



VeriFinder™ S200

High Resolution Radionuclide Identification Device (RID)



Key Features

- ⦿ **Superior resolution:** High certainty simultaneous ID of multiple and masked isotopes with low false alarm rate.
- ⦿ **Fast start-up time:** 45s from switch-on to detection.
- ⦿ **Smart wireless connectivity:** Email instant and automatically generated reports using Wi-Fi, 4G or Bluetooth connectivity.
- ⦿ **Extensive reach-back capabilities:** Supports remote, real-time monitoring and control of in-the-field devices including real-time events lists, dose mapping and remote diagnostics.
- ⦿ **Ergonomically balanced:** Comfortable for prolonged use.
- ⦿ **High reliability:** Continuous and automatic end-to-end digital stabilization and health monitoring with no annual calibration required.

The VeriFinder is an ergonomically balanced handheld radionuclide identification device (RID) with patented and field-proven Discovery Technology®. It provides simple color-coded isotope classification alongside high accuracy radiation detection and isotope identification where similar instruments struggle.

The VeriFinder is a fully connected smart device with in-built GPS and multiple wired and wireless communication options (inc. Wi-Fi, 4G, USB and Ethernet) enabling instant reporting via email and supports comprehensive reach-back from multiple locations. This smart, real-time connectivity ensures that information required for critical decisions is immediately available to experts; our reach-back webserver software provides real-time events lists, dose mapping, view

and control of all connected devices, remote settings and software updates and remote diagnostics.

Symetrica's advanced algorithms improves the effective resolution of the gamma detection system resulting in reliable low-level detection with fast, simultaneous and accurate identification of multiple and masked isotopes in challenging real-world environments. The optional neutron detector is ³He-free employing ⁶Li:ZnS technology, also achieving class-leading sensitivity.

VeriFinder's design, smart connectivity and extensive reach-back capabilities lends itself well to the quick and easy mounting and de-mounting on both manned and unmanned platforms providing a truly multi-functional device.



VeriFinder S200 Specification

Configuration

Detectors	1.5 x 1.5 in (38.1 x 38.1 mm) crystal (NaI or LaBr) and ⁶ Li:ZnS Neutron Detector with Discovery Technology [†]
Functions	Simultaneous isotope detection and identification, neutron detection, spectral analysis, dose rate meter, instant online reporting
Weight	2.05 kg (4.5 lb), inc. battery
Cold Start Time	45 s

Performance

Identification	Exceeds ANSI N42.34
Energy Range (gamma)	25 keV – 3 MeV
Dose Rate Range	1 nSv/h to 900 mSv/h (1 µrem/h to 90 rem/h)
Scintillator Dose Rate Range	10 nSv/h to 1 mSv/h (1 µrem/h to 100 mrem/h) with automatic scintillator shutdown protection
High Dose Rate Mode	0.9 mSv/h to 900 mSv/h (90 mrem/h to 90 rem/h) ¹³⁷ Cs
Raw Resolution	LaBr3: 3% FWHM and NaI: 8% FWHM at 662 keV ¹³⁷ Cs
Effective Resolution [†]	LaBr3: 1.7% FWHM and NaI: 2.2% FWHM at 662 keV ¹³⁷ Cs
Sampling Time	User settable from 30 s to 60 mins <i>Note:</i> User can acquire IDs under 20 seconds manually for sources at 0.5 µSv/h
Response Time	Instant response to sources (0.2 s) with continuous operation through temperature shock
Stabilization & Health Monitoring	Automatic and continuous end-to-end digital calibration, stabilization and health monitoring
Library	Exceeds ANSI N42.34 with over 50 radioisotopes and source types in customizable library
Neutron (optional)	²⁵² Cf 20,000 n/s @ 0.6 m/s @ 0.25 m (2 ft/s @ 10 in)
Neutron range	0.025 eV to 15 MeV
Maintenance	5-year calibration and service interval

Input / Output

Power	110-240 V mains, 12-24 V car adaptor and external fast battery charger. <i>Optional:</i> AA battery adapter
Battery Life	>8 hrs
Battery	COTS Replaceable, rechargeable Li-ion with 1 spare battery provided as standard
Positioning & Mapping	GPS, <i>Optional:</i> Real-time dose mapping and unit tracking at reach-back
Data and Connectivity	PDF reports, ANSI N42.42 compliant, 4G, Wi-Fi & USB. <i>Optional:</i> Bluetooth, satellite phone, Ethernet
PC Interface	Web browser interface with fully featured event viewer. Bulk event offload tool. <i>Optional:</i> Collated fleet event list with remote view and/or operation of in-the-field devices
Display	Color, transfective and active matrix LCD
Keypad	3 button, optimised for use with one hand, gloved
Alerts	Audio, tactile (vibration), LED and display alerts

Environmental

Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Relative Humidity	Up to 93% relative humidity, non-condensing, 35°C (95°F)
Ingress Protection	IP65 as per IEC 60529

[†]Discovery Technology outperforms other systems with the same scintillator by increasing the effective resolution of the deconvolution spectra during identification. Contact us for more information.

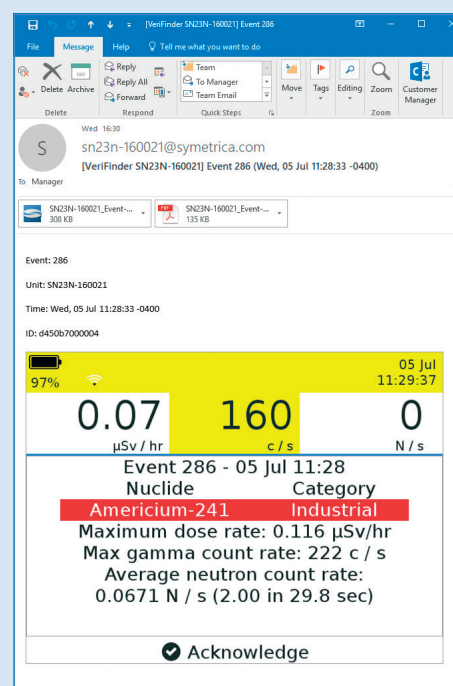
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Discovery Technology[®] is a combination of Symmetrica's hardware and patented algorithms and is deployed in thousands of systems globally from handheld RIIDs to fixed infrastructure Radiation Portal Monitors (RPM). It is the current technology of choice (through competitive evaluation) of multiple US and international government agencies.

Discovery Technology uses on-board processing for spectral enhancement backed up with Symmetrica's extensive analysis of real-world data resulting in:

- High true-positive and low false-positive isotope identification.
- World-beating classification and identification performance of NORMs and non-NORMs.
- Fully functional and accurate operation through temperature shock.
- Switch on and operate in high radiation fields.
- Identification of masked isotopes that cannot normally be resolved when analyzing raw spectra.
- Reliable and scalable ³He-free neutron detection even in high gamma exposed fields.
- Predictive maintenance and no annual calibration required.



Instant online reporting

Contact Symmetrica

Symmetrica Inc.
4 Lyberty Way Ste 1, Westford, MA 01886,
United States T: +1 (508) 718 5606

Symmetrica Security Ltd
Roman House, 39 Botley Road, Southampton,
SO52 9AE, United Kingdom T: +44 (0) 2380 111 580

E: sales@symmetrica.com

Find out more
about our products
www.symmetrica.com

