Quality and Reliability
Vitrek, founded in 1990, is the premier source of precision power testing and measuring equipment for industrial and consumer product development and manufacturing. Vitrek’s sophisticated technology provides companies the edge in design verification and product manufacturability.

High Reliability with Low Cost of Ownership
The 6000 Series Phase Angle Voltmeter (PAV) continuously self-tests its internal circuitry ensuring the most accurate results possible and eliminating lengthy recalibrations. These minimal calibration requirements, coupled with field-proven superior reliability and a two-year warranty, make the cost of ownership low.

The ability to separately apply amplitude scaling and phase offsets to each input allows the 6000 to provide truly meaningful results. It delivers actual results and separate deviations from either the values present at a given time, or from entered data, and presents these in delta, ratio, percentage or dB formats. The user can choose to have phase shifts displayed in either degrees (0 - 360º or ± 180º), radians or time delay format. The THD can be displayed in absolute, percentage or dB formats.

>
Wide bandwidth (0.1Hz – 100kHz)
> 0.05% basic amplitude accuracy
> 0.05º phase accuracy
> Total & individual harmonic analysis
> 100ppm accuracy, 1ppm resolution, frequency measurements
> 4-line scrollable (50 lines total) display and 101 element nullmeter
> Separate amplitude and frequency scaling and phase offset on all outputs
> Phase sensitive or frequency selective voltage, current power and impedance measurements

>
Frequency response and distortion analysis
> Front panel configuration lockout for dedicated production and QC test applications
> Can be configured to emulate older analog PAVs that exist in the market

INDUSTRIES SERVED
- LVDT/RVDT Manufacturers
- Synchro/Resolver Manufacturers
- Accelerometer and Gyroscope Manufacturers
- Military
- Aerospace
Condensed Specifications
(Contact Vitrek for complete specifications.)

VOLTAGE INPUTS
Amplitude: 0.05\% + 0.005%/kHz for any single input and for matching between any inputs multiply by 2 for voltages in excess of 300Vpk
Phase: 0.05° + 0.005%/kHz between A and B on same range, + 0.0025°/kHz per range when differing ranges, + 0.05°/kHz between unpaired inputs, multiply by 2 for voltages in excess of 300Vpk
Noise: 20nV + 0.00001% of full-scale range/√Hz of measurement bandwidth
DC Offset: 100μV + 0.03% of full-scale range
Distortion: -80dB at any harmonic
Voltage Range: 10mV to 1000Vpk full scale (10Vrms max for 50Ω input) in 3:1 steps. Fixed or auto range
Trigger Level: Zero, TTL, ECL, CMOS, or Variable. 1% of input range accuracy
Bandwidth: >2.5MHz or user-defined upper limit in the range of 5Hz to 100kHz (-3dB)
Configuration: Balanced Differential BNC input pairs with separate Guard binding posts. DC + AC or AC only coupling (0.1Hz cut off). Guard may be externally driven or internally connected to either input Lo
Impedance: 600kΩ to Guard from each input node, selectable 50Ω input impedance, in parallel with less than 35pF
Common Mode: Guard isolated from ground (100MΩ || 1000pF) for voltages <1000Vpk. Inputs may have voltages to Guard of up to the larger of the range full-scale value or 10V. CMRR referred to Guard is >80dB for frequencies up to 10kHz, decreasing linearly to >60dB at 100kHz. CMRR referred to ground is >140dB at DC to 10kHz, decreasing linearly to >100dB at 100kHz

CURRENT INPUTS
Current inputs are as voltage inputs with an internal current shunt, yielding full-scale current ranges of up to 300mA peak in 3:1 steps. Maximum burden is 250mV External shunts may optionally be used on the voltage inputs to extend the current ranges up to 20A RMS

PHYSICAL
Power: 80 – 265 Vrms autoselect, 40 – 400 Hz @ 25VA max
Size: 7”h x 17”w x 14”d
Weight: 20 lbs
Operating Range: 0°C to 50°C, less than 85% RH at 40°C (non-condensing)
Storage Range: -30°C to +65°C, less than 95% RH at 40°C (non-condensing)

WARRANTY
Two Years

ORDERING INFORMATION

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Please visit www.vitrek.com for ordering information.