emtest / AMETEK®

NetWave 7.3

Electronic Power Source

The NetWave series (1-phase) are single phase AC/DC power sources, specifically designed to meet the requirements as per the standards IEC/EN 61000-4-13, -4-14 and -4-28. Used as a DC power source it covers the requirements as per the standards IEC/EN 61000-4-17 (Ripple on DC) and IEC/EN 61000-4-29 for voltage dips and interruptions on DC supplies.

With its low distortion and high stability, even if supplying dynamic loads, the NetWave series guarantees full compliant measurements for harmonics and flicker testing as per IEC/EN 61000-3-2,-3-3, -3-11 and -3-12 as well as JIS C 61000-3-2.

The NetWave series is well suited for testing inverters (e.g. solar power, wind power) and e-vehicles. Additionally, the NetWave 7.3 offers the necessary capabilities for avionics testing as per DO-160, Airbus ABD0100 and Boeing as well as per MIL-STD-704.

NETWAVE - THE POWERFUL MULTITALENT FOR AC AND DC SUPPLY SIMULATION

The programmable AC and DC power source with its wide frequency bandwidth offers powerful waveform generation capabilities for various test applications in the EMC area and for avionics testing. Based on a Dual-Processor technology, with an integrated high-performance PC, a digital signal processor (DSP) and equipped with a hard disk the NetWave is capable to generate and record waveforms in realtime.

Its output power with low distortion and high stability, even if supplying dynamic loads, guarantees full compliant measurements for harmonics and flicker testing as per IEC/EN 61000-3-2, JIS C 61000-3-2 and IEC/EN 61000-3-3 as well as per IEC/EN 61000-3-11 and IEC/EN 61000-3-12. The NetWave is well suited for testing inverters of solar and wind power generators and e-vehicles. Additionally it can be used to generate immunity test signals according IEC 61000-4-13, -4-14, -4-27, -4-27, -4-17 and -4-29 (precompliant). NetWave 7.3 offers also full capabilities for avionics testing as per DO-160, Airbus ABD0100 and Boeing as well as per MIL-STD-704 and -461

According to standard requirements a pure sinusoidal voltage is needed for harmonics and flicker measurements. The output voltage of the NetWave is therefore guaranteed to have a very low distortion (THD) of less than 0.5% regardless of the load.

No matter whether waveforms are programmed of segments or of single points (normally resulting in MBs of data) the NetWave will do. Recording of waveforms with up to 1GByte is easily possible. The measuring channels are designed to handle up to +/- 500 Vpeak and +/-150 Apeak with 16bit resolution. Interfaces like GPIB, Ethernet and USB (to connect a memory stick) are common features with the NetWave.

The NetWave 7.3 has an isolated output as required by military and avionics standards.

MAIN FEATURES

- **Wide Power Bandwidth; DC - 5 kHz**
- **Output Power up to 7500 VA and 9000 W**
- **Output Voltage max. 360 VAC and +/- 500 VDC**
- **High Inrush Current Capability up to 47 A**
- **Extended trigger and control capabilities**
- **Built-in Arbitrary Waveform Generator for easy generation of complexe waveforms**
- **Standard Test Routines for IEC/EN, Aircraft and MIL-STD testing**
- **Built-in voltage and current measurement (option)**

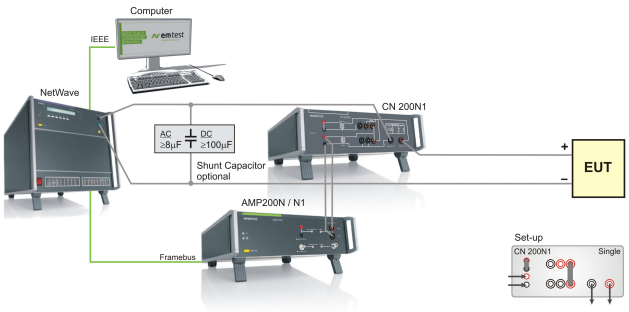
EDITING, DOCUMENTING AND MANAGING YOUR WAVEFORMS AND STANDARD TESTS

net.control is the all-in-one software platform to easily and conveniently control the NetWave Series. By means of net.control the user can program any kind of waveforms either composed from segments or points and download them into the NetWave. Enhanced graphic tools are at hand to adjust the waveform according to individual requirements. net.control provides a library of an extensive compilation of predefined segments as well as tens of thousands of standard test routines as per EMC and avionics standards. net.control is also handling any waveform recorded by other method (e.g. captured by an oscilloscope) or imported as Excel or CSV files. All waveforms can be downloaded into the NetWave. net.control offers an enhanced reporting tool to generate test and measuring reports and can be used under Windows (7 / 8 / 10 / 11).

Available Options & Accessories

Opt-1 NWB	built-in measurement board with power analyzer functionality (1 x voltage and 1 x current), recommended for Aerospace applications (i.e. DO-160, MIL STD 461 etc.)
F-Box	Lowpass fitler for smoothing the DC votlage for very low ripple applications, i.e. MIL-HDBK-704 HDC 103 & LDC 103, serveral models available
L-Box	50 µH decoupling coils with integrated 10 uF capacitor for MIL-STD-704 LDC, several modesl available
DPA 500N	Digital power analyzer for harmonics and flicker measurements according IEC 61000-3-2, -12, -3-3, -11 and other standards
AMP 200N2	LF Signalgenerator & Amplifier to generate ripple and magnetic fields, DC to 250 kHz, (500 kHz), max. 1000 W, output voltage max. 160 Vp-p, 50 Vrms

NetWave 7.3



Setup with AMP 200N and CN 200N

Technical Specifications

	NetWave 7.3-208	NetWave 7.3-400	NetWave 7.3-480
Output Power AC	7.5 kVA		
Output Voltage AC	360 V (isolated)		
Output Current AC	max. 26 A cont. (at 300 V), 47 A for 3 s, 200 A repetitive peak		
Output Power DC	9 kW		
Output Voltage DC	max. ± 500 V (isolated)		
Output Current DC	max. 26 A cont. (at 360 V), 47 A for 3 s, 200 A repetitive peak		
Bandwidth	5 kHz		
Ripple	<50 V: 110 mV; >50 V: <200 mVrms + 0.02% of set value,		
Voltage Accuracy	DC: ±0.2 % of set value ±0.15 % of full scale, AC: add ±0.1 % of set frequency /1000		
Phase Resolution	1 °		
Frequency Accuracy	100 ppm		
Slew Rate max.	8000 V/ms		

General Specifications

	NetWave 7.3-208	NetWave 7.3-400	NetWave 7.3-480
Compensation / Sense	internal / external sense, max. compensation 15%		
Display and Controls	2-Line LCD display, LED indicators, operating keys		
Signal Generator	Integrated, 3 channels, 16 bit, 50 kSa/s per channel, min. 60 GB memory on hard disk		
Operating Modes	Source AC: PLL synchronization with other voltage sources Trigger channel: extended trigger functions Segment Step: Ramping of voltage and/or frequency in constant time windows Extern mode: Control of the NetWave by an external control signal Simple mode: Optimized control for integration of the NetWave into existing automation environment (i.e. Matlab)		
Safety	Emergency stop		
Protection	Over current, over voltage, over temperature, low voltage, current limiter		
Com. Interface	GPIB, Ethernet, USB (Type A), Frame Bus		
Output Connectors	4 mm lab plugs		
Supply Frequency	45 Hz – 65 Hz		
Supply Voltage	3 x 208 V, 1PH+N+PE	3 x 400 V, 1PH+N+PE	3 x 480 V, 1PH+N+PE
Supply Current	50 A / phase	25 A / phase	21 A / phase
Supply Connector	Screw Terminal	CEE 32A	
Dimensions	Minirack 25HU, 600 x 800 x 1250 mm / 24 x 32 x 49 in		
Net Weight	120 kg / 265 lbs		
Operating Environment	5°C - 35°C, 10% - 90% non-condensing, 86 kPa (860 mbar) to 106 kPa (1 060 mbar)		