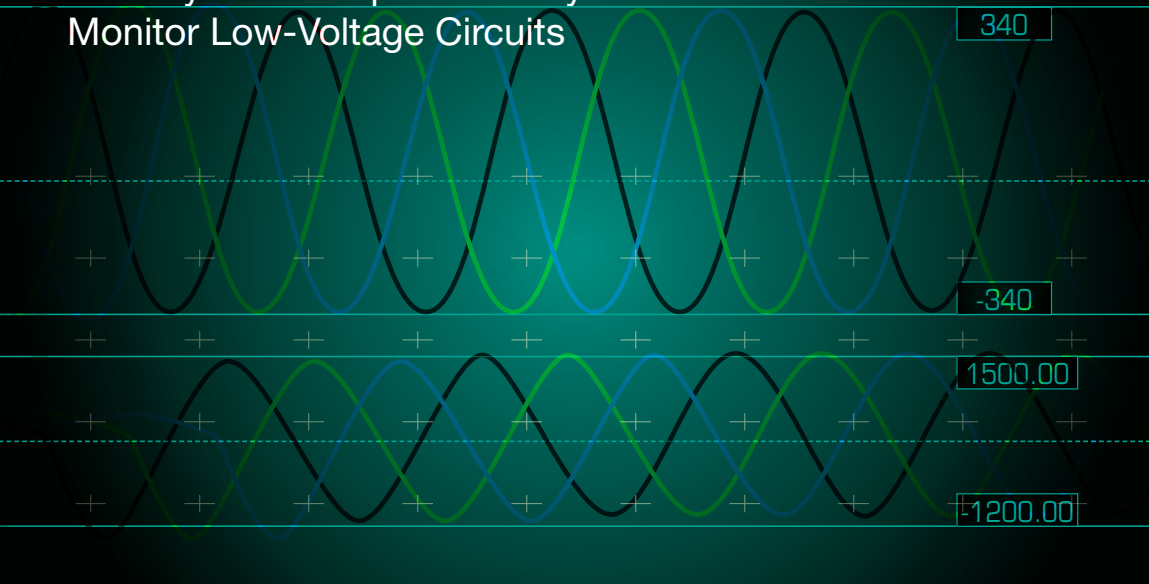
GRIDSENSE™

PowerMonic

Reliably and Comprehensively
Monitor Low-Voltage Circuits



PowerMonic is the industry standard for power quality monitoring applications, including:

- Energy audits and voltage investigations
- Power profiling and load studies
- Harmonic analysis
- Power Factor studies
- Flicker and imbalance investigations

Based on user-determined fixed and sliding thresholds, PowerMonic captures high resolution snapshots of voltage and current fluctuations, including motor starts, spikes and transient events. It performs both short- and long-term power monitoring on pad and pole mount transformers, capacitor banks, regulators, and distribution substations, as well as commercial, residential and industrial connection points.

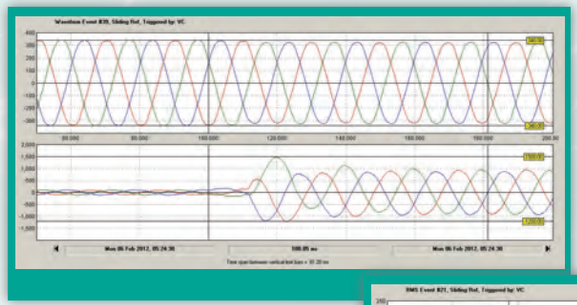
Constructed of highest quality, weather-proof, ruggedized and UV-stabilized materials, PowerMonic is built to withstand the harshest conditions—indoors and out.

Remote Capabilities and Advanced Software for Quick Diagnosis

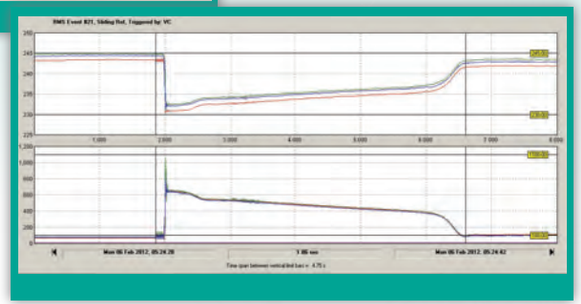
The new PowerMonic 35 and 45 offer remote communications capabilities for additional efficiency. Now you can remotely access your PowerMonic data, saving time and money while speeding analytics via PowerView Software.

> ***"Advanced [power quality] software, such as GridSense PowerView, allows detailed power quality data to be examined rapidly and easily."***
>
> – David Edwards, Engineers Australia Magazine

PowerMonic – The name has become the benchmark for power quality interface configuration, downloading, data analysis, and reporting. The step-by-step configuration wizard and intuitive graphical interface present information in easy-to-analyze charts, helping you quickly turn raw data into actionable information.



PowerView software capturing waveform event



RMS event at motor start

PowerMonic also offers:

- Real, apparent and reactive power logging
- Power factor and total harmonic distortion logging
- Magnitude and phase logging for user-selectable harmonics up to H48
- Sag/Swell events capture with user-selectable thresholds and adjustable hysteresis
- Up to 30-second RMS event capture with user-selectable fixed and sliding thresholds and user-selectable pre-trigger
- 400ms waveform event capture with user-selectable fixed and sliding triggers and 100ms pre-trigger
- 400ms transient event capture with user-adjustable threshold and 100ms pre-trigger
- PST and PLT flicker recording in accordance with IEC power quality standards
- CAT IV 600V safety category and IP66-rated enclosure and accessories (current transducers and voltage clamps) allow safe use on overhead LV wiring and points-of-supply
- User-programmable display for instantaneous, 'no-PC' readings
- Best-in-class 15MB flash memory for long term recording
- Local configuration and downloads via standard USB connection; remote configuration and downloads via optional internal 3G modem.

PowerMonic

Technical Specifications

	Voltage	Current
Input Channels	4 (isolated)	4
Measuring Range (RMS)	A, B & C channels: 0-600 VAC GND channel: 0 - 60 VAC	0-3000 Amp
Frequency Range	50Hz nominal (42.5Hz - 57.5Hz) 60Hz nominal (51.0Hz – 69.0Hz)	50Hz nominal (42.5Hz - 57.5Hz) 60Hz nominal (51.0Hz – 69.0Hz)
Instrument Accuracy	A, B & C channels: ±0.4% reading ±1 lsd GND channel: ±1% reading ±1 lsd	±0.4% reading ±1 lsd
System Accuracy	±0.4% reading ± 1 lsd	1% reading ±1lsd (0.5M Current probes)
Logged Parameters	IEC61000-4-30 V, A, Min/Max, Freq, TPF, DPF, kW, KVA, kVAR	
Frequency	IEC61000-4-30 (+/- 0.02Hz)	
Total Harmonic Distortion	IEC61000-4-7 (THD-F & THD-R)	
Harmonics	IEC61000-4-7 (Up to 48th, Magnitudes & Angles)	
Interharmonics	IEC61000-4-7 (Up to 48th)	
Flicker (Pst & Plt)	IEC61000-4-15 (10min Pst, 2hr Plt, logged every 10min)	
Voltage & Current Unbalance	IEC61000-4-30	
Waveform Capture	Duration: 400ms Triggers: half-cycle RMS, $\frac{dv}{dt}$	
RMS Capture	Half-cycle RMS 50Hz - 5s to 30s configurable 60Hz - 5s to 25s configurable	
Sag / Swell Capture	Half-cycle RMS	
Circuit Connections	Star/Wye, Delta, Split Phase, Single Phase, Generic Independent Measurement	
Display	Graphic LCD 128 x 64bits	
Memory	15MB FLASH	
Communications	USB1.1 for Local operation, RS232 for Remote operation	
Power Consumption	Maximum 12 VA (10 W typical) from Phase A	
Power Source Main	Phase A to neutral 60 – 600 Volts AC 50 or 60 Hz	
Power Source Backup	6 V 0.5 Ah Rechargeable sealed lead acid (not user replaceable)	
RTC Battery	3 V 950 mAh Li-Manganese dioxide / Organic electrolyte (not user replaceable)	
Dimensions	230 mm (l) x 120 mm (w) x 90 mm (d) or 9.1” (l) x 4.72” (w) x 3.6” (d)	
Weight	3 kg (7 lbs) instrument only, 7kg (16 lbs) typical with accessories in carry case	
Ambient Temperature	-20°C to +60°C (-4°F to +130°F). Note: standby battery is disabled when ambient temperature exceeds +45°C (113°F)	
Protection Class	AS 60529-2004 - IP66	
Classifications	IEC 61010-1 2001 Pollution Degree 3 Measurement Category IV 600 Volts (Double Insulation or Reinforced Insulation, Altitude up to 2000 m)	