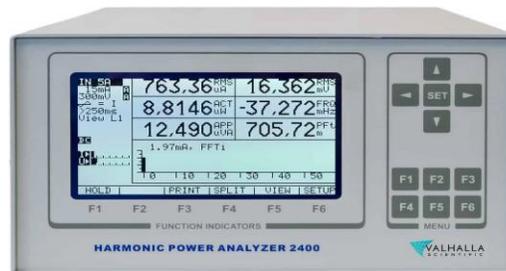


Power Analyzer 2400



High-performance precision in both single and three-phases: a wattmeter, oscilloscope, and power spectrum analyzer in one. The 2400 power analyzer measures, computes and displays critical power variables so you can concentrate on more efficient & reliable testing. The 2400 Series provides simultaneous, precise voltage and current measurements while monitoring and displaying the power parameters you need in the format that best fits your application.

Extraordinary Features

- The analyzer inputs are all galvanically isolated.
- Broad band DC-300kHz.
- Wide input range (0.3V – 1000V, 15mA – 40A).
- Exceptional common mode rejection for use in frequency inverter driven systems.
- The accuracy is 0.1% (0.05% versions are available).
- The bright LCD monitor displays up to 10 measured values in well legible 9mm high numbers.
- The Three-Phase Power Analyzer puts up to 32 measured values on the screen.

Technical Specifications

Voltage	8 ranges: 0.3 V, 1 V, 3 V, 10 V, 30 V, 100 V, 300 V, 1000 V Frequency range Crest Factor Input Impedance Common Mode Standard accuracy 23°C; rms, mean, rectified mean; 0.3V typical 1 Hz-1 kHz DC, 1 kHz-10 kHz 10 kHz-100 kHz 100 kHz-300 kHz	50 Hz/100 kHz $\pm(0.1\% \text{ rdg} + 0.1\% \text{ range})$ $\pm(0.2\% \text{ rdg} + 0.2\% \text{ range})$ $\pm(0.3\% \text{ rdg} + 0.04\% \text{ /kHz rdg})$ $\pm(0.3\% \text{ rdg} + 0.04\% \text{ /kHz rdg})$, typical	DC, 0.1 Hz – 1 MHz 3:1 at 50 % full scale (fs) 1 MOhm 160 dB/100 dB Improved accuracy $\pm(0.05\% \text{ rdg} + 0.07\% \text{ range})$
Current	13 ranges: 1.5 mA, 5 mA, 15 mA, 50 mA, 150 mA, 500 mA, 1.5 A, 5 A; 1, 3, 10, 30, 100 A Frequency range Crest Factor Common Mode Standard accuracy 23°C; 1 A-, 5 A-, shunt input 1 Hz-1 kHz DC, 1 kHz-10 kHz 10 kHz-100 kHz 100 kHz-300 kHz	30 A input $\pm(0.1\% \text{ rdg} + 0.1\% \text{ range})$ $\pm(0.1\% \text{ rdg} + 0.1\% \text{ range})$ DC, 1 kHz-10 kHz $\pm(0.2\% \text{ rdg} + 0.2\% \text{ range})$ $\pm(0.3\% \text{ rdg} + 0.04\% \text{ /kHz rdg})$ $\pm(0.3\% \text{ rdg} + 0.04\% \text{ /kHz rdg})$, typical	Max. 1 A, 5 A, 30 A, resp. DC, 0.1 Hz-300 kHz / 1 MHz 3:1 at 50 % full scale (fs) 160 dB/120 dB Lowest ranges 1.5 mA, 15 mA, 1 A: typical. Improved accuracy 1Hz-400 Hz $\pm(0.05\% \text{ rdg} + 0.07\% \text{ range})$
Power	104 ranges corresponding to the products V x A. Frequency range 45 Hz-65 Hz 1 Hz-1 kHz DC, 1 kHz-10 kHz 10 kHz-100 kHz Add accuracy percentage figures of current and voltage, +0.04 %/kHz PF		DC, 0.1 Hz-300 kHz PF= 0 to ± 0.1 PF= 0 to ± 1 PF= 0 to ± 1 PF=1
Frequency Computed Values	0.1 Hz-400 kHz, V triggered; Accuracy $\pm 0.1\%$. Accuracy; Reactive Power, $\text{Var} = \pm(\text{VA}^2 - \text{W}^2)^{1/2}$, Apparent Power: $\text{VA} = \text{Arms} \text{Vrms}$; Power Factor: $\text{PF} = \text{W}/\text{VA}$; Crest Factor: $\text{CF} = \text{Ap}/\text{Arms}$, Vp/Vrms ; Add accuracy percentage figures of values involved Form Factor: $\text{FF} = \text{AU}/\text{Arms}$, VU/Vrms ; Impedance: $\text{Z} = \text{Vrms}/\text{Arms}$; Total Harm Dist: $\text{THD} = (\text{Irms}^2 - \text{Ifund}^2)^{1/2}/\text{Irms}$		in computation.
Integrator	Energy, Charge; Accuracy Wh, Vah, Varh, Ah; Basic accuracy of integrated quantity.		
Harmonic Analysis	Frequency range of fundamental 100 kHz Range of harmonic Accuracy, Harmonic current and voltage 2 Hz-1 kHz 10 kHz-100 kHz	2.5 Hz- $\pm(0.1\% \text{ rdg} + 0.1\% \text{ range})$ 1 kHz-10 kHz $\pm(0.5\% \text{ rdg} + 0.5\% \text{ range})$ $\pm(0.7\% \text{ rdg} + 0.1\% \text{ /kHz rdg})$, typical	1-99
Display	Blue liquid crystal graphic display with FL backlight 64x120 mm: 128 x 240 pixels		
Power	AC, 50-400 Hz; Fuse: Power		85 V-240 V; 2 A, 15 VA
Dielectric Strength	Inputs to case or power supply Line input to case Input to Input		2.5 kV/50 Hz/1 minute 1.5 kV/50 Hz/ 1 minute 4 kV/50 Hz/1 minute
Dimension	H x W x D; Weight		150 x 235 x 320 mm; 4 kg
Options	IEEE-488-2, RS232, Centronics printer output 4 programmable analog outputs; single-, sum-, or average values 4 analog inputs 0- ± 5 V, input impedance 200 k Ω 4 analog inputs, 0- ± 10 V, input impedance 200 k Ω Rack Mounting Kit Windows Operating Software 95, 98, 2000, NT, XP; transformer-motor testing		0- ± 5 V, accuracy 0.2 % 0- ± 5 V, accuracy 0.2 % 0- ± 10 V accuracy 0.2 %
1.5mA-1A Inp/ Shunt Input	1 A input Hi against ILo Shunt Hi Shunt Lo	1 A input, mA: 1.5, 5, 15, 50, 150, 500, 1500 Shunt input, mV: 60, 600, 10, 600, 6000, 60000 Input impedance: 60k	1 A input: set scaling to 0.1 Shunt input: 60 mV corresponds to 1.0000 A