

**NARDA EMF MONITORS**

**AMS-8061**

# Frequency selective monitoring using a three axis isotropic antenna

ITU-T K.83 compliant

- ▲ Frequency range: 100 kHz to 6 GHz
- ▲ Built in spectrum analyzer for monitoring up to 20 user defined frequency bands
- ▲ Fully autonomous operation:
  - Solar panel power supply
  - Built-in mobile 4G modem **NEW**
  - Automatic data transfer
  - Daily reports, warnings & alarm messages via SMS
  - On-board GPS
- ▲ Easy integration into test environments and Web Based Applications
- ▲ Low weight, robust design, compact size for indoor and outdoor operations



Area Monitor AMS-8061  
with Solar Panel

## Minimum outlay, maximum result

An EMF monitoring system is made up from a series of EMF monitors installed wherever the EMF presence needs to be assessed continuously or by long term observation. The EMF monitors store the data and report them using conventional mobile data communication at set time intervals to a central unit, e.g. PC or data server. The system size can range from a single location up to countrywide coverage. Narda EMF monitors combine all the features that are essential for this purpose: autonomy, outdoor usability, mobility, robustness, and low operating costs.

You can be certain to find the ideal solution for every area of application with Narda. And you can depend on its reliability, thanks to our decades of experience coupled with cutting edge technology, backed up by our own certified calibration laboratory.



## The AMS Series

Its frequency selective application is the optimum solution for technical superiority from a tight budget. Narda EMF Monitors can do more than just record and store measurement values at a specific location. The AMS-8061 recognizes which frequency bands and services are responsible for a particular radiation.

For example, if several antennas are installed at one location. It is possible to distinguish between the various mobile services (GSM, UMTS, LTE) as well as between FM TV transmitters. By the help of the built in spectrum analyzer it is possible to determine for each individual EMF source whether the corresponding emission limit values are being adhered to, in addition to evaluating the effects on the environment.

Basically, this feature makes it quick and easy to determine who is the offending emitter/carrier.



Sensor model	EHA-2B-01	HA-1B-01	EA-1B-01	EA-1B-02
Frequency range	100 kHz - 6 GHz	100 kHz - 110 MHz	110 MHz - 6 GHz	27 MHz - 3 GHz
Measurement range	0.01 - 160 V/m	100 µA/m - 7 A/m	0.01 - 160 V/m	0.01 - 200 V/m
Sensitivity	0.01 V/m	100 µA/m	0.01 V/m	0.01 V/m
Overload	435 V/m	20 A/m	435 V/m	435 V/m
Resolution	0.01 V/m	100 µA/m	0.01 V/m	0.01 V/m
Linearity	± 2 dB	± 2 dB	± 2 dB	± 2 dB
Frequency response (flatness)	± 3 dB	± 3 dB	± 3 dB	± 3 dB
Overall anisotropy (EN50383)	< 2.5 dB up to 3 GHz < 3.5 dB up to 6 GHz	< 2.5 dB	< 2.5 dB up to 3 GHz < 3.5 dB up to 6 GHz	< 2.5 dB
Unit	V/m	A/m	V/m	V/m

## The Applications - Narda Area Monitor Antennas

Probe designation	<b>EHA-2B-01</b>	<b>HA-1B-01</b>	<b>EA-1B-01</b>	<b>EA-1B-02</b>
Frequency range	100 kHz to 6 GHz	100 kHz to 110 MHz	110 MHz to 6 GHz	27 MHz to 3 GHz
Field type (isotropic sensors)	E	H	E	E
Mobile communications	●		●	●
TV broadcasting	●		●	●
Directional radio	●		●	●
Radio	●	●		●
Wi-Fi	●		●	
Beacon radio		●		

AMS-8061	
Solar panel (24/7) & back-up battery	✓
Internal 4G modem	✓
Ethernet port	✓
USB	✓
SD Card	✓
RS232	✓
GPS sensor	✓
Temperature sensor	✓
Humidity sensor	✓
Remote capabilities	✓



Technical Specifications	
AMS-8061 Selective Area Monitor	
Frequency range	100 kHz to 6 GHz (in accordance with antenna specifications)
User-Programmable frequency bands	Up to 20, individual start-stop frequency settings
Sensor type	Triaxial, isotropic antenna system
Sensor dimensions	120 mm
Sensor RF connection	50 Ohm, N-male
Sensor control	Multi-pin connector
Measurement range	0,01 to 200 V/m or 100 uA/m to 7 A/m (depending antenna specifications)
Dynamic range	> 60 dB in all settings of the attenuator
Sensitivity	0.01 V/m or 100 uA/m (depending antenna specifications)
Overload	435 V/m or 20 A/m (depending antenna specifications)
Resolution	0.01 V/m or 100 uA/m (depending antenna specifications)
Linearity	±2 dB
Frequency response (flatness)	±3 dB
Overall anisotropy (EN50383)	< 2.5 dB to 3 GHz; < 3.5 dB to 6 GHz
Out of band attenuation	> 50 dB (depending on settings)
Rejection	> 20 dB
Reading rate	Up to 200 ms (depending on settings)
Measuring parameters	Settable bands and automatic configuration (RBW, Hold time, Detector Pk-RMS, Attenuator, Zero Span)
Unit	V/m, % of preset limit of each band, A/m
EMF stored values	AVG or RMS, Max value
Average and Average time	Arithmetic or RMS; 1 – 15 minutes
Storing rate	1, 2, 6, 15 minutes
Max logging before overwriting	18 month @ 6 minutes storing rate; 3 month @ 1 minute storing rate; circular memory
Alarms	SMS and/or data download for: field over limit, memory full, open case, temperature, humidity, low battery, sensor failure, main unit failure.
Communication	FTP and CSD protocols via internal 4G modem, Ethernet, RS-232 and USB link
Modem	Worldwide LTE, UMTS/HSPA+/GSM/GPRS/EDGE coverage
Data download	FTP: automatic to server; CSD: automatic or manual to PC
SIM card type (not included)	Enabled for CSD: Circuit Switched Data service or GPRS or both data communication modes Enabled for SMS & FTP: required
SMS	SMS to 10 mobile phones (daily report of Max. EMF value, min. battery voltage)
Battery management	Every record includes battery voltage and charge current value
Temperature and humidity sensors	Internal, logged in memory
GPS coordinates	Latitude, longitude
Clock	Internal real time clock
Firmware upgrade	Remotely upgradable (FTP, CSD), USB, RS232
Interface	RS-232, Ethernet and USB
External memory	Micro SD card (not included)

**Technical Specifications**

AMS-8061 Selective Area Monitor	
Power supply	Solar panel 17.5 V, 2 x 40 W Backup sealed Pb rechargeable battery, 12 V AC power supply and battery charger 100-240 V, 50/60 Hz to 24 VDC, 1.25A
Autonomy with battery only	48 to 60 Hours, depending on settings
Autonomy with solar panel	For best performance install solar panels in direct sunlight. 24 hours/365 days for PSH (Peak Sun Hours) >= 2; equal to >=2 kWh/m <sup>2</sup> per day.
Operating temperature	-10 °C to 55 °C
Humidity	≤ 95%
Wind speed	Max 150 km/h (unit must be installed according to instructions)
Environmental protection	IP55
Radome dimensions (Ø x H)	250 x 740 mm
Base dimensions (L x H x D)	660 x 95 x 600 mm
Pole (Ø x H)	60 x 760 mm
Solar panel dimensions (L x H x D)	1100 x 610 x 35 mm
Overall dimensions (L x H x D)	1480 x 1100 x 715 mm
Weight approx.	34 kg
Country of origin	Italy

**ORDERING INFORMATION**

AMS-8061/00	
<b>Included in delivery</b>	
<ul style="list-style-type: none"> <li>Frequency Selective Area Monitor</li> <li>Base Unit ( to be equipped with specific antenna)</li> <li>AC/DC Converter with plug adapters</li> <li>Modem 4G</li> <li>8061 NSTS Area Monitor Remote Control SW</li> <li>USB Cable</li> <li>Ethernet cable, IP67 on station side</li> <li>Mast, Base, Ballast Bags, Tool Kit and Solar Panel for battery recharging</li> <li>Operating manual</li> <li>Certificate of calibration (including antenna)</li> <li>PC software Area monitor Installer</li> </ul>	<b>620.000.274</b>
<b>Isotropic antenna (Necessary for operation of station AMS-8061)</b>	
<ul style="list-style-type: none"> <li>EHA-2B-01 Isotropic antenna 100 kHz - 6 GHz</li> <li>HA-1B-01 Isotropic antenna 100 kHz - 110 MHz</li> <li>EA-1B-01 Isotropic antenna 110 MHz - 6 GHz</li> <li>EA-1B-02 Isotropic antenna 27 MHz - 3 GHz</li> </ul>	<b>650.000.317</b> <b>650.000.318</b> <b>650.000.319</b> <b>650.000.320</b>
<b>Optional accessory</b>	
<ul style="list-style-type: none"> <li>External power supply AMS-8061</li> </ul>	<b>650.800.109</b>