### SPECIFICATIONS base unit*

<table>
<thead>
<tr>
<th></th>
<th>GENERAL</th>
<th>PROFESSIONAL</th>
<th>ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range Min</td>
<td>10Hz</td>
<td>10Hz</td>
<td>1Hz</td>
</tr>
<tr>
<td>Frequency range Max</td>
<td>10kHz</td>
<td>100kHz</td>
<td>1MHz</td>
</tr>
<tr>
<td>Range electrical field [V/m] (typical) Min (1D)</td>
<td>1V/m</td>
<td>0.1V/m</td>
<td>0.1V/m</td>
</tr>
<tr>
<td>Range electrical field [V/m] (typical) Max (1D)</td>
<td>2kV/m</td>
<td>5kV/m</td>
<td>5kV/m</td>
</tr>
<tr>
<td>Range magnetic field [Tesla] (typical) Min (3D)</td>
<td>10nT</td>
<td>1nT</td>
<td>1nT</td>
</tr>
<tr>
<td>Range magnetic field [Tesla] (typical) Max (3D)</td>
<td>100µT</td>
<td>100µT</td>
<td>100µT</td>
</tr>
<tr>
<td>Range magnetic field [Tesla] (typical) Max (3D)</td>
<td>100µG</td>
<td>10µG</td>
<td>10µG</td>
</tr>
<tr>
<td>Filter bandwidth Min</td>
<td>5Hz</td>
<td>5Hz</td>
<td>1Hz</td>
</tr>
<tr>
<td>Filter bandwidth Max</td>
<td>10kHz</td>
<td>300kHz</td>
<td>1MHz</td>
</tr>
<tr>
<td>Accuracy Base unit (typical)</td>
<td>5%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Vector power measurement (I/Q) and True RMS</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### FEATURES

- Standards conformant exp. limits (ICNIRP, BGV B11, BismSchV etc.)
- Extended full ICNIRP range
- Isotropic (3D) AC magnetic field measurement
- ADVANCED HOLD mode (HOLD function)
- INTERNAL data logger (long-term measurements)
- FLASH memory including firmware update (over the Internet)
- “Clear text” signal identification with direct frequency display
- Integrated battery charging circuitry
- Audio demodulation Piezo Piezo AM AM AM&FM AM&FM
- X, Y, Z Axis display or 3D Vectorproduct (only M.-Field)
- Jog Dial (Multi-functional dial) for “one-hand operation”

### DISPLAY

- Fast FFT or DFT spectrum analyses
- Limit calculation with simultaneous percentage display
- X, Y, Z Axis display or 3D Vectorproduct (only M.-Field)
- Main display in V/m, Tesla, Gauss or Am (switchable)
- High-resolution 50 segment bargraph (trend display)
- 3fold marker display (ex. 3x field strength & frequency at once)

### INTERFACES / CONNECTORS

- Fast USB 2.0 Interface (PC connection)
- Audio output
- DC input (max 15V) for external power supply
- External ultra sensitive signal input (SMA input) with max. 0.2V
- Jog Dial (Multi-functional dial) for “one-hand operation”

### OPTIONS (extra charge)

- Option 001 (1MB memory expansion)
- Option 005 (12Bit DDC / offers ultra high sensetivity up to 1pT)
- Option 006 (Measure 3D static magnetic fields)*
- Option 010 (Expanded frequency range up to 30MHz e.g. RFID)
- Option 009 (Ultra high 24Bit resolution on static magnetic fields)

### INCLUDED ACCESSORIES in addition to the base unit

- Aaronia 7.2V high-performance battery (1300mAh) + charger
- Aluminum design transport case incl. padding inlays
- Professional PC analysis software (Windows, downloadable)

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* Preliminary specifications as of 05.12.2008. The NF series is available with latest Beta-Firmware. ALL options are available for this series too. The Beta-Firmware is in continuous development. Some functionality may still be limited and not fully to specifications (Beta-Status). By regularly checking our homepage for updates, you can always keep your measurement device up-to-date. As soon as version 1.0 of the firmware is released, all functionality and features will be fully available.

** Option 006 range: 100µG-6G, you can “zero” this sensor by using our optional “Zero Gauss” chamber.

** Range, sensetivity and accuracy can change depending on frequency, sensor and used parameters. Precision values are based on Aaronia calibration-reference under specific test conditions. Unless otherwise stated, these specifications apply for the reference condition: ambient temperature 22±3°C, relative air humidity 40% to 60%, continuous wave signal (CW), RMS detection.

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** Standard: 1MHz. Only with option 010 up to 30MHz. / Standard: 0.1nT. Only with option 005 up to 1pT.
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<thead>
<tr>
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<th>GENERAL</th>
<th>PROFESSIONAL</th>
<th>ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range Min</td>
<td>700MHz</td>
<td>1MHz</td>
<td>700MHz</td>
</tr>
<tr>
<td>Frequency range Max</td>
<td>2.5GHz</td>
<td>10MHz</td>
<td>2.5GHz</td>
</tr>
<tr>
<td>Optional PEAK Power-Meter (Maximum usable frequency)**</td>
<td>-</td>
<td>-</td>
<td>50MHz</td>
</tr>
<tr>
<td>-</td>
<td></td>
<td></td>
<td>+0dBm</td>
</tr>
<tr>
<td>AVG Noise Level(1Hz)'</td>
<td>-80dBm</td>
<td>-135dBm</td>
<td>-80dBm</td>
</tr>
<tr>
<td>AVG Noise Level(1Hz) with PreAmp</td>
<td>-</td>
<td>-</td>
<td>-80dBm</td>
</tr>
<tr>
<td>Maximum Level</td>
<td>+0dBm</td>
<td>+10dBm</td>
<td>+0dBm</td>
</tr>
<tr>
<td>Filter bandwidth (RBW) Min</td>
<td>1MHz</td>
<td>1MHz</td>
<td>1MHz</td>
</tr>
<tr>
<td>Filter bandwidth (RBW) Max</td>
<td>50MHz</td>
<td>50MHz</td>
<td>50MHz</td>
</tr>
<tr>
<td>EMC-Filter (RBW) 9kHz, 120kHz, 5MHz; 20MHz; 40MHz</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Accuracy Base unit (typical)</td>
<td>+/-4dB</td>
<td>+/-4dB</td>
<td>+/-4dB</td>
</tr>
<tr>
<td>Vector power measurement (I/Q) and True RMS</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lowest possible SampleTime</td>
<td>100MS</td>
<td>100MS</td>
<td>100MS</td>
</tr>
</tbody>
</table>

**FEATURES**

- Standards-conformant exposure limits (ICNIRP, BGV B11, BlnSchV etc.)
- Extended full ICNIRP range
- Fast ZERO-SPAN sweep
- PULSE mode
- ADVANCED HOLD mode (HOLD function)
- INTERNAL Data Logger (long-term measurements)
- TIME-SLOT-Analyzer
- Internal speaker
- Configurable antenna and cable calibration data
- Audio demodulation

**DISPLAY**

- DIRECT RF spectrum display
- Exposure limits display with simultaneous percentage display
- Main display in dBm, V/m, A/m or dBµV (switchable)
- ADDITIONAL display in W/m² with AUTORANGE (pW, µW etc.)
- High-resolution bargraph (trend display)
- 3fold marker display (ex. 3x power & frequency at once)

**INTERFACES / CONNECTORS**

- Fast USB 2.0 Interface (PC connection)
- Audio output (2.5mm MONO)
- DC input (max. 15V) for external power supply
- 50 Ohm SMA RF input (F)
- Jog Dial (multi-function dial) for "one-hand operation"

**OPTIONS (extra charge)**

- Option 001 (1MB memory expansion)
- Option 002 (high sensitiv 0.5ppm TCXO timebase)
- Option 020 (internal, switchable 15dB PreAmplifier)
- Option 20x (REALTIME broad band Power-Meter)

**INCLUDED ACCESSORIES in addition to the base unit**

- Miniature SMA rod antenna
- HyperLOG EMV directional LogPer antenna (model)
- Professional PC analysis software (Windows, downloadable)
- Aluminum design transport case

**Specifications subject to change without notice, errors excepted. Subject to our most current terms and conditions.**

* Further REALTIME spectrum analysers up to 18GHz are already in development. Please contact us for further details! Preliminary specifications as of 05.12.2009. The V4 series is available with latest Beta-Firmware. All options are available for this series too. The Beta-Firmware is in continuous development. Some functionality may still be limited and not fully to specifications (Beta-Status). By regularly checking our homepage for updates, you can always keep your measurement device up-to-date. As soon as V1.0 of the firmware is released, all functionality and features will be fully available. Range, sensitivity and accuracy can change depending on frequency, antenna and used parameters. Precision values are based on Aaronia calibration-reference under specific test conditions. Unless otherwise stated, these specifications apply for the reference condition: ambient temperature 22±3°C, relative air humidity 40% to 60%, continuous wave signal (CW), RMS detection. V4 Noise Level @5,555GHz. Maximum sensitivity of Rev.3 units: -90dBm @2,2GHz. ** Internal: +20dBm. External (with optional 20dB precision attenuator): +40dBm. *** Depending on frequency the optional PEAK power meter offers sensitivity up to -50dBm and max. +10dBm input power with an extremely fast response time.

Exclusive North American Distributor: Kaltman Creations LLC 651 Amberton Crossing, Suwanee, Georgia 30024 USA Tel:678-714-2000 www.RFAnalyzers.com