

Single Phase Power Quality Analyser with Flicker



Ranger PM1000F ..



.... is a single phase, power quality, troubleshooting tool with Flicker measurements to IEC61000-4-15, including Instantaneous Flicker **Sensation**

Now with optional wireless Bluetooth to communicate with your *Ranger* remotely and save time.

- Simply plug it in and it will begin recording without requiring any user skill.
- With Adaptive Store the PM1000 can record over a long period, down to single cycle resolution, and wont miss any significant details. There is no need to set thresholds.
- The PM1000 can talk to you via a PDA or mobile phone and to your PC via an infra red communication device or Bluetooth. A virtual user interface on your PC or PDA allows you to set the PM1000 up and see real time data without it needing a display.

Parameters Measured

Voltage
Current
Stray voltage Hi Res <35V
Real Power
Reactive Power
Power Factor
Apparent Power
Phase Angle
Frequency
Total Harmonic Value
Total Harmonic Distortion
Flicker

To help you

Up to 16 channels of recorded information at the same session enables you to get the information you want first time.

Three flashing red/green LEDs give status information when the PM1000 is recording so you can check all is in order with no fuss.

The PM1000 comes with some set ups for single phase hook ups already stored so you can get started with confidence.

On screen 'Help' guides you through setting up so you can get it right first time.

You can store up to 127 set ups or data files in the PM1000 so you only have to create each of your unique set ups once. The logger remembers them for your future use and saves you much time and effort.

Set ups can be programmed in on site for your convenience.

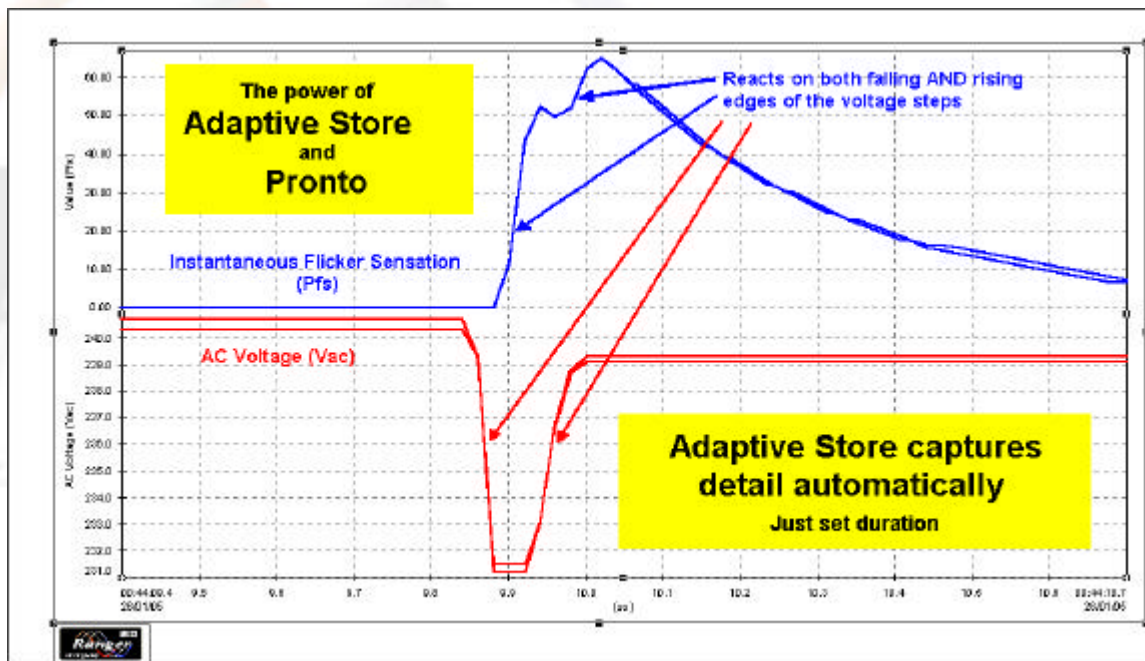
Compact and light, the PM1000 comes with a protective boot and especially designed bag so carrying it around is easy.

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The PM1000 gives you detail over long recording periods thanks to ORL's intelligent, effective, data handling technique, **Adaptive Store**.

This unique capability is combined with the comprehensive scope of the Ranger data analysis software, **Pronto for Windows**, to produce graphs and reports.

Example graph



Use the graphing wizard to help you in a few clicks get your graph or be an adventurous user and design your own graph and report layouts, then create a template which Pronto will remember for future use.

All the **Ranger** Power Master series of power quality analysers use the same software, **Pronto for Windows**, and have a similar user interface. Therefore once you have used one of them you can feel comfortable whichever PM you use.

For further information and help please contact:

Facilities in Pronto

- Annotations
- Exception reports
- Templates
- Listings
- Zooming and panning

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Ranger PM1000F Specification



Input Voltage: 2 channels, 0-270 Vac, Live to Neutral and Neutral to Earth

Input Current: 1 channel, ranges 0-1000 A rms and 0-50 A rms. Sensing using a flexible Rogowski Coil. Also works with standard CT's

Channels: 16

Accuracy: Volts and wide range current < 0.25% True RMS

+/-2 LSB's excluding sensors. Narrow range current < 1% True RMS excluding sensors

Resolution: Programmable to 0.1 Vac and 0.1 Aac or 0.01V and 0.01A high resolution mode

Maths Channels:

AC 1 Phase: RMS, Stray Voltage RMS Hi Res < 35V,

Real power W, Reactive Power VARS (fund), Apparent Power VA, Power Factor PF, Phase Angle, Frequency, Instantaneous Flicker Sensation, Short Term & Long Term Perceptibility, Flicker Flag

Harmonics: Total Harmonic Value, % Total Harmonic Distortion

Other Maths Option: Channel X * Constant,

Channel X / Channel Y, Filtered Channel X, Internal Temperature, On Charge, Battery Volts

Sampling: Continuous sampling at 64 samples per cycle;

Recording: Single cycle True RMS response time; 16 bit simultaneously sampling all signals

Recording Mode and Rate:

Adaptive Store: Unique store management enables extended recording & single cycle resolution on significant signal changes

Point Store: Selectable from single cycle rate to once every 12 hours

Memory: 1 MB RAM

Data Retention: Back-up battery provides 1 month's retention @ 25°C (77°F) from a full charge

Power: Runs and charges via an input to 'Voltage Input Channel 1' of 100-270 Vac

Battery: 4 AA Ni-Cad battery pack & 1 Lithium button cell

Battery ride through: 10 minutes at a time. Operation from fully charged battery with no ac mains power present > 5 hrs at 25°C

Safety & Standards: IEC 61010 (300V Cat III, Pollution level 2), CE, IEC 61326 (EMC), IEC 61000-4-15

Internal fusing: PSU, Battery stack, fused voltage lead

Communications:

User Interface: 3 status LEDs (Power on, Voltage in spec, Recording /Memory)

Serial Port: Serial infra red port, (up to 115.2K baud); isolation >2.5 kV and/or Bluetooth (wireless)

Protocol: MODBUS ASCII

Computer Requirements for Pronto Software: Windows 98, ME, NT4, XP, 2000, Pentium class processor or higher, 32 MB RAM,

Case: Rectangular box enclosed in a protective boot.

Dimensions: 215 mm x 116 mm x 45 mm including boot.

Weight: 900 gm including boot

Operating Temp: -10° C (14° F) to 60°C (140° F)

