Technical Data
identiFINDER® R 400

Product
identiFINDER® R 400

Product Variants

*1 idF2-NG
*2 idF2-NGH
*3 idF2-ULCS-NG
*4 idF2-ULCS-NGH
*5 idF2-ULK-NG
*6 idF2-ULK-NGH
*7 idF2-UW-CS-NG
*8 idF2-UW-CS-NGH
*9 idF2-UW-ULCS-NG
*10 idF2-UW-ULCS-NGH
*11 idF2-T1
*12 idF2-T2
*13 idF2-LG
*14 idF2-LGH

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General

The identiFINDER R 400 is the improved successor of the #1 handheld radionuclide identification device (RIID), the original identiFINDER. It provides continuous detection capability and the fast identification of radioactive material which supplies critical information to the user in the field, enabling them to make a next step determination. The unit can contain either a 35 mm (1.4") ∗ 51 mm (2.0") NaI or 30 mm (1.2") ∗ 30 mm (1.2") $LaBr_3$ scintillation detector with an energy compensated GM detector included for high dose rate situations. The instrument can be equipped with an optional ^3He neutron detector and is available in standard or submersible housings. The ideal balance of performance versus size and weight of the instrument make it appealing for general surveying. Whether the application is scanning people, bags, vehicles, etc… the identiFINDER is perfect choice for a wide range of scenarios.

Detectors

Gamma: NaI *1 *3 *5 *2 *4 *6 *7 *8 *9 *10	Crystal size 35 mm (1.4") × 51 mm (2.0")
Gamma: NaI *12 *11	Crystal size 23 mm (0.9") × 21 mm (0.8"); tungsten shielded
Gamma: $LaBr_3$ *13 *14	Crystal size 30 mm (1.2") × 30 mm (1.2")
Neutrons: ^3He Proportional Counter Tube *2 *4 *6 *8 *10	15 mm (0.6") × 54 mm (2.1"); net: 14 mm (0.6") × 29 mm (1.1"); 8 atm
Gamma (High Dose Rate)	Geiger-Müller detector
GPS	12-channel SiRF III receiver

Performance

Energy Range (Gamma)	20 keV – 3 MeV
Gamma Spectrum	1024 channels; 3 MeV
Dose Rate Range	0.000 µSv/h – 10.00 mSv/h
dto. Scintillator	0.000 µSv/h – 500 µSv/h
dto. Geiger-Müller Detector	100 µSv/h – 10 mSv/h
dto. Overload	10 mSv/h – 1 Sv/h
Dose Rate Accuracy (^{137}Cs)	±30 %
Dose Range	0.000 µSv – 1 Sv
Neutron Sensitivity *2 *4 *6 *8 *10 *14	2.6 cps/nv
Stabilization *1 *2 *7 *8	Calibration source; ±1 % for temperature change rate of 0.5 °C (0.9 °F)/min
Stabilization *3 *4 *9 *10 *6	Calibration source; LED; ±1 % for temperature change rate of 0.5 °C (0.9 °F)/min
Stabilization *5 *6 *13 *14	LED; ±1 % for temperature change rate of 0.5 °C (0.9 °F)/min
Nuclide Identification	According to ANSI N42.34
Typical Resolution *1 *3 *5 *2 *4 *6 *12 *7 *8 *9 *10 *11	≤8 % FWHM at 662 keV at 20.0 °C (68.0 °F) ambient temperature
Typical Resolution *13 *14	4.5 % FWHM at 662 keV at 20.0 °C (68.0 °F) ambient temperature

Service

Recommended Interval	5 a

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Physical	
Dimensions (W × D × H) *1 *3 *5 *2 *4 *6 *12 *11 *13 *14	248 mm (9.8") × 93 mm (3.7") × 75 mm (3.0")
Dimensions (W × D × H) *7 *8 *9 *10	270 mm (10.6") × 93 mm (3.7") × 82 mm (3.2")
Weight *2 *4 *6	1200 g (42.3 oz) including batteries
Weight *7 *9	1360 g (48.0 oz) including batteries
Weight *8 *10	1380 g (48.7 oz) including batteries
Weight *12 *1 *11	1450 g (51.1 oz) including batteries
Weight	1045 g (36.9 oz) including batteries
Housing Material	Aluminium
Environmental	
Operating Temperature	-20 °C – +55 °C (-4 °F – 131 °F)
Relative Humidity *1 *3 *5 *2 *4 *6 *12 *11 *13 *14	10 % – 80 %, non condensing
Relative Humidity *7 *8 *9 *10	≤100 %
Protection Rating *1 *3 *5 *2 *4 *6 *12 *11 *13 *14	IP53 according to IEC 60529; (with rubber cover mounted on socket)
Protection Rating *7 *8 *9 *10	IP68 according to IEC 60529; 10 m (32'9.7"); 8 h
Battery	
Operating Duration	≥8 h at 20.0 °C (68.0 °F) in dose rate mode with dimmed display back light and GPS switched off
Display	
Type	Transflective color LCD
Input/Output	
USB *1 *3 *5 *2 *4 *6 *12 *11	USB 2.0; micro-B socket
USB *7 *8 *9 *10	USB 2.0; LEMO Series K socket with bung
Bluetooth *1 *3 *5 *2 *4 *6 *7 *8 *9 *10 *11 *12	Class 2.0; ≤10 m (32'9.7") range
Software	
IPv4	DHCP server included; subnet configurable
IPv6	ULA routing prefix fde6:e89e:44bc::/48 with device specific subnet
Download File Formats	ANSI N42.42 and spc files compatible with third-party analysis software applications such as GADRAS, Cambio, or PeakEasy
U-235 Enrichment Measurement *12	NaI Gamma Enrichment Measurements (NaIGEM) algorithm
Accessories	
Connection Cable *7 *8 *9 *10	LEMO Series K connector – USB A
Holster *1 *3 *5 *2 *4 *6 *12 *11	210 g (7.4 oz)
Holster *7 *8 *9 *10	220 g (7.8 oz)
^{40}K Source *5 *6	Box with potassium chloride (KCl)

GPS can be removed upon request. Bluetooth can be removed upon request.