Technical Data

identiFINDER® R 500

General

The identiFINDER R 500 is an extremely sensitive and accurate digital handheld radioisotope identification device (RIID). 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 102 mm (4.0")NaI or 38 mm (1.5")LaBr 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.

The large volume scintillation detectors increases its ability to detect and locate source in difficult environments make it appeal for a variety of challenging applications. If large areas need to be scanned rapidly or there is potential for shielding (as frequently encountered in truck and cargo scanning), the identiFINDER R 500 provides superior performance compared to other RIIDs.

Detectors

- Gamma: NaI
  - Crystal size 102 mm (4.0") x 19 mm (0.7")
- Gamma: LaBr
  - Crystal size 38 mm (1.5") x 38 mm (1.5")
- Neutrons: 3He Proportional Counter Tube
  - 19 mm (0.7") x 106 mm (4.2"); net: 18 mm (0.7") x 75 mm (3.0"); 8 atm
- Gamma (High Dose Rate)
  - Geiger-Müller detector
- GPS
  - 12-channel SiRF III receiver

Performance

- Energy Range (Gamma) 20 keV – 3 MeV
- Corrections Real-time linearization of gamma spectrum
- Gamma Spectrum 1024 channels; 3 MeV
- Dose Rate Range
  - dt0. Scintillator: 0.000 μSv/h – 1.00 mSv/h
  - dt0. Geiger-Müller Detector: 10 μSv/h – 1.00 mSv/h
- dt0. Overload: 1 mSv/h – 10 mSv/h
- Dose Range 0.000 μSv – 1 Sv
- Neutron Sensitivity
  - 9 cps/nv ±15 %
- Stabilization Calibration source; LED; ±1 % for temperature change rate of 0.5 °C (0.9 °F)/min
- Nuclide Identification According to ANSI N42.34
- Typical Resolution
  - 8 % FWHM at 662 keV at 20.0 °C (68.0 °F) ambient temperature

Physical

- Dimensions (W x D x H) 129 mm (5.1") x 212 mm (8.3") x 323 mm (12.7")
- Weight
  - 2900 g (102.3 oz) including batteries
  - 2895 g (102.1 oz) including batteries
- Weight
  - 2460 g (86.8 oz) including batteries
- Housing Material Aluminium
### Technical Data

**identiFINDER® R 500**

**Product Variants**
- *1 radHUNTER ULCS-NG
- *2 radHUNTER ULCS-NGH
- *3 radHUNTER UL-LGH
- *4 radHUNTER UL-LG

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#### Environmental

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-20 °C – +55 °C (-4 °F – 131 °F)</td>
</tr>
<tr>
<td>Temperature Change</td>
<td>Sudden temperature change must not exceed 30.0 °C (54.0 °F) in order to avoid damage to the detector crystal</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>10 % – 80 %, non condensing</td>
</tr>
<tr>
<td>Protection Rating</td>
<td>IP54 according to IEC 60529</td>
</tr>
</tbody>
</table>

#### Battery

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>FLIR powerPACK ultra 2 (LSD NiMH, rechargeable)</td>
</tr>
<tr>
<td>Operating Duration</td>
<td>≥ 8 h at 20.0 °C (68.0 °F) in dose rate mode with dimmed display back light and GPS switched off</td>
</tr>
</tbody>
</table>

#### Display

<table>
<thead>
<tr>
<th>Specification</th>
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<tbody>
<tr>
<td>Type</td>
<td>Transflective color LCD</td>
</tr>
</tbody>
</table>

#### Input/Output

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>USB</td>
<td>USB 2.0, mini-B socket</td>
</tr>
<tr>
<td>Bluetooth &quot;*1&quot; &quot;*2</td>
<td>Class 2.0, ≤ 10 m (32’9.7”) range</td>
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</tbody>
</table>

#### Software

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPv4</td>
<td>DHCP server included; subnet configurable</td>
</tr>
<tr>
<td>IPv6</td>
<td>ULA routing prefix fde6:e89e:44bc::/48 with device specific subnet</td>
</tr>
</tbody>
</table>

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