



## Bare High Voltage Probes

Upgraded "bare" versions of our probes for space-saving installation into oil (or SF6) tanks are now available. These probes are similar to the VD series probes with somewhat lower accuracy at a somewhat lower cost. When installing these probes some information about the surrounding areas is required. The length of a VD-120 bare probe (120 kV) is 0.35 m. These units are threaded and can therefore be stacked into higher voltage units. The VD-60 and VD-120 are offered at 60 kV and 120 kV respectively. The bare probes are now available for use in air, but only at 60 and 1120 kV sizes.

Combinations at 180 kV, 240 kV, 300 kV and 360 kV can readily be created. 10,000:1 ratios are typical but other ratios are can be provided. Shielded probes or unshielded probes can be provided. Typical accuracy is 1 % DC and 1.5 % AC.

Bare probes are designed for use in equipment or in areas where the measurement conditions are well understood, the measurement is primarily DC, or there is not a conductor close by. They are designed with higher capacitance for minimization of stray capacitive effects without the use of shielding toroids. Shielding toroids can also be provided for very precise, built in measurements. The probes are long enough for use in air with appropriate electrodes, and can also be used in oil or SF6 gas. The probes have applications ranging from pulse modulator in-situ measurements to implantation equipment to excimer laser system measurements. They are factory calibrated, and they do not require adjustment when installed. They can be provided for use with various measurement instruments such as 10 Megohm meters and 1 megohm oscilloscopes, and various digitizers. The new rugged encapsulated design allows multiples of the VD-60B and VD-120B basic units to be coupled together for higher voltages.

Model Number	VD-60B	VD-120B	VD-180B	VD-240B	VD-300B
Max DC/Pulsed V (kV)	60/80	120/160	180/240	240/300	300/360
Max Frequency (Mhz.)	15	15	10	8	6
Cable Impedance (ohms)	50 ohm standard or customer specified				
DC - 2 Hz. accuracy	<1%	<1%	<1%	<1%	<1%
2 Hz. - 200 Hz. accuracy	<2 %	<2 %	<2 %	<2 %	<3 %
200 Hz. - 1 Mhz. accuracy	<2.5 %	<2.5 %	<3 %	<3 %	<3.5 %
> 1 Mhz. Accuracy	<3 %	<3 %	<4 %	<4 %	<5 %
Input R/C (Megohm/pf)	800/38	1600/19	2400/13	3200/9	4000/8
Cable Length (ft./m)	30/9	30/9	30/9	30/9	30/9
Standard Divider Ratio	10,000:1	10,000:1	10,000:1	10,000:1	10,000:1
Length (inches/cm.)	6.9/17.5	12.9/32.8	19.8/60.3	25.8/65.6	32.7/83.1

Part Numbers are VD-xxxB-yy. yy = 10 is the standard 10,000:1 ratio -5 is 5,000:1 -20 is 20,000:1 High frequency accuracy improves if the geometry is well understood or conductors are far away.