Voltech™

PM100
PM300

POWER
ANALYZERS

PM100 and PM300 Power Analyzers

U sing the proven technology of the world leading Voltech range, these analyzers allow precision bench-top measurements at the price of a portable meter. By connecting directly to the analyzer's 20A-rated, internal shunts, the errors of gain and phase found in external current transformers and transducers are eliminated. For measurements above 20A and 1000V, a broad range of transformers, shunts and DC-coupled transducers can be accommodated.

Ideal for general-purpose measurements of watts, power factor, harmonics and volts and amps in the design, development and production of electrical and electronic equipment, the PM100 and PM300 are supplied complete with test leads, user manual and certificate of calibration and conformance.

PM100 (Single-Phase) and PM300 (Three-Phase) Analyzers

- **0.1% basic accuracy**
- **DC to 250kHz bandwidth**
- **1000Vpk/20A RMS direct inputs**
- **Graphics display of waveforms and harmonic bar-charts**
- **W, V, A, VA, Var, power factor, cosØ, Vpk, Apk, crest factors and frequency**
- **Channel 1, 2, 3, SUM( ) and neutral quantities on the PM300 three-phase analyzer**
- **Harmonics V, A, (incl. phase) and W to the 50th; total harmonic distortion**
- **Integrator for W-hr, VA-hr, A-hr, VA-hr, average and target PF**
- **Easy-to-use menu structure available in different languages**
- **Accepts and scales for external current and voltage transducers; external shunt inputs for current transducers with voltage output**

Interfaces

(Optional - one fitted at a time)

- IEEE488 for high-speed control and data capture

- RS232 and parallel printer
  The RS232 serial port allows complete command and results handling as IEEE488. The parallel printer port may be connected directly to a standard printer with a parallel interface for printing displayed or selected numeric results.
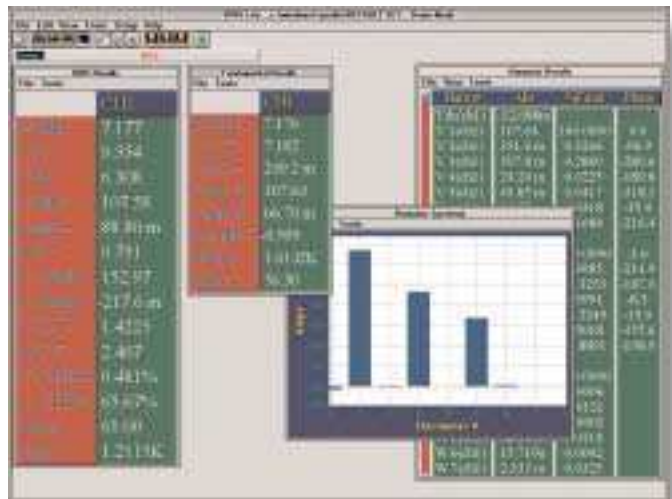
- Chart recorder and alarm interface
  Twelve 0-5V DC outputs track any measurement parameter desired. Two free relay contacts can be programmed to toggle at any selected level for alarm or process control purposes. The twelve chart recorder outputs may also be configured as digital alarms.

Software

- VPASLite Windows software for control and data handling features quick and easy set-up of analysis parameters plus display of numeric data and harmonic bar-charts. Data may be exported to standard Windows text and spreadsheet applications for further presentation and analysis.

Special Modes

- Amps inrush, the peak current at switch-on. Continuous fast sampling captures the peak inrush current. See the Voltech PS1000 Inrush Power Switch data sheet.

  - Ballast mode for testing the output of electronic lighting ballasts. Reliable measurements of tube current and power using the Voltech Ballast CT.

Specification

(23° C ± 5° C valid 1 year from calibration)

Basic Measurements	V, A, W, VA, Var, PF, Apk, Vpk, Acf, Vcf, frequency
Harmonics	V and A, including phase, plus W – all to the 50th
Integrator	W-h, VA-h, Var-h, A-h, average PF, timer
Inrush	Displays peak current during switch-on
Ballast Mode	For measurements on electronic lighting ballasts, Ballast CT recommended
Voltage Range	2Vrms to 1000Vpk (8 ranges)
Accuracy	±0.1% reading ±0.1% range ±0.1% per kHz ±10mV
Overload Withstand	1400Vpk for 1 sec
Amps Range	20mArms to 20Arms (200Apk)
Accuracy	±0.1% reading ±0.1% range ±0.2% per kHz ±1mA
Overload Withstand	60Arms for 1 sec
W Accuracy	±0.2% reading ±0.2% range ±0.3% per kHz ±5mW
Bandwidth	DC and 5Hz to 250kHz
Safety and EMC	Designed to IEC61010; complies with CE directive
Line Power Input	Dual range 90-120V, 195-265V, 48-65Hz
Interfaces (One fitted at a time)	IEEE488 RS232 I/O and parallel printer Chart recorder and alarms
Dimensions (w x h x l mm)	219 x 123 x 281 Suitable for rack mounting; 3U $^{1}/_{2}$ width