

# PowerVisa 440D

## Power Quality Analyzer



Equipped with 8 independent channels, the 3-phase PowerVisa® 440D is the only advanced power monitoring instrument to incorporate a color touch screen into its lightweight design. Automated setups provide instant detection of circuits and configurations, ensuring that the instrument is ready to successfully collect data. Users can select the length and mode of data collection, including troubleshooting, data logging, power quality surveys, energy and load balancing. The PowerVisa 440D collects data at 256 samples/cycle/channel, offers remote communications using RS-232, ethernet or USB options, and meets IEEE 1159 and the newest European standards.

### Measured Parameters

(4) differential inputs, 1-600 Vrms, AC / DC, 0.1% rdg + 0.05% FS, 256 samples/cycle, 16 bit ADC  
(4) inputs with CTs 1-6000 Arms, CT-dependent, AC/DC, 256 samples/cycle, 0.1% rdg + CTs, 16 bit ADC  
Frequency range, 10 mHz resolution, 45-65 Hz  
Phase lock loop – standard PQ mode

### Monitoring/Compliance

IEEE 1159  
IEC 61000-4-30 Class A  
EN50160 Quality of Supply

### Power Quality Triggers

Cycle-by-cycle analysis; 256 samples/cycle; ½ RMS stpes  
L-L, L-N, N-G RMS variations: sags/swells/interruptions  
RMS recordings and Waveshape recordings (32 pre-fault, 10K post-fault cycles)  
Low and medium frequency transients – V&I  
Harmonics summary parameters  
Cross trigger V&I channels  
RMS event characterization (IEEE or IEC)

### Distortion/Power/Energy

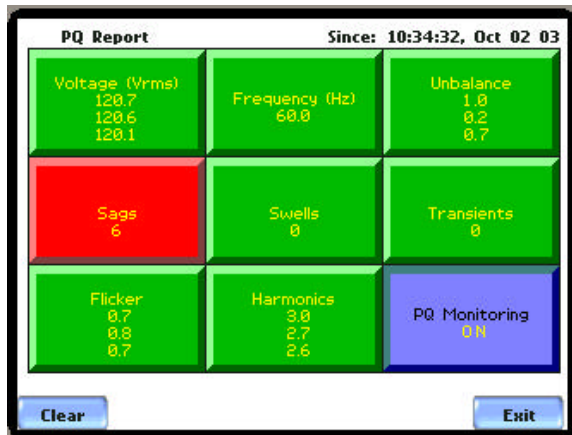
W, VA, VAR, TPF, DPF, Demand, Energy, etc.; Harmonics & interharmonics per IEC 61000-4-7  
THD/ Harmonic Spectrum, TID/ Interharmonic Spectrum (V, I, W) to 63rd  
Crest factor, K factor, transformer derating factor, telephone interference factor

### General Specifications

Size (HxWxD): 12" x 2.5" x 8"; Weight: 3.8 lbs  
Operating temperature: 0 to 50 degrees C; Storage temperature: -20 to 55 degrees C  
Humidity: 10 – 90% non-condensing  
Memory options (must have one): 32M-128M removable compact flashcard

## Troubleshooting

The PowerVisa 440D's unique annunciator "report card" provides instant power quality answers in the field. A wide range of power monitoring data is collected, analyzed and tabulated in color-coded categories to quickly identify areas of concern, which are identified in red. Drill down for more detailed information by simply touching the intuitive graphical screen to troubleshoot problems, locate the source and pinpoint the root cause of power quality disturbances.



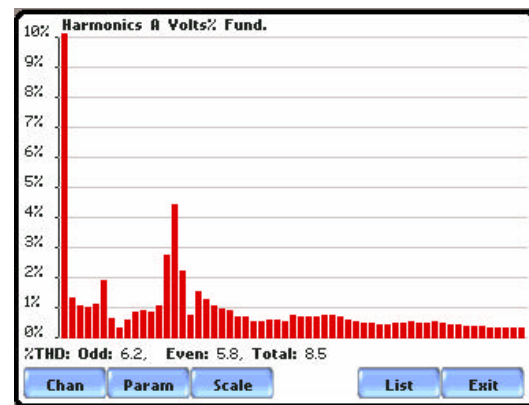
## Energy Surveys

The cost of energy is oftentimes a facility's largest operating expense. Reducing energy consumption during peak times, shifting loads, purchasing energy efficient equipment, or changing energy suppliers can shave 10-40% annually off that cost. The PowerVisa 440D is an invaluable tool for performing energy surveys, including monitoring energy consumption, usage patterns, peak demands and the activation of large loads to reduce electricity costs. Plus, the PowerVisa 440D makes it easy to track and allocate energy costs by process or department.



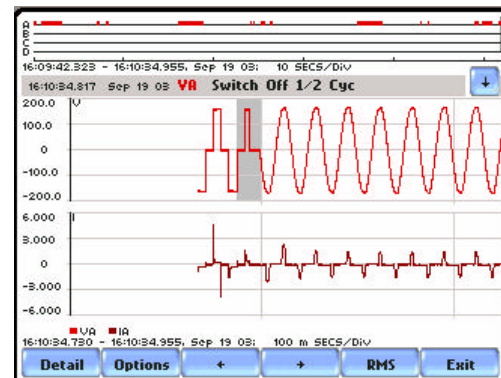
## Harmonics

As the sensitivity of power electronics increases, equipment ranging from HVAC systems, personal computers and copiers to computerized process equipment and manufacturing systems are susceptible to harmonic pollution. In fact, harmonics can cause small, almost imperceptible variations in performance that aggregate to effect significant long-term damage. Current harmonics generated by a source can pollute the entire power system without being affected itself. The PowerVisa 440D captures detailed harmonics, interharmonics and subharmonics to effectively troubleshoot the complex problems caused by these events.



## Equipment Performance Testing

Determining the availability and compatibility of facility power prior to the installation of new equipment is simplified using the PowerVisa 440D. The instrument incorporates advanced features such as RMS triggers, low/medium frequency transients, and cross triggering between channels to demonstrate that power mitigation devices such as UPSs are operating properly. Real time readings observed during maintenance and startup processes enable users to see results and tweak that equipment during the testing process.



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