VITREK



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4700 High Voltage Meter

Precision and rugged reliability you can depend on

4700 High Voltage Meter

Direct Measurement or HV SmartProbe™

Vitrek's 4700 precisely measures voltages directly up to 10KV, right out of the box—with no external probes. That's high enough for most of the HV sources out there. However, should you care to expand your high voltage measurement range—just add one or more of the available 35KV, 70KV, 100KV and 150KV SmartProbes™. The Vitrek SmartProbes™ each store their own calibration data which is down loaded when they are plugged in to the 4700—this results in high accuracy, calibrated readings and allows any Vitrek SmartProbe™ to be used with any 4700 HV Meter. The SmartProbe's™ proprietary, ultra-low TC attenuator design minimizes self-heating—while its low capacitance technology enhances AC performance. In addition to the direct input terminal the 4700 has two probe inputs—use one probe to



HVL Series High Performance Lab Grade, HV-SmartProbes™ shown above in 35KV, 70KV and 100KV models. Handheld HVP-35 portable HV-SmartProbes™ shown with detachable probe tip. extend your measurement range or use two probes for making high voltage differential measurements.

Superior Performance by Design

Measurement integrity is our bottom line whether you are running a production line manufacturing medical imaging equipment, in a national laboratory conducting ground breaking research or in the cal lab certifying test equipment—it is essential to choose your tools carefully. To insure the best possible measurement accuracy, the 4700 makes over 40,000 reading per second which are then filtered, sub-sampled, scaled and offset corrected—all with "error free" mathematic methodology. The True RMS AC readings are as true as they come, while the DC measurements offer rocket fast settling with rock solid stability. In addition to this, the 4700 provides VLF AC readings down to 0.01 Hz, as well as, peak to peak, crest factor and fundamental frequency measurement. Available G series probes offer extremely high input impedances for electrostatic voltmeter applications.

High Voltage Test Automation

Automate your HV test requirement with the 4700's built-in Ethernet port, high speed serial communication port or available GPIB. The 4700 is fully programmable—so you can select your measurement mode and bandwidth, then take readings as often as desired. The 4700 also comes standard with a USB printer port, to capture readings and get hardcopy printouts of HV plots—so you can document the sag or overshoot in a typical hipot test.

Vitrek's Calibration laboratory is ISO 17025 Accredited

The 4700 and probes come with a free ISO 17025 accredited calibration with data and uncertainties Chart Mode automatically plots voltage readings from a few seconds to several days. Highly useful for determining ramp linearity, overshoot and sag on hipot testers and other HV sources



Features

- Calibrates Hipot testers, HV power supplies and insulation testers
- Measures up to 10KV directly and 35, 70, 100 or 150KV with HV Smartprobes
- Basic accuracy—0.03% DC and 0.1% true RMS AC
- Color touch screen—makes for easy measurement selection and display
- Ethernet, serial, USB printer port all standard, GPIB optional
- Simultaneous AC and DC voltage readings
- Chart Mode provides graphic documentation of HV drift, ramp time, overshoot and sag
- Dual inputs allows Differential or Phase-to-Phase voltage measurement
- High speed DSP provides up to 60 filtered readings per second
- True RMS AC measurement from 0.01Hz to 600Hz—covering VLF to aviation frequencies
- AC noise rejection 78dB—for rock solid, six digit DC Measurements
- Optional battery pack goes up to 11 hours between charges
- G Series—high input impedance probes for electrostatic applications
- CE mark Certified to EN61010
- Available ISO 17025 accredited calibration
- Three year extended warranty (one year standard warranty)

General Specifications

AC/DC Voltage Measurement Resolution: Selectable 4, 5 or 6 digits Measurement Functions: DC Voltage, True RMS AC Voltage, Ripple, Peak to Peak, Crest Factor & Frequency Measurement (4 digits 0.01 Hz to 600Hz) Measurement Time: Selectable down to 16mS (60 readings per sec.) Maximum Input to Common Terminal: 3 KV Peak for 1 sec, no damage Accuracy Specifications: Valid one year ± 5C from Cal temperature

Standard Accessories

The 4700 and probes are shipped with an ISO 17025 cal cert with data and uncertainties, direct input test leads, chassis ground lead, operator's manual, and external power supply. The HVP handheld probes comes with a detachable probe tip and the HVL series probes ship come with a toroid corona shield

Warranty

Three year extended parts and labor warranty with no charge registration and annual factory calibration. One year standard warranty.

4700 Performance Specifications

Maximum Voltage Measurement (Input Impedance)

Direct Input Terminal:10KVDC, 10KVACrms (110 Meg ohms)
HVL/P-35 Probe.....35KVDC, 30KVACrms (200 Meg ohms)
HVL-35G Probe.....35KVDC (10 Gig ohms)
HVL-70 Probe.....70KVDC, 50KVACrms (400 Meg ohms)
HVL-70G Probe.....70KVDC (20 Gig ohms)
HVL-100 Probe.....100KVDC, 75KVACrms (600 Meg ohms)
HVL-100G Probe.....100KVDC (30 Gig ohms)
HVL-150 Probe.....140KVDC, 100KVACrms (1 Gig ohm)

DC Voltage Measurement Accuracy (Resolution)

Direct Input Terminal.....0.03% of reading + 0.03V (10mV)
HVL/P-35 Probe.....0.035% of reading + 0.07V (100mV)
HVL-35G Probe.....0.25% of reading + 1.5V (1V)
HVL-70 Probe.....0.04% of reading + 0.2V (1V)
HVL-70G Probe.....0.35% of reading + 3.5V (1V)
HVL-100 Probe.....0.05% of reading + 0.3V (1V)
HVL-100G Probe.....0.5% of reading + 15 (10V)
HVL-150 Probe.....0.08% of reading + 0.7V (10V)

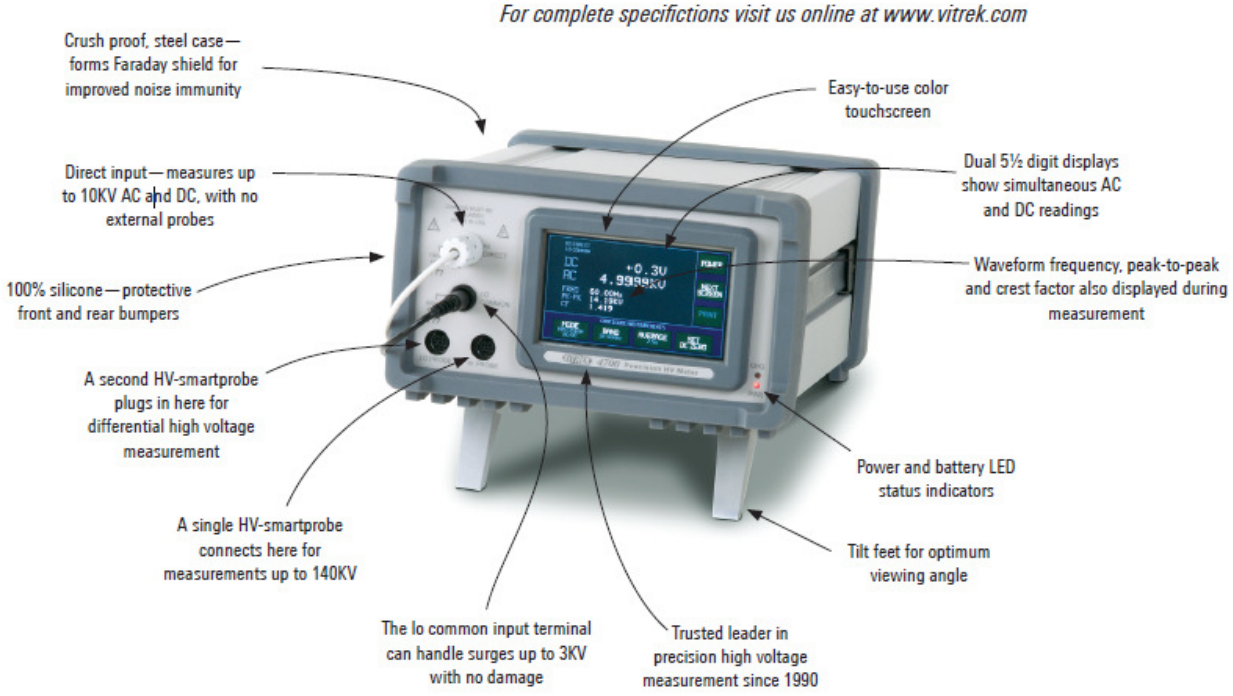
AC Voltage Measurement Accuracy (Resolution)

Direct Input Terminal.....0.12% of reading + 0.1V (10mV)
HVL/P-35 Probe.....0.1% of reading + 0.2V (100mV)
HVL-70 Probe.....0.1% of reading + 0.4V (1V)
HVL-100 Probe.....0.1% of reading + 0.6V (1V)
HVL-150 Probe.....0.5% of reading + 1V (10V)

AC Voltage Measurement Accuracy (Resolution)

Direct Input Terminal.....0.12% of reading + 0.1V (10mV)
HVL/P-35 Probe.....0.1% of reading + 0.2V (100mV)
HVL-70 Probe.....0.1% of reading + 0.4V (1V)
HVL-100 Probe.....0.1% of reading + 0.6V (1V)
HVL-150 Probe.....0.5% of reading + 1V (10V)

For complete specifictions visit us online at www.vitrek.com



Which product is right for you?
Contact us today.

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