RDS-100
Radiation Detection System

The RDS-100 Radiation Detection System offers comprehensive radiation management and unsurpassed reliability in a self-contained, portable system.

The Radiac Meter included in this system, is equipped with "SMART" technology, which allows any system probe or training probe to be interchanged and used immediately without calibrating.

All calibration data is stored in the probes and read by the Radiac Meter upon connection.

An optional GPS-based Large-Area Training System provides documented assurance that personnel are properly trained, without any exposure to radioactive materials.

FEATURES

- Storage of up to 300 data points, including dose rate, date and time
- GPS compatible
- Compatible with "SMART" probes
- Outstanding linearity over a wide dynamic range
- Can be calibrated using license-free source
- Compatible with Training Probes
- Can be operated and read while wearing fire or hazmat protective clothing
- Will not ignite explosive atmospheres - intrinsically safe
- Waterproof to 3 ft
- Background Subtract feature
- Electronic filter to reduce fluctuations in readings
- Built-in RS-232 interface
- Automatic self-calibration

SPECIFICATIONS

RDS-100 RADIAC SET	
Display	Direct reading Liquid Crystal Display (1/2" characters) Backlit for night operation Three signification digits Floating decimal point Unit and alarm status indicators Large digits, readable at 2 meters
Power	Battery powered by three standard 9 V cells Can be operated on vehicle or aircraft power (12 or 24 V DC via rear panel counter)
Alarms	Pre-settable alarms for dose and dose rate Settable to any values over dynamic range Audible alarm - 90 dB max. Visual alarm - bright flashing light
Controls	Power ON/OFF Selectable alarms - Audible, visual, audible/visual Modes - Rate, Dose, Test
"SMART" technology	All system detector probes are instantly recognised and functional upon hook-up, without any adjustment, programming or calibration
EMI Susceptability	Not affected by EMI Will not affect other instruments
Nuclear Survivability	Nuclear hardened
Communications	Built-in RS-232, data downloadable to standard remote PC GPS compatible via rear panel connector
Size and Weight	104 x 48 x 182 mm 1.25 kg (2.75 lbs)

DETECTOR PROBES		
Accuracy	±15% of true dose and dose rate over the entire dynamic range	
Radiation Types and Range	Gamma Dose Rate Gamma Dose Alpha Dose Rate Beta Dose Rate	0.01 µSv/hr - 9.99 Sv/hr 0.01 µSv - 9.99 Sv 0 - 20,000 c/s 0 - 20,000 c/s
	Rad/hr µGreys/hr unit available	
Gamma Energy Response	Within ±20%, 80 keV to 3 MeV	
Standard Detector Compliment	Beta-Gamma Probe Alpha Probe Beta (pancake) Probe	Model RDS-100GP Model RDS-100AP Model RDS-100BP
Optional Detectors	X-Ray Probe µSv Gamma Probe Neutron Probe	Model RDS-100XP Model RDS-100MP Model RDS-100NP
Saturation Characteristics	Will never saturate or fall back	
Response Time	Unfiltered Mode Filtered Mode	2 seconds 4 seconds
Size and Weight	Beta-Gamma Probe Alpha Probe Beta (pancake) Probe	37 x 37 x 170 mm 450g / 1 lb 133 x 87 x 280 mm 100 cm^2 open area 530g / 1.18 lb 44.5 x 229 mm 0.40g / 0.88 lb

ENVIRONMENTAL	
Operating Temp.	-40°C to +50°C
Storage Temp.	-40°C to +70°C
Humidity	0 - 100% relative humidity
Immerision	Water-tight at 3ft depth for 2 hours
Sand	Withstands sand particles in 5700 ft/min wind
Dust	Withstands fine dust in 1750 ft/min wind
Fungus	Inherently fungus resistant materials
Vibration	Withstands vibration associated with transport
Shock	Withstands shock of dropping during use
Altitude	40,000 ft / 12,000 m
Explosive Atmosphere	Will not ignite explosive gas mixture

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