



VeriFinder™ S100

Tactical handheld radionuclide identification device (RID)



Key Features

Unparalleled Identification Performance

- ⦿ Advanced algorithms and hardware significantly improve operational capabilities
- ⦿ Identifies multiple isotopes simultaneously with high confidence
- ⦿ Identifies over 50 nuclides including masked and shielded cases
- ⦿ Exceptional detection capabilities for Special Nuclear Materials

Designed for the operator in the field

- ⦿ Up to 10 years of service without annual calibration
- ⦿ Ready for detection in 75 seconds even in high radiation environments
- ⦿ Immune to temperature fluctuations and environmental conditions.
- ⦿ Low life-cycle costs due to continuous digital stabilization and health monitoring
- ⦿ Ergonomic and compact design for extended use
- ⦿ Long battery life for extended missions

The VeriFinder™ S100 is the most mission-oriented handheld radionuclide identification device (RID). It is designed compact, lightweight, and balanced to minimize impact on operators who may need to handle the VeriFinder S100 for long shifts. It offers 14 hours of continuous operation, ensuring you can detect, locate, measure, and identify radioactive sources precisely when and where it's critical. The patented stabilizing system and health monitoring provides confidence that the

VeriFinder S100 will be working in the field for up to 10 years at the same best-in-class performance. Symetrica's advanced algorithms enhance the effective resolution of the gamma detection system, ensuring reliable low-level detection and fast, simultaneous, and accurate identification of multiple and masked isotopes in challenging environments. The neutron detector, which is free of ³He, utilizes ⁶Li technology to achieve leading-class sensitivity.



VeriFinder S100 Specification

Mission	Search, Locate, Identify and Verify Radioactive Threats
Technology	Radioisotope identification device (RID)
Model	VeriFinder™ S100
Standard Configuration	S100-1N2 (Part # 400-0160)

Performance

Identification	Exceeds ANSI N42.34
Gamma	
Detector type	NaI(Tl)
Detector volume	43 cm ³ (2.6 in ³)
Effective resolution	2.2% FWHM at 662 keV ¹³⁷ Cs
Raw resolution	<8% FWHM at 662 keV ¹³⁷ Cs
Energy Range (gamma)	25 keV - 3 MeV
Performance	Class leading 'Minimum Identifiable Amount' (MIA) ¹ using patented algorithms
Maximum dose for ID	1 mSv/h (100mrem/h)
Dose rate measurement	10 nSv/h to 900 mSv/h (1 urem/h to 90 rem/h)
Response time	Instant response to sources (0.2 s) with continuous operation through temperature shock with 1GHz CPU
Time to ID from power up	up to 90 seconds
Sampling time	User settable from a few seconds to 60 mins
Health status monitoring	Automatic and continuous end-to-end digital calibration and health monitoring

Neutron

Detector type	Li ₆ F/ZnS
Detector size	2.7 cm dia. X 11 cm (1" dia. X 4.3")
Capability	²⁵² Cf 20,000 n/s @ 0.6 m/s @ 0.25 m (2 ft/s @ 10 in)
Energy range	0.025 eV to 15MeV

Compliance

Specifications	ANSI N42.34, ANSI N42.42, IEC 62327, IEC 62755
Ingress protection	IP67 (IEC 60529)
Radiation safety	Dosimeter / Mission Dose modes Gamma dose accuracy of ± 10% for ¹³⁷ Cs Inbuilt neutron moderator for handheld use enables ALARP (As Low As Reasonably Practicable) - Neutron model

Mechanical

Dimensions	29.2 x 11.8 x 11 cm (11.5 x 4.6 x 4.3 in)
Weight	1.3 kg (2.9 lbs)

Electrical

Battery	Integrated Li-ion
Run time	14 hrs
Communications	Bluetooth, WiFi, USB-C
Display	3.5 in. (8.9 cm)
Operational Temperature	-20 to 50°C (-4 to 122°F)

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.



VeriFinder S100 charging & data offload dock

Contact Symetrica

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

Symetrica Security Ltd
Kenneth Dibben House, Southampton Science Park,
Chilworth, Hampshire, SO16 7NS, United Kingdom
T: +44 (0) 2380 111 580

E: sales@symetrica.com

Find out more
about our products
www.symetrica.com



¹ Minimum Identifiable Amount (MIA) is not published for security purposes. Please contact us for more information.

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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