

IDENTIFINDER® R400

Handheld Spectroscopic Radiation
Detection & Identification



The identiFINDER R400 is the most widely deployed handheld radiation detection and identification product in the world. At half the size and weight of competitive RIDs, radionuclide identification devices, the R400 helps operators feel comfortable using the instrument even in the most hazardous and stressful environments. Operators use the handheld R400 to detect, quickly locate, measure, and identify the source of radioactive material. Like other identiFINDER R-series products, the R400 contains on-board Bluetooth, web server, and GPS technologies and produces rapid visible, audible, and tactile alerts that expedite response measures. The common operating interface reduces training time and costs, while increasing operator confidence and inter-operability between agencies. The identiFINDER R400 provides operators the ideal balance of size and weight for a wide variety of monitoring scenarios including all-purpose surveying, emergency response, and environmental monitoring. As the only RID with a true underwater variant to withstand up to 10 meters of water indefinitely (IP68), and with over 20,000 devices deployed globally, it is the most trusted RID in the world.

ALL-PURPOSE, FIELD-PROVEN RADIOLOGICAL SURVEYING

Over 20,000 deployed globally for tough, tried-and-true performance

- NaI or LaBr detectors provide custom solutions for sensitivity and resolution
- Available in gamma only or gamma and neutron models
- Underwater model able to withstand submersion up to 10 meters

FAST, RELIABLE IDENTIFICATION AND DETECTION

Rugged and mission-ready for fast front-line detection and response

- Quickly and efficiently detect, locate, measure, and identify sources
- Back-up gamma detector provides detection capability, even in high dose rate environments
- Identifies ANSI N42.34 library
- High resolution, low false alarms

RAPID ALERTS AND COMMUNICATIONS FOR EXPEDITED DECISION-MAKING

Easily transfer important tactical information

- Fast two-minute startup
- On-board GPS, webserver, and Bluetooth capabilities
- Common operating interface reduces training burden
- Large, color display eases data interpretation



SPECIFICATIONS

identiFINDER R400

Technology	Radionuclide identification device (RID)
Product Variants	NG ¹ , NGH ² , UW-NG ³ , UW-NGH ⁴ , LG ⁵ , LGH ⁶ , UW-LG ⁷ , UW-LGH ⁸ , T1 ⁹ , T2 ¹⁰
Gamma (NaI) ¹⁻⁴	1.4 x 2.0 in (35 x 51 mm)
Gamma (NaI) Tungsten Shielded ^{9,10}	0.9 x 0.8 in (23 x 21 mm) - Tungsten shielded
Gamma (LaBr3) ⁵⁻⁸	1.2 x 1.2 in (30 x 30 mm)
Neutrons (He-3) ^{2,4,6,8,10}	0.6 x 2.1 in (15 x 54 mm)
Gamma (High Dose Rate)	Geiger-Müller tube
Energy Range (Gamma)	20 keV - 3 MeV
Gamma Spectrum	1024 channels; 3 MeV
Dose Rate / Accuracy (Cs-137)	0 nSv/h - 500.00 mSv/h (0 nrem/h - 50.0 rem/h); ±30 %
Scintillator Dose Rate Range	0 nSv/h - 500 µSv/h (0 nrem/h - 50 mrem/h)
Geiger-Müller Dose Rate Range	100 µSv/h - 1 Sv/h (10 mrem/h - 100 rem/h)
Dose Range	0 nSv - 1 Sv (0 nrem - 100 rem)
Neutron Sensitivity ^{2,4,6,8,10, 14}	2.6 cps/nv; ±20 %
Stabilization	Variants ¹⁻⁴ - calibration source Variants ⁵⁻⁸ - LED
Typical Resolution	Variants ^{1-4, 9, 10} - less than equal to 8% Variants ⁵⁻⁸ - 4.5%
Service Interval	5-year factory maintenance

Sampling & Analysis

Sample Introduction	Absorption of EM gamma emissions
Threats	Detects neutron or gamma radiation emitted from natural occurrences in the environment, special nuclear material, industrial, or medical material
Nuclide Identification	According to ANSI N42.34
Sampling & Analysis	From a few seconds to minutes

System Interface

Display & Alerts	Transflective color LCD
Communication	USB - ^{1,2,5,6,9,10} LEMO Series K socket - ^{3,4,7,8}
Data Storage	2GB internal memory; up to 600,000 spectra
Training Requirements	<10 mins for operator; 1 day for advanced user
Software	Onboard webserver software, NaI Gamma Enrichment Measurements (NaIGEM) algorithm - variant 10

Power

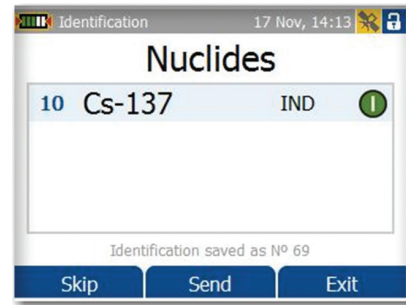
Input Voltage	100-240 VAC (wall and car adapters and USB cable supplied)
Battery Specs	Either rechargeable NiMH or 4x AA pack (supplied); ≥8h operational battery life; recharge ≤4h when using AC; recharge >4h when using USB
Cold Start Time	<2 mins from cold start

Environmental

Operating Temperature	-4 to 122 °F (-20 to 50 °C)
Operating Humidity	10 to 80% ^{1,2,5,6,9,10} 100% ^{3,4,7,8}
Storage Temperature	14 to 95 °F (-10 to 35 °C)

Physical Features

Dimensions (L x W x H)	≤3.7 x 10.6 x 3.2 in (9.4 x 26.9 x 8.1 cm) - with battery
Weight	≤3.2 lbs (≤1.5 kg)
Enclosure & Protection	Aluminum housing; protection rating IP53 according to IEC 60529 variants ^{1,2,5,6,9,10} ; protection rating IP68 according to IEC 60529 variants ^{3,4,7,8} ; 10 m; 8 h



Specifications are subject to change without notice.
For the most up-to-date specs, go to www.teledyneflir.com

AMERICAS

7055 Troy Hill Dr. Suite 300
Elkridge, MD 21075 USA

APAC

10 Kallang Avenue #09-10
Aperia Tower 2
Singapore 339510

EMEA

Luxemburgstraat 2
2321 Meer
Belgium

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