clarke-hess
COMMUNICATION RESEARCH CORP.
manufacturer of precision test and measurement equipment

OTHER PRODUCTS

Phase Angle Voltmeter Model 2500

- **Simultaneous Data Display**
- **Isolated inputs**
- **0.03º Phase Accuracy**
- **On board reference generator**
- **80 dB harmonic rejection**
- **Wide frequency response**
- **IEEE-488, RS232, Printer Port**

Description

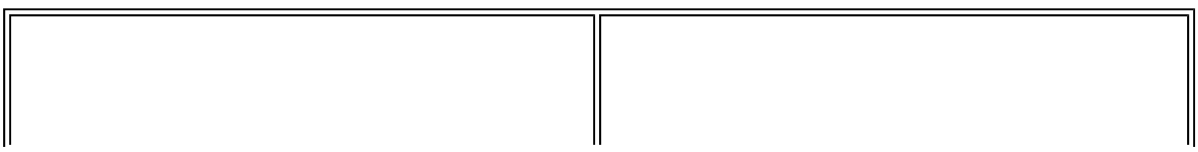
The Model 2500 PAV makes any other Phase Angle Voltmeter obsolete. With advance DSP technology and Fast Fourier Transform algorithms this Phase Angle Voltmeter provides a new level of performance and versatility. In addition, the Model 2500 Phase Angle Voltmeter is considerably less expensive than any other traditional PAVs currentl on the market.

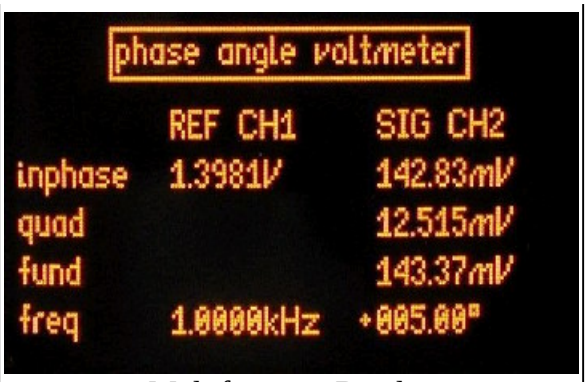
Specifically targeted at the Synchro/Resolver and LVDT/RVDT marketplace this Phase Angle Voltmeter makes measurements of Phase Angle, In-Phase, Quadrature, Fundamental and Total a breeze. All parameters are displayed simultaneously on a bright multifunction display. The readout can even be zoomed to enlarge any selected measurement.

Isolated inputs allow null, ratio and gain measurements of key parameters and a reference offset facilitates bridging measurements. A sensitive null meter is included fo precise nulling. An on-board reference generator (with optional amplifier) eliminates the need for an external reference; although the unit can be used with an external generato if so desired.

But the Model 2500 Phase Angle Voltmeter goes further. It can also measure complex impedance, power and harmonics, plot gain and phase over a selected frequency rang display input waveforms and show magnitudes of individual frequencies present in the input signal.

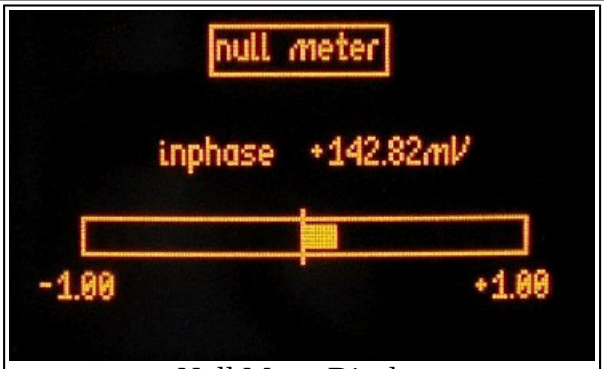
Typical Displays





Multifunction Display

Fundamental and Phase



Null Meter Display

Specifications

Primary Measurements

Phase Angle Voltmeter

Channels / display	2 isolated / 5 digits resolution (0.01º Phase Angle)
Measurement	Rms, Fundamental, Inphase, Quadrature, Frequency and Phase plus Null Meter
Voltage Input Ranges	500V 300V, 100V, 30V, 1 0V, 3V, 1V, 300mV, 100mV, 30mV,10 mV or Autoranging
Phase Input Ranges	0.00º - 360º or ±180º
Frequency Range	Dc to 2MHz
Common Mode Rejection Ratio (CMRR)	5Hz to 999.99Hz : 126dB 1kHz to 5kHz: 110dB 5kHz to 32 kHz: 100dB 32kHz to 64kHz: 91dB
Harmonic Rejection	80dB (even and odd)
Max input	±500V peak 500V peak from earth
Input impedance	1 M // 30pF (excluding. Leads)
Coupling	Ac or ac+dc
Time constant	0.2s, 1.5s or 12s

Fundamental Accuracy (Signal and Reference)

Frequency	Voltage Rdg + Rng	Phase	Gain Ratio
10mHz to 2kHz	± 0.05% ± 0.05%	±0.03º	±0.02dB
2kHz to 5kHz	± 0.05% ± 0.10%	±0.04º	±0.03dB
5kHz to 20kHz	± 0.10% ± 0.15%	±0.05º	±0.04dB
20kHz to 32kHz	± 0.10% ± 0.30%	±0.15º	±0.06dB
32kHz to 54kHz	± 0.10% ± 0.80%	±0.25º	±0.08dB
54kHz to 100kHz	± 0.10% ± 1.20%	±0.50º	±0.12dB

Add 0.300mV to the uncertainty for rms voltages.

Signal generator (internal)

Waveforms	sine, triangle, square, sawtooth, dc
Frequency	10mHz to 2.4MHz (sine); 10mHz to 1MHz (other)
Accuracy	Frequency ±0.05%; Amplitude ±5% (to 100kHz)
Output impedance	50Ω
Output voltage	10mV to 10V peak
Offset	0V to 10V

Secondary Measurements

Gain Phase Analyzer
R-L-C Meter
Transformer Analyzer

General

Display	160 x 80 dot graphic electroluminescent
Display Refresh Rate	25Hz (all readings simultaneously)
Digital Interface	IEEE-488.2, RS232, Printer Port
Size	Approximately 17.3"(43.9cm) x 3.5"(8.89cm) x 9.7"(24.6cm) (whd)
Temperature range	Operating: 0° to 40°C Within specification: 23° ±5°C after 30 minute warm-up
Weight	Approximately 11pounds
Power supply	115 V rms ±10%, 60Hz, 30VA max.
Warranty	1 year

Ordering information

Model 2500	Includes input probes, BNC output cable, RS232 cable; power cord, manual, Certificate of Calibration
Option 01	LCR / Wound Component Test Head Includes Kelvin clips

home e-mail clarke-hess

clarke-hess
3243 Route 112, Medford, NY 11763
Phone: (631) 698-3350 Fax: (631) 698-3356