

FEATURES

- Perform calibration yourself
- Perform multiple measurements:
 - DC
 - Ripple Voltage — AC superimposed on DC
 - AC Peak
 - AC RMS - true value
 - AC absolute average
- Low temperature and voltage coefficients
- Digital readout
- AC and DC coupling
- Battery or line power
- Built-in, self-regulating battery charger
- Lightweight and portable divider (KVM20 to KVM200)
- Rugged, reinforced carrying case (KVM20 to KVM200)
- True divider

BENEFITS

- NIST traceable
- Significant cost savings on outside calibrations
- High accuracy under varying ambient conditions
- Fast & accurate measurements
- Portable
- Suitable for field or factory
- Cannot be overcharged
- Use with oscilloscope or other measuring device

APPLICATIONS

- Calibration of AC and DC high voltage test equipment:
 - DC hipot testers
 - AC hipot (dielectric) testers
- Voltage monitoring of high voltage systems
- High voltage DC power supplies
- Flocking lines
- Semiconductor implantation systems

DESCRIPTION

The HIPOTRONICS KVM Series of kilovoltmeters are highly accurate, portable voltage measurement systems traceable to NIST standards. The KVM series consists of a high voltage divider assembly, a precision readout device, durable carrying case and interconnection leads. The carrying case and battery operation make the system completely portable for field testing while the precision divider assembly and readout device make it suitable for laboratory use.



HIPOTRONICS
THE MEASURE OF A LEADER

KVM Series AC/DC Kilovoltmeters



*KVM Series
Kilovoltmeters*

CONTROL PANEL FUNCTIONS

DC — The DC mode measures the average value of the direct current component of any voltage waveform.

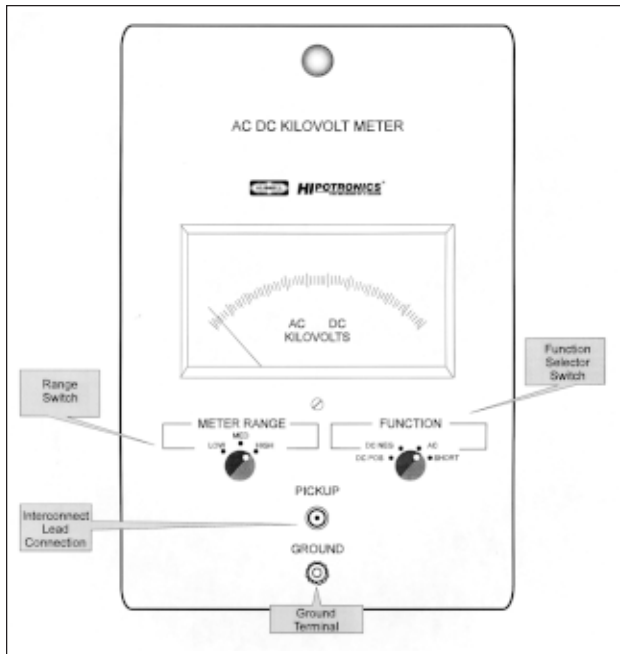
ABS AVG — The Absolute Average mode rectifies the input waveform (take the absolute value) and then averages this value. This mode will respond to both AC and DC components. In the DC coupling mode, the indicated value will be the algebraic sum of the average DC component plus the average of the AC component.

RMS — The Root-Means-Square mode indicates the true rms value of any waveform. A single integrated circuit directly computes the rms value of any complex waveform. It accurately converts signals with crest factors of up to five (peak value of five times the amplitude of the rms value). All calculations are done automatically.

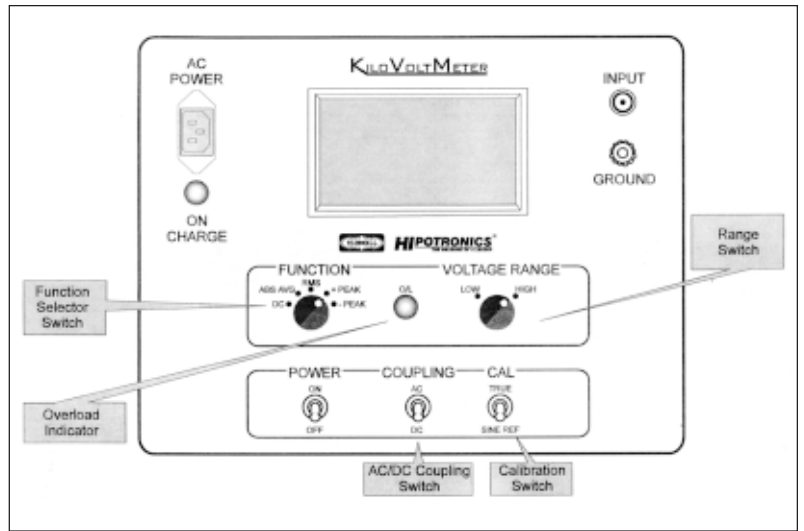
PEAK — The Peak mode will indicate the peak values of the waveform being measured. The Positive Peak mode will capture the highest or most positive excursion of the waveform (even though this may be a negative polarity). Conversely, the Negative Peak mode will capture the lowest or most negative excursion.

CALIBRATION SWITCH — This switch provides a method of checking the calibration of equipment with peak or average responding meters which are RMS indicating.

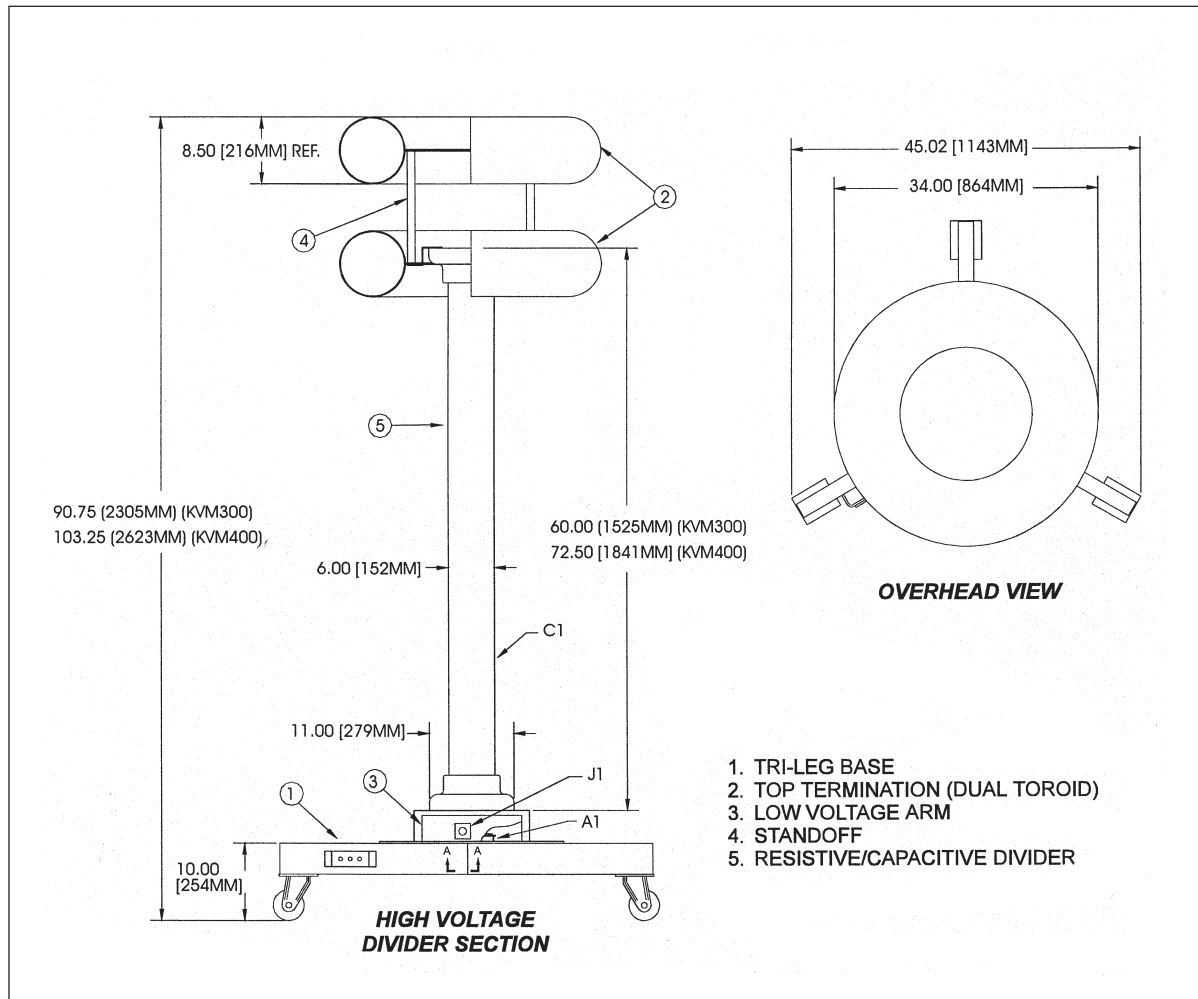
COUPLING — In the DC position the entire waveform is measured (both AC and DC components). In the AC position only the AC component is measured.



KVA Panel Detail



KVM Panel Detail



High Voltage Divider Dimensional Detail

1. TRI-LEG BASE
2. TOP TERMINATION (DUAL TOROID)
3. LOW VOLTAGE ARM
4. STANDOFF
5. RESISTIVE/CAPACITIVE DIVIDER

SPECIFICATIONS

MODEL NO.	KVM20	KVM100	KVM200	KVM300	KVM400
DISPLAY FEATURES					
INSTRUMENT	Digital, 3½ Digits ½" LED, Auto Polarity				
HIGH RANGE	0-19.99 kV	0-100 kV	0-199.9 kV	0-300 kV	0-400 kV
LOW RANGE	0-1.999 kV	0-10.0 kV	0-19.99 kV	0-30.0 kV	0-40.0 kV
ACCURACY (dc) (rms, average) (peak)	<0.5% <1.0% <2.0%	All Accuracies as % of Full Scale, Range from (10-100)% of Scale			
INPUT	Impedance = 1M ; Level = 100 VFS				
POWER REQUIREMENTS	Internal Battery - 4 NiCd Cells, Size D 8 Hour Operation - 16 Hour Recharge (at 120V or 220V) External Operation - 115, 60Hz or 220V, 50 Hz				
HIGH VOLTAGE DIVIDER ASSEMBLIES					
VOLTAGE RATING (rms) (dc) (peak)	20 kV AC 20 kV DC 28.3 kVp	100 kV AC 100 kV DC 142 kVp	200 kV AC 200 kV DC 283 kVp	300 kV AC 300 kV DC 425 kVp	400 kV AC 400 kV DC 566 kVp
NOMINAL RATIO (VOUT/VIN)	Assuming a Load Impedance of 1 M & < 500 pF				
	200:1	1000:1	2000:1	3000:1	4000:1
HV ARM IMPEDANCE	Parallel R&C branches				
RESISTANCE	80 M	380 M	760 M	900 M	1520 M
CAPACITANCE	200 pF	200 pF	200 pF	200 pF	200 pF
FREQUENCY RESPONSE	DC to 1 kHz				
STABILITY COEFFICIENTS TEMPERATURE VOLTAGE	<0.025%/°C <0.1% over the working voltage range				
INTERCONNECT CABLES	<ul style="list-style-type: none"> • One 25' coaxial (RG58/U) with BNC type connectors for interconnection between divider and readout device (KVM20 - KVM200; 50' long for KVM300, KVM400) • One 15' braided cable for divider ground lead • One 6' detachable power supply cord 				

NOTE: Above Model # with Suffix "-DO" indicates the divider section only of the kilovoltmeter.

ACCESSORIES

- SPARE PARTS KITS — Catalog Nos. SPK1- (Model No.)

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NOTE: Because Hipotronics, Inc. has a policy of continuous product improvement, it reserves the right to change design and specifications without notice.