

Valhalla 3030A Energy Analyzer Datalogger



Specifications

Options-Accessories



Harmonic Energy Analyzer

As a Harmonic Energy Analyzer, the 3030A tracks percent of total harmonic distortion (%THD). The % THD indicates the degree of non-sinusoidal waveshape the voltage or current exhibits. Individual harmonic values (1st-50th) are optionally available.

Line Disturbance Analyzer

As a Line Disturbance Analyzer, the 3030A tracks voltage or current disturbances (transients -up to 999 events). Amplitude, duration and risetime are continuously monitored; largest transient data is logged. Swells and sags may also be detected and logged.

Power - Energy Datalogger

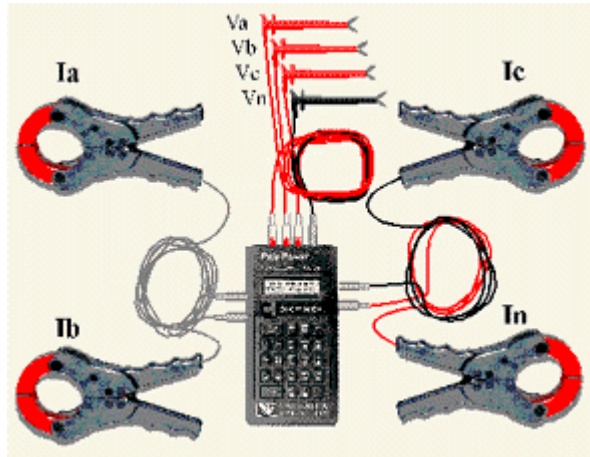
As a Demand Analyzer, the 3030A tracks power consumption, Energy, Cost, Harmonic Distortion, True Watts, Kilowatt-Hours (KWHr), True RMS Volts, Amps, True Power Factor (W/VA) and more. Graphs and individual waveforms can be uploaded to a PC for analysis.

Single and Three Phase Harmonic Energy Analyzer - Datalogger

- The Valhalla 3030A is one of the smallest, most cost effective instruments for the measurement and analysis of single and three phase electric power. It lets the user analyze energy usage and costs. You can evaluate power quality, troubleshoot wiring and equipment energy use, and perform true three phase measurements for less than the cost of a single phase instrument.
- The Valhalla 3030A capability includes: single and three phase voltage, current, power (watts), energy (KWHrs), cost, power factor (p.f.), total harmonic distortion, transients (spikes), frequency, duty cycle, and power cycles. It also stores in non-volatile memory two complete sets of waveforms (saves 14 signals- 3Ø) as standard.
- The Valhalla 3030A also measures 3Ø delta voltages - (i.e. phase to phase voltages) and current levels as standard. Primary/secondary ratios for current transformers (CT's) and potential transformers (PT's) can be entered into the unit for recording of primary values when

monitoring secondary outputs, to provide automatic scaling for energy measurements (i.e. Kilowatt Hours).

- The Valhalla 3030A measures each phase to phase voltage and current in a three phase delta configuration. Total 3Ø power factor may also be displayed. The PC Control Analysis software provides simultaneous voltage and current measurement sequencing. There is no waiting or cycle time delays between the voltage or current data.



3030A Analyzer and Hardware

Standard Features

- 3 Voltage Inputs, 4 Current Inputs - A, B, C and Neutral Inputs for single and three phase (3 wire "delta" or 4 wire "wye") circuits - accepts user CT & PT ratios
- 100 Measurements each second - Answers to all common questions about electric power: present values, summaries and estimates.
- Monitor Demand or Disturbances - Summary data available on the display, demand data logged values may be uploaded to a computer for display and analysis
- True RMS VA (apparent power) and True Power -Maximum, minimum, average and present value for each, regardless of waveshape or distortion level
- 12 Voltage Measurements - Maximum, minimum, average, and present value for each phase to phase voltage
- 16 Current Measurements - Maximum, minimum, average and present value for A, B, C and neutral currents
- Duty Cycle - Average "On" Time - Power Cycles-Estimated power cycles - per Hr., per day, per week - Great diagnostic tool for thermostatically controlled loads
- 16 Power Factor Measurements - Max., min., average/ present value of true power factor for each phase & total
- User Control of Basic Settings - Change logging period, time, date, greeting, etc.
- Internal Battery to Bridge Power Failures - Internal rechargeable battery pack can operate unit for 10 hrs between charges
- Transient/Swell/Sag Detection - Magnitude, duration, risetime, and time/date of worst transient swells and sags of at least 1 second in duration are recorded while monitoring consumption
- Elapsed KWHr & True Cost, Estimated Energy & Cost per Hr., /Mo., / Yr. - Actual energy use, energy estimates and costs are updated each second

- Peak Demand Period - Finds period and magnitude of the (maximum) peak demand - amplitude and time/date
- Real Time Clock/Calendar - Displays present and elapsed time of monitoring
- Easy to Use and Understand -Menu driven format



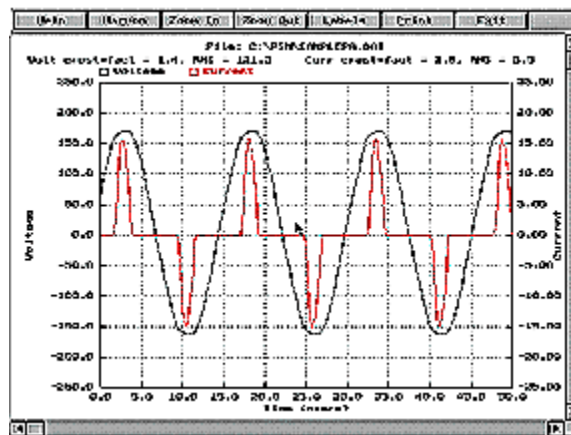
True RMS Current

Current measurements - A,B,C, and neutral current inputs for 1Ø and 3Ø circuits. Maximum, minimum, average, and present value for each phase to neutral current. True RMS values provide accurate measurements regardless of waveshape. The photo above shows phase A current (Ia) levels.



True RMS Voltage Display

12 True RMS voltage measurements for 1Ø and 3Ø applications including maximum, minimum, average, and present values. The 3030A true RMS voltage levels provide accurate measurements for distorted or non-sinusoidal wave forms.



PC Control Analysis

PC control/analysis capability allows high resolution voltage and current wave forms to be uploaded to your PC.



True RMS Power
15.10 KWatts

True RMS Power

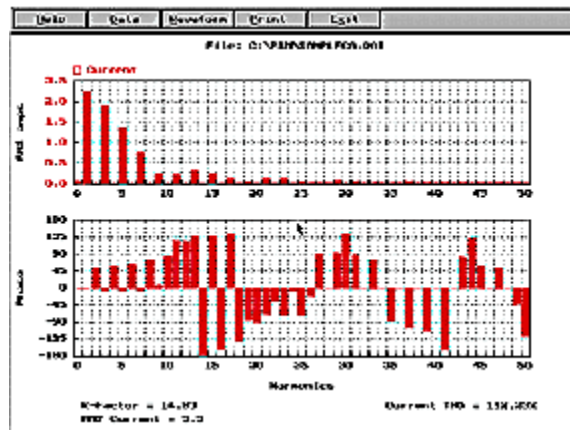
8 true power measurements as well as apparent power (VA). Both parameters (true power, and VA) are measurable as a maximum, minimum, average, and present values for any phase (A, B, C, and total power).



Frequency
60.0 Hertz

3030A frequency display

Frequency and Duty Cycle measurements are also available. Ideal for field or on-site use, the Valhalla 3030A can easily perform "power on" duty cycle ratios (% ON/OFF) for motors, refrigerators, compressors, air-conditioners, and a variety of thermostatically or relay controlled devices.



Harmonic and PC Control

Harmonic and PC control analysis links the measured waveform for graphic display of harmonics from the 1st thru 50th to your PC.



Power Factor
0.75 (Uan, Ia)

Power Factor

12 Power Factor measurements (W/ VA) accurate from zero to unity p.f. for all phases, maximum, minimum, average, present value, and total p.f. are available as standard. The photo above shows phase A to neutral power factor readings.



Frequency
60.0 Hertz

Total Harmonic Distortion display

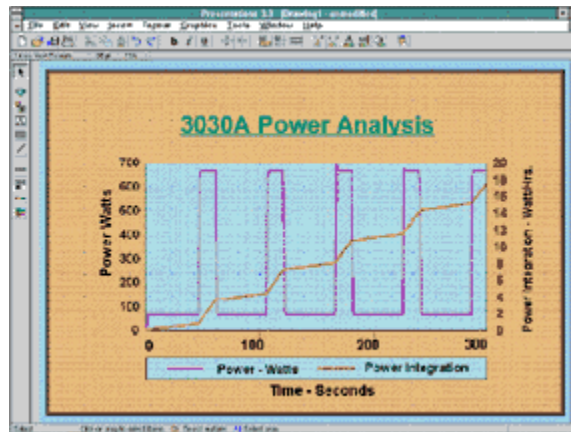
% THD - Total Harmonic Distortion of any of 3 voltages or

4 currents upon demand is standard. Individual harmonics (option "HARM" , 1st - 15th) may be expanded to the 50th harmonic with the PC control analysis option.



Transient Spike Measurement display

As a line disturbance analyzer, i.e. above, the Valhalla 3030A displays that 145 transients were detected at potentials greater than 241 volts peak. The Valhalla 3030A user may set disturbance trigger threshold levels that can capture transients at any established level.



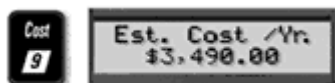
Line Disturbance Analyzer

Fluctuations in power consumption or device under test power levels may be graphically displayed or imported into your presentation or spreadsheet software.



Peak Demand Period Measurement display

As a power datalogger the Valhalla 3030A records the peak demand period (i.e. period of day) when the most energy is used, along with the average power demand for each demand interval automatically. The Valhalla 3030A allows complete interval entry flexibility, from 1 second to a 99 minute demand period.



Est. Cost/Yr.

Ideal for energy audits, the Valhalla 3030A measures actual energy use (KWHr & true cost). estimated energy

use per hour, day, month, and year. It also accepts user adjustable utility rates.

Specifications



Size:

- 4" Wide ´ 8" Long ´ 1.75" Deep

Weight:

- Less than 2 pounds

Operating Range:

- 0 - 50 degrees C (32 - 122 degrees F)
- Relative humidity to 70% (non-condensing)

Power Requirement:

- 12 VDC @ 50 mA, wall mount power supply included
Internal Ni-Cad operates up to 10 hours after overnight charge

Voltage:

- Input Range: 1 - 600 Vrms steady-state (direct input),
or 600 – 5,000 Vrms with 5KVP probes,
or 600 – 15,000 Vrms with 15KVP probes.
- Display Range: 1 - 6 megavolts (using input ratios)
- Accuracy: 0.5%
- Frequency Response: No derating of accuracy for
harmonics through 25th harmonic (1500 Hz for
60 Hz fundamental)

Current:

- Input Range: 0.01 - 5000 Amps, AC or DC with the
proper current probe attached
With HA10: .01 - 10 Amps
With HA100: 0.1 - 100 Amps
With HA1000: 1 -
1000 Amps
With FX3000: 10 – 3000 Amps
With
FX5000: 100 - 5000 Amps
With DC600: 5 - 600 Amps DC
6 autoranges
- Display Range: 1ma - 6 megamps (using input ratios)
- Accuracy: 0.5% plus accuracy of current probe
- Frequency Response: dependent on current probe attached
With
HA1000: no derating of accuracy for
harmonics through the 25th harmonic (1500 Hz

for 60 Hz fundamental)

Frequency:

- Range: DC, 45 - 66 Hz, 360 – 440 Hz fundamental frequency
DC and 45 - 1650 Hz included in RMS
45 - 3000 Hz for harmonic measurements
- Accuracy: 0.5%

Power, Energy, Cost, Power Factor:

- Display Range: 1 watt - 60 megawatts (using input ratios)
- Accuracy: 1% plus accuracy of current probe

Harmonic Distortion:

- Range: Range: Basic unit has THD only
With Harmonic Analysis Option, individual harmonics through 15th (900 Hz)
With Harmonic Analysis and PowerSight Manager software, harmonics through 50th (3000 Hz)
- Accuracy: To within 1% of fundamental

Transient Detection:

- Minimum duration to guarantee capture: 32 msec
- Measurable Range of Magnitude: ± 2500 Vpk

Captured Waveforms:

- Quantity: 14 waveforms organized into 2 time-coincident sets of 7 each (3 voltages and 4 currents)

Complete Systems

- [PolyPower 3030A](#)
- [PK314M w/ 4-1000 amp probes & extended memory](#)
- [PK314 w/ 4-1000 amp probes](#)
- [PK313 w/ 3-1000 amp probes](#)
- [PK334M w/ 4-3000 amp Flex probes & extended memory](#)
- [PK334 w/ 4-3000 amp Flex probes](#)
- [PK333 w/ 3-3000 amp Flex probes](#)

Software

- [PolyPower Manager \[PCCA\]](#)
- [Report Generator](#)

Current / Voltage Probes

- [Deluxe Voltage Leads \[DXV\]](#)
- [Deluxe Fused Voltage Leads \[DFV\]](#)
- [15k Voltage Probe \[15KVP\]](#)
- [5k Voltage Probe \[5KVP\]](#)
- [HA1000](#)
- [HA100](#)
- [HA5](#)
- [DC600](#)
- [FX3000](#)
- [FX5000](#)

Accessories

- [Weather Resistant Case \[CASW\]](#)
- [Hard-Shell Carrying Case \[CAS3\]](#)
- [Soft Operating Case \[SCAS2\]](#)
- [Soft Accessories Carrying Case \[SCAS3\]](#)
- [Line-to-DC Converter \[LDC\]](#)
- [120 Volt Outlet Test Adapter \[120ADP\]](#)

Options

- [Memory Option \[MEM\]](#) [Extended](#)
- [Analysis Option \[HAO\]](#) [Harmonics](#)
- [Option \[LOG\]](#) [DataLogging](#)
- [Control/Analysis Option \[PCCA\]](#) [PC](#)