

RANGER PM2000F POWER QUALITY METER SOCKET LOGGER

FEATURES

- ▶ **Patented Single Cycle Adaptive Storage**
One Meg memory provides single cycle event resolution over recording periods of 30 days with all 16 channels recording— **Standard**
- ▶ FIVE externally visible status LEDs (4-bi-color)
- ▶ Rogowski coil technology ensures the most accurate current readings in a low current measurement situation
Accurate current readings to zero amps
- ▶ **RECORDS & DISPLAYS Instantaneous Flicker Sensation over the entire recording session**, as well as programmable time periods for long & short term flicker—**Ranger / Pronto Exclusive**
- ▶ Data storage includes an additional internal flash memory for field programmable upgrades
- ▶ Battery back up provides 10 minutes resettable timed ride-through in case of power outage
- ▶ Works with 1S, 2S, & 12S Meter Sockets
- ▶ **Twelve** pre-stored configurations are set for split phase hook ups with several math channels pre-configured for power, harmonic, and **Flicker measurements**
- ▶ **Infrared Optically Isolated Noncontacting** RS232, with MODBUS ASCII
- ▶ Records and displays up to **16 channels** of voltage, current, power, power factor, VAR's, phase angle, frequency, THD Harmonic Readouts on all voltage and current channels - **Standard**
- ▶ **PM Meter** Software to show digital display of all 16 channels—**Standard**
- ▶ **PM Wave** Software shows waveform of all input channels—**Standard**
- ▶ **PM Screen** Software for virtual screen display, configuration, and operation (launched through Pronto for Windows) - **Standard**
- ▶ Measures voltage **L1 to L2** (we don't calculate it), L1 to neutral, L2 to neutral, Measures current in L1 and in L2—**Standard**
- ▶ Compact size Marwell socket case



Each Unit Includes

- PM2000F Power Quality Meter Socket Logger
- Pronto for Windows Analysis Software
 - Infrared Serial Download Cable
- Neutral Blade & Neutral Clip Lead
 - LED Legend Card
- 12 Volt Charger & Carrying Case
 - Operation Manual on CD
 - Training Video

CONFORMS TO IEEE 1453
OUR SOFTWARE DISPLAYS & PRINTS
INSTANTANEOUS FLICKER SENSATION
FOR THE ENTIRE LENGTH OF RECORDING
A RANGER / PRONTO EXCLUSIVE
ASK OUR COMPETITORS TO SHOW YOU
IF THEIR SOFTWARE CAN DO THIS
BEFORE YOU BUY!

SPECIFICATIONS

- Input Voltage** Three 0-300 Vac True RMS
- Input Current** Two 0-220 Amp Rogowski Type Rigid Coil Sensors
Industry Exclusive feature: Allows extremely low level accurate current sensing down to 0 Amps
- Channels** 16
- Accuracy** Voltage < 0.25% True RMS of Reading
Current < 0.5% True RMS of Reading
- Resolution** Fixed to 0.1 Vac and 0.1 Aac
- Math Channels** **AC 1 Phase:** RMS, Real Power, VARS (fund), Apparent Power, Power Factor, Phase angle, Frequency
AC Split Phase: Real Power, VARS (fund), Apparent Power, Power Factor
- Records & Displays Instantaneous Flicker Sensation over the entire recording session**, as well as programmable time periods for long & short term flicker—**Ranger / Pronto Exclusive**
- Harmonics:** Total Harmonic Value, % Total Harmonic Distortion
- Other Math Option:** Channel X * Constant, Channel X / Channel Y, Filtered Channel X, Internal Temperature, On Charge, Battery Volts
- Recording** 3840 samples per second; **Single Cycle** True RMS response time; 16 bit simultaneously sampling all channels

- Memory** 1MB Ram - **Standard / Approximately 4MB** uncompressed
- 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
- Data Retention** Back-up battery provides 2 month's retention @ 77°F (25°C)
- Power** Requires 100-300 Vac from L1 to L2 voltage measurement or separate power supply
- Battery: 4 AA Ni-Cad rechargeable battery pack Customer Replaceable**
- Communications** **Serial Ports:** Infrared Optically Isolated, non-contacting RS232, (up to 115.2K baud)
Protocol: MODBUS ASCII
- Computer Requirements for Pronto Software:** Windows 9x, ME, NT, XP: 486DX66 or higher; 250MB hard drive: 16MB RAM
- Case** Marwell Socket
- Weight** 2.6 lbs.
- Operating Temp** -22° F (-30° C) to 149° F (65° C)

TOP 5 REASONS YOU SHOULD ONLY CONSIDER RANGER RANGER PM2000F METER SOCKET LOGGER

As of August 2006 THE ONLY Meter Socket Logger Compliant to IEEE 1453 released May 2005

1. The ONLY Logger that can provide the required "NEW" **Instantaneous Flicker** Output for the ENTIRE LENGTH OF RECORDING UP TO 14 DAYS while RECORDING ALL 16 CHANNELS available
2. We **DO NOT** Compute L1 to L2, we **MEASURE IT!** AND give you 3 Voltages & 2 Currents
3. We use Aircore Rogowski Coil CT's in the socket and can actually **READ DOWN TO 0 AMPS** and up to 220 Amps
4. Recording **Automatically** Starts after 1 minute –No room for Human Error
5. RECORDS **16 Channels** simultaneously for **2 WEEKS** with **single cycle resolution** on changes BECAUSE of our **EXCLUSIVE PATENTED "SINGLE CYCLE ADAPTIVE STORE"**
Gives unprecedented detail.
TRY IT! YOU WILL BE AMAZED!



12 Pre-Stored Configurations. Just choose through the infrared communication port OR program your own, with the included PMScreen Software

PRONTO Software is included with all PM Products, AND **LIFETIME UPGRADES** for software & firmware at **NO COST**

RANGER PM2000HF VIRTUAL DISPLAY SCREEN EXAMPLES

The grid shows the following screen examples:

- Main Menu:** Hook Up, Configure, Display, Explore, START RECORDING, Power Off.
- List Channels:** CH4 RMS I1 (I1) +13.2 Aac; CH1 +91.1 UAC; CH2 +91.1 UAC; CH3 +90.9 UAC.
- Status-Recording:** 98% AVAILABLE, 5.71V CHARGING, 11:01:07 17/JUN/03, ELAPSED 0:00:00:00, REMAINING 6:23:59:52.
- Phasor Diagram:** VOLTAGE (L1, L2, L3) and CURRENT (I1, I2, I3) waveforms.
- Review "CURRENT CONFIG":** Table with columns CH, FUNCTION, HI ALARM, LO.
- Edit Configuration "F1 STANDARD":** I/P Signals, Record Mode & Time, Recordings Channels.
- Hook-Up in use METER SOCKET:** Graph showing voltage and current waveforms for L1, L2, L3 and I1, I2, I3.
- Sessions Explorer:** List of recording sessions with dates and times.
- Utilities:** Baud Rate (115200), Manage Battery, NETWORK ADDRESS (1), SER NO: 1.018.0246.290207.