

Solid Performance

Designed to measure low-level gamma radiation, this Environmental Radiation Monitor (RSS 131 ER) is the latest High Pressure Ionization Chamber (HPIC) from GE Energy. With over 30 years of service in multiple utility and government agency environmental radiation monitoring applications around the world, Reuter Stokes Environmental Radiation Monitors continue to provide reliable operation in extreme climates. Versatile, accurate and reliable, the RSS 131 ER is ideally suited for use in Homeland Security applications.

A Full Package

Features typically required for a fully functional system are packaged “in the box.” The system is equipped with three weatherproof RS-232 ports and an optional dial-up modem. Although units are often operated as stand-alone systems, many have been incorporated into environmental monitoring stations and may be used in Homeland Security monitoring applications. GE Energy offers meteorological monitoring options, including wind speed/direction, a rain gauge, and barometric pressure. These options contribute to a comprehensive assessment of the impact of radiation on the environment and enables real-time decision-making by authorities.

Configurable by the User

The user has the option to specify parameters such as alarm limits, unit address, and data recording interval (1 sec — 9 hrs). This is accomplished via one of the serial interface ports using a PC — there is no need to open the weatherproof enclosure to make these adjustments, enabling straightforward customization.

Benefits

- Able to identify radiation increases above background levels not detectable with Geiger-Mueller technologies
- Omni-directional — spherical HPIC is not subject to inherent Geiger-Mueller tube limitations
- Fast response time — less than 10 seconds for specified accuracy
- Reliable operation in extreme climates
- Many units in service over 20 years
- Simplified repair and maintenance

Features

- Extended range: 0-100 R/hr (0-1 Sv/hr)
- Unattended gamma radiation monitor — originally designed to monitor nuclear power plant perimeters
- Configurable with a variety of sensors for Environmental and Homeland Security applications
- High signal-to-noise ratio: Internal background as little as 1% of Geiger-Muller based sensors
- Accuracy: +/-5% at 10microR/hr
- Configurable alarm set points
- 20,000 data point storage — interval configurable
- Replaces all earlier models, including the RSS 1012, RSS 1013 and the RSS 131



fact sheet

Specifications

Gamma Measurement

- 0-100 R/hr (0-1 Sv/hr)
- Accuracy +/-5% at 10microR/hr, +/-7% above 1 R/hr
- Zero <+/-0.5 microR/hr
- Gain <+/-1% of reading
- Angular dependence: <2% over all angles
- Sample Rate: 1 second
- Operating temperature: -25C to +55C

Auxiliary Measurements

- Sensor temperature
- Battery voltage
- High voltage bias

Data Storage

- Data recording interval – adjustable 1 second to 9 hours
- Data capacity – 20,000 data points
- Maximum archive time – 5.5 hours to 20.5 years

Power

- 6 volt internal battery (optional)
- Operating current 220mA
- External battery charger (optional)
- Solar power (optional)

Real-time clock

- Drift <2 minutes/month

Serial Transmission

- Three RS-232 ports
- Dial-up modem (optional)
- Compatible with many externally mounted wireless radio options

Mechanical

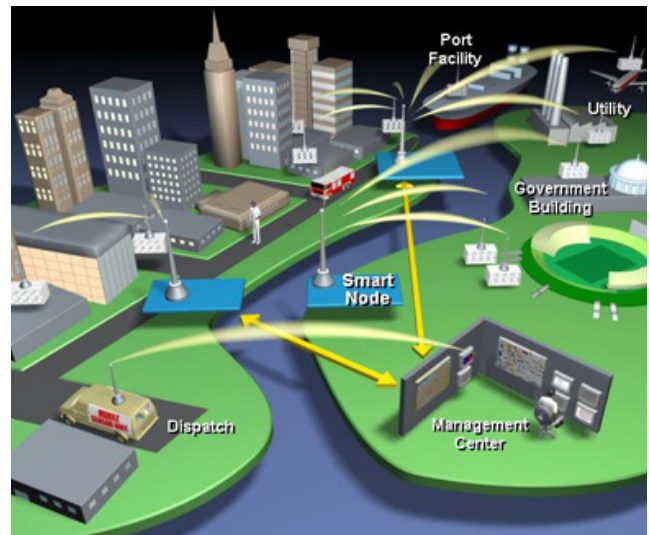
- 12”X12”X14” overall (31cm x 31cm x 36cm)
- 33 lbs (15 kg)
- Weatherproof enclosure: Aluminum with two-part catalytic polyurethane paint
- Latches and hardware: stainless steel

Other Options

- Tripod
- Configuration utility
- Rain gauge
- Barometric pressure
- Wind speed and direction

Certifications

- CE Certified (Low Voltage Directive and Electromagnetic Compatibility Directive)



GE Energy
8499 Darrow Road
Twinsburg, OH 44087
+1 330.425.3755
rsweb@ge.com
www.ge.com/energy