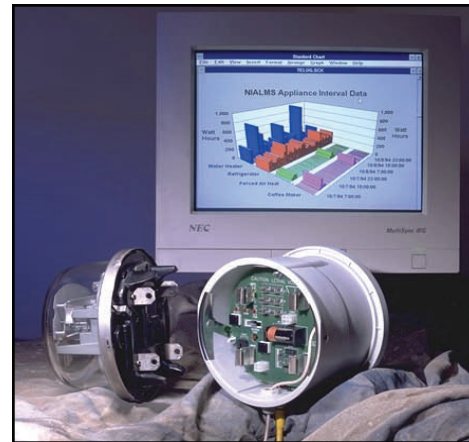


LM-1312 Meter Adapter Recorder

A Versatile Meter Base “Plug-In” Recorder

- ***Resolve High Bill And Power Quality Complaints***
- ***Safely Record At The Meter Without External Boxes or Wires***
- ***Alternate Package for Breaker Panel Mounting Available***
- ***Automatic Remote Alarm Notification Through real time SMS to your cell phone.***
- ***Records Energy Parameters And Harmonics, Disturbance Events, Waveform Capture, and Flicker***
- ***Full database support with analysis software included***
- ***Integrated Modem for AMR functionality***
- ***Optional removable SD card data storage for fast, secure field retrieval of stored data***



The LM-1312 is a Form 2S residential meter adapter recorder designed to simply plug into a meter base to

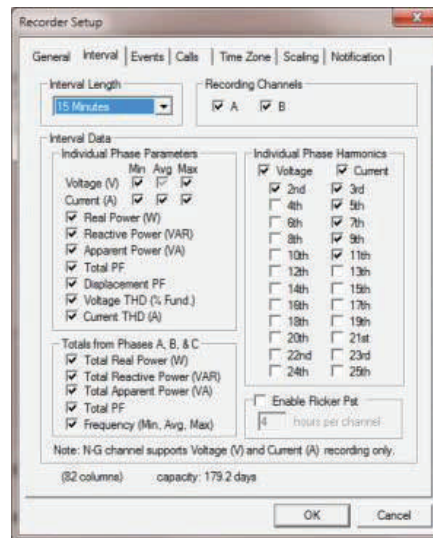


simultaneously record more than 30 energy parameters along with harmonics, disturbance events, waveform capture, and flicker. The unit has captive internal CT's making installation and current measurement easy and

can be programmed to send real time notification when a measured condition exceeds a user-programmed threshold. Data is kept in the meter in non-volatile flash memory so that no data is ever lost and there is no battery maintenance required to preserve recorded data.

1312 records voltage, current, swell and sag events, total harmonic distortion (THD%) for both voltage and current and even measures and records individual harmonics.

Easy to use software generates charts and reports in Excel[®] eliminating software compatibility problems. At a glance, sags or loose neutrals can be identified. And you still have the Excel[®] data to manipulate to do other calculations if necessary.



Energy Measurements

The unit records more than 30 energy parameters including Voltage, Current, kW, kVAR, kVA, True and Displacement Power Factors, for each leg, total, and both the single-cycle minimum and single-cycle maximum values for each interval, as well as line Frequency. Time stamps are Internet synchronized.

Power Quality

More and more residences have become vulnerable to power quality problems because of home offices and so many appliances using sensitive electronics. The LM-

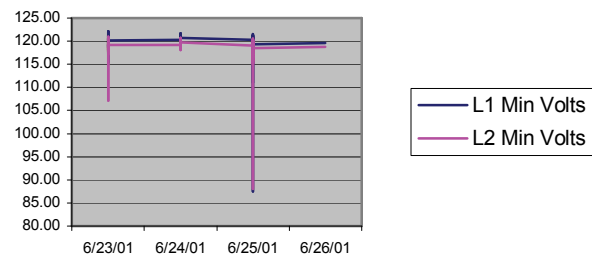
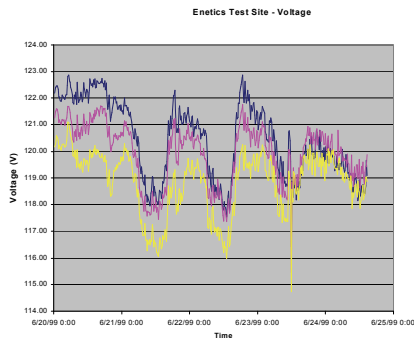
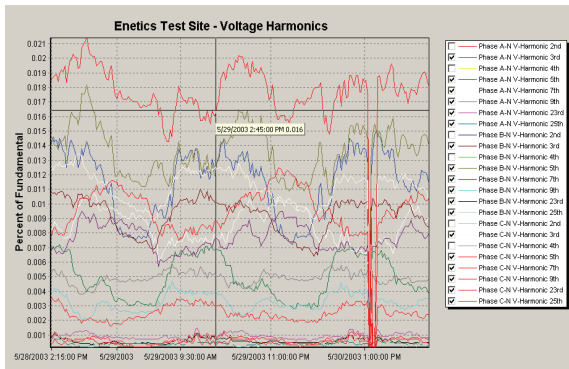


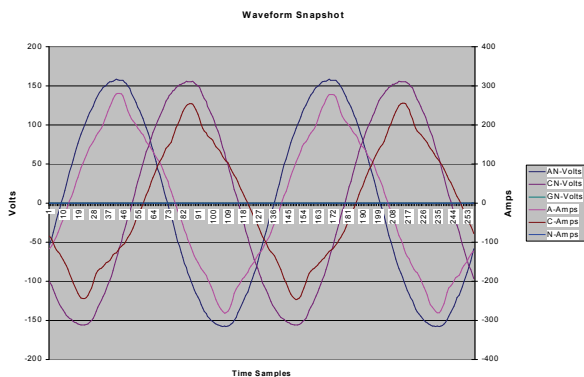
Chart Of Minimum Voltages Shows Sags

Software

The LM-5500 series software consists of three components: PowerScope for remote meter management/data retrieval, the database (SQL), and the Excel® macros charting/reporting software. The database automatically stores data collected from one or more designated sites. Data is easily retrieved with queries from within Excel® to generate the required charts and reports. The Excel® worksheet datafile including the charts and reports can then be exported in various formats and shared among users. Zooming and panning is available on the charts. A key advantage of using an SQL database and Excel® is that it is an “open” system, not locking you into any suppliers’ proprietary software. You can retrieve any data available from the database and/or use the Excel® data to generate additional charts and reports.



Phase Voltages In A Spreadsheet



Specifications

Form: 2S
Channels:
Voltage 2
Current 2 (simultaneous voltage and current sampling)

Range:
Voltage 120/240
Current Form 2S—200 amps

Memory
Non-volatile without battery backup
Typical Data Storage Time:
15 Min Interv/16 Parameters: 600 Days min
15 Min Interv/117 Parameters: 100 Days min
Software reports recording time at setup. Waveform and event capture storage is independent from interval data storage. Up to 3000 events are saved in non-volatile memory.

Sample Rate/Response Time:
32 samples/cycle for interval data
128 samples/cycle for harmonic analysis

End-to-End Accuracy:
Voltage $\pm 0.2\%$ reading + 0.1% FS
Current $\pm 0.2\%$ reading + 0.2% FS
Power $\pm 0.5\%$ reading + 0.01% FS
Power Factor $\pm 1\%$
THD $\pm 1\%$
Frequency $\pm .1\%$; .01 Hz Resolution
ANSI C12.16

Recording Interval: 15 sec to 1 hour
Flicker: EN61000-4-15
Harmonics: V and I Up to 25th
Voltage THD (% Fundamental)
Current THD (% Fundamental or RMS Amps)

Disturbance Events: Auto Trigger; Record Up to 10,000

Waveform Capture: Auto Trigger; 2 cycles pre-trigger; 6 cycles post-trigger

Communications:
Native Open Protocol - Modbus RTU
Serial Port up to 57.6 kbps
Integral Hayes compatible telephone modem

Communications Options:
Ethernet and USB
Wireless/Cellular—GPRS
2 Independent Simultaneous Comm Sessions

Storage Option
Add-in board for removable Secure Digital (SD) flash storage

Power: 85—265 VAC, 47—63 Hz.
Automatically from service
Real-Time Clock: Battery backed during power loss
No Data Battery Maintenance

EMC: EN55022 Class B Radiated

Environmental/Physical: CE Certified

Operating Temp Range: -20°C to +70°C
Size: 10.5” x 9.25” x 5.5”
(26.7 x 23.5 x 14 cm)
Weight: 4.5 lbs (2 kg)
Weather: Full conformal coating

(Specifications Subject To Change Without Notice)

4/21/2010