

VeriFinder™ SN11-N

Compact, Lightweight, Handheld
Radioisotope Identification Device



detection
monitoring
identification

radiation



The VeriFinder SN11-N is a compact, lightweight, ergonomically balanced handheld radio-isotope identification device (RIID) 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.

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 neutron detector is ³He-free employing ⁶Li:ZnS technology, also achieving class-leading sensitivity.



FEATURES

- Compact Design: same exceptional VeriFinder performance in a lighter, smaller package.
- Superior Performance: high certainty simultaneous ID of multiple isotopes even under masked or shielded conditions.
- Fast start-up time: 75s from swith-on to detection - even in high background environments.
- Ergonomically balanced: Comfortable for prolonged use and holsterable.
- High reliability: Continuous and automatic end-to-end digital stabilization and health monitoring with no annual calibration required.
- Real-world functionality: Fully operational and accurate through temperature shock.

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SPECIFICATIONS

CONFIGURATION

Detectors	1.5 x 1.5 in (38.1 x 38.1 mm) NaI crystal and 6Li:ZnS Neutron Detector with Discovery Technology†
Functions	Isotope detection and identification, neutron detection, spectral analysis, dose rate meter
Weight	2.3 lb (1.0 kg)
Cold Start Time	75 s

PERFORMANCE

Identification	Exceeds ANSI N42.34
Energy range (Gamma)	25 keV to 3 MeV
Dose rate range	1 µrem/h to 90 rem/h (10 nSv/h to 900 mSv/h)
Scintillator Dose rate range	1 µrem/h to 100 mrem/h (10 nSv/h to 1 mSv/h) with automatic scintillator shutdown protection
High Dose Rate Mode	90 mrem/h to 90 rem/h (0.9 mSv/h to 900 mSv/h) ¹³⁷ Cs
Raw Resolution	NaI: 8% FWHM at 662 keV ¹³⁷ Cs
Effective resolution	NaI: 2.2% FWHM at 662 keV ¹³⁷ Cs
Neutron	²⁵² Cf 20,000 n/s @ 0.6 m/s @ 0.25 m (2 ft/s @ 10 in)
Sampling Time	User settable from 30 s to 60 mins
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 47 isotopes in a customizable library
Maintenance	5-year calibration and service interval

INPUT / OUTPUT

Power	110-240V mains and 12-24V car adaptor
Battery Life	>8 hrs
Battery	Integral, rechargeable Li-ion battery with external AA battery caddy
Positioning & Mapping	GPS with GLONASS
Data & Connectivity	Automatically generated PDF summary reports and ANSI N42.42 compliant reports. USB-C and Bluetooth
PC Interface	Web browser interface with fully featured event viewer. Bulk event offload tool
Display	Color, transfective and active matrix LCD
Keypad	3 button, optimized for use with one hand, gloved
Alerts	Audio, tactile (vibration) and display alerts

ENVIRONMENTAL

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

Discovery Technology® is a combination of Symetrica'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 Symetrica'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 radionuclides.
- 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.

