter-Stokes Environmental Radiation Monitor

RS Reuter-Stokes

a Baker Hughes business

Next generation design, rooted in proven technology

The next generation RSDetection™ Environmental Radiation Monitor, produced by Reuter-Stokes, provides superior technology for the detection and measurement of low-level gamma radiation. The RSDetection™ Environmental Radiation Monitor remains rooted in the high pressure ionization chamber (HPIC) technology of prior offerings, while providing improvements in several key areas: sensitivity, reliability, and stability. With updated electronics and diagnostics in a weatherproof case, the RSDetection™ Environmental Radiation Monitor is uniquely suited to provide robust and reliable operation in extreme environments, for applications varying from homeland security to nuclear power plants.

Rich history

With a rich history dating back over 50 years, Reuter-Stokes has been an industry leader in the research, design and manufacturing of quality detectors for a variety of radiation monitoring applications. With over 100,000 detectors in service around the world supporting instrumentation ranging from reactor monitoring and security applications to neutron research and oil exploration, no company understands your radiation measurement requirements better than we do.

Benefits

- **Enhanced sensitivity and performance –** 10″ diameter HPIC gamma detector. Excellent temperature stability. High accuracy (Zero stability: ± 0.5μR/hr; Gain stability: ±3% < 35μR/hr, ±0.5% > 35μR/hr).

- **Improved reliability and stability –** Upgraded processing electronics design.

- **Extended battery life –** Up to 48 hours** run time. Equipped with built-in battery charger.

- **Upgraded communications –** Ethernet and 3 USB ports along with an RS-232 serial port for backward compatibility.

- **Increased data capacity –** 1 GB storage. Adjustable recording intervals, greater than 10M data points of storage.

- **Omni-directional –** Spherical HPIC is not subject to inherent Geiger-Mueller tube limitations. Provides more uniform directionality and has higher sensitivity at lower dose rates.

- **Fast response time –** Less than 10 seconds.

Features

- Extended range: 0-100R/hr (0-1Sv/hr).

- Adjustable data smoothing filter.

- High signal-to-noise ratio.

- Time stamped data and configurable recording intervals.

- Configurable options for a variety of Environmental and Homeland Security applications.

- Windows based configuration utility allows users to connect to a single RSDetection™ unit for configuration, data display, and diagnostics.

- Backwards compatible with RSS-131 (ER) – same mounting scheme and core protocol (adapter cable required).

- Replaces earlier models, including the RSS 1012, RSS 1013, and the RSS 131 (ER).

** Nominal under normal unit operation.

Specifications

Gamma measurement (-40°C to 55°C)	0-100 R/hr (0-1 Sv/hr) • Zero stability +/- 0.5μR/hr • Gain stability: ±3% < 35μR/hr, ±0.5% > 35μR/hr Calibration Accuracy: ±-3.5% Angular dependence: • <5% (85% of viewed field, upward looking) • <10% (15% of viewed field, downward looking) Sample Rate: 5 seconds
Mechanical enclosure	19.75" x 13.62" x 16.50" (50cm x 34.6cm x 41.9cm) 27 lbs (12.5 kg) Weatherproof, polycarbonate material
Environmental	Operating temperature w/o battery: -40 to 55 °C Operating temperature w/ battery: -10 to 55 °C Relative humidity: 0 – 100%
Communications	USB Ports – (2) USBA, (1) USBB – 480 Mb/s Ethernet – RJ-45 – 10/100M RS-232 – (Additional RS-232 ports can be added with USB-to-serial adapters)
Data	Adjustable data recording interval – (seconds to days) Maintained data on power cycle > 10M data point storage Time stamped data
Certifications	• CE Certified (Low Voltage Directive and Electromagnetic Compatibility Directive) • WEEE • ETL • IEC • RoHS
Options / **Power**	Lithium-ion internal battery (optional) Power consumption – 4W (typical) Internal Li-Ion battery charger 48 hour run-time (nominal under normal unit operation)
Options / **Optional sensors and equipment (References)**	Tripod Rain gauge Wind speed and direction

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