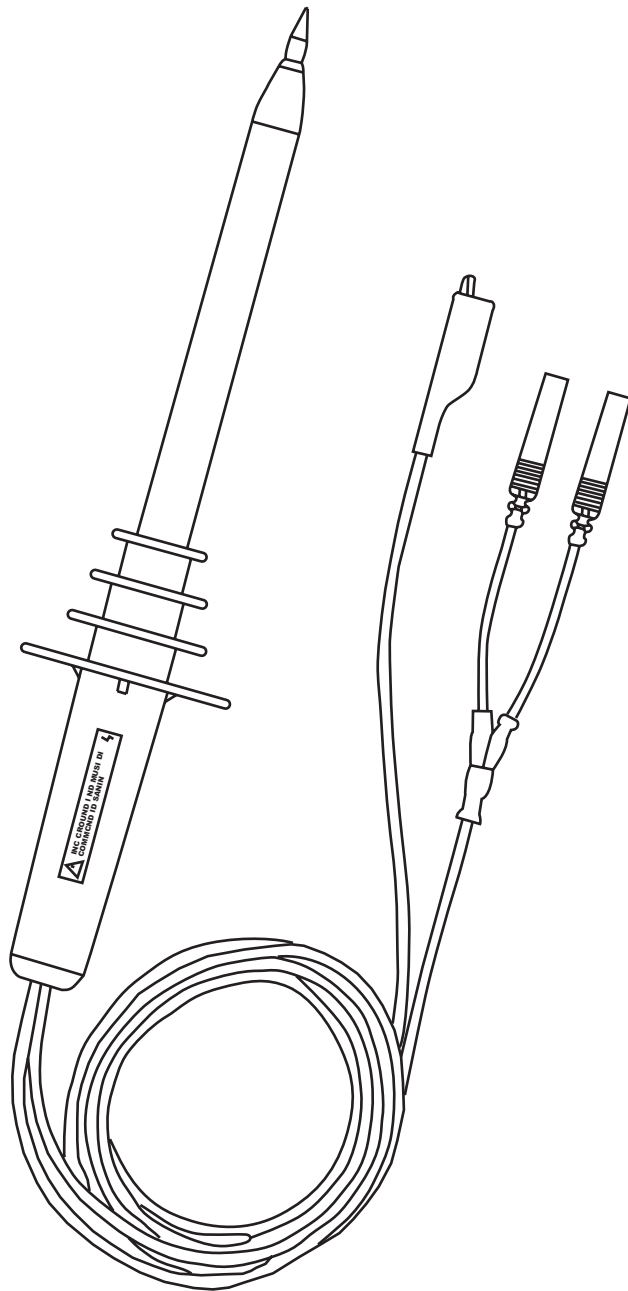


KEITHLEY

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Model 1600A High Voltage Probe User's Guide



WARNING This high voltage probe is designed to prevent accidental shock to the operator when properly used. This operating note must be read and fully understood prior to using the probe.

Specifications

Input resistance:	Approx. 1000m Ω
Division ratio:	1000:1
Maximum working voltage:	40KV DC or Peak AC, 28KV RMS AC
Accuracy:	DC volts: $\pm 1\%$ (1KV to 20KV), $\pm 2\%$ (20KV to 40KV) AC volts: Typically 5% at 60Hz
Temperature Coefficient:	Less than 200ppm/ $^{\circ}$ C
Operating temperature:	0 $^{\circ}$ C to +50 $^{\circ}$ C
Storage temperature:	-20 $^{\circ}$ C to -70 $^{\circ}$ C
Cable length:	1 meter

Safety precautions

This high voltage probe must only be used by personnel who are trained, experienced, or otherwise qualified to recognize hazardous situations and who are trained in the safety precautions that are necessary to avoid possible injury when using such a device.

Do not work alone when working with high voltage circuits.

For your own safety, inspect the probes for cracks and frayed or broken leads before each use. If defects are noted, DO NOT use the probe.

Hands, shoes, floor, and work bench must be dry. Avoid making measurements under humid, damp, or other environmental conditions that might affect the safety of the measurement situation.

If possible, always turn the high voltage source off before connecting or disconnecting the probe.

The probe body should be kept clean and free of any conductive contamination. Refer to the section on cleaning.

Operation

1. Connect the plugs to the volts (HI) and com (LO) input terminals of your voltmeter.
2. Select the desired voltmeter function and range: do not use autoranging.
3. Whenever possible, turn the high voltage source off before making any connections.
4. Connect the divider probe common lead (alligator clip) to a good earth ground or reliable chassis ground.

WARNING Do not attempt to take measurements from sources where the chassis or return lead is not grounded.

WARNING This ground connection is critical to the safe operation of the probe. Failure to make this connection when making high voltage measurements may result in personal injury or damage to the probe or voltmeter. This connection must always be made **BEFORE** the probe tip comes into contact with the high voltage and must not be removed until after the probe tip has been removed from the high voltage source.

WARNING Do not connect the ground clip lead to the high voltage source or the probe lip to ground for any reason.

WARNING Before turning the high voltage on, make sure that no part of your body is in contact with the device under test.

5. Measure the voltage remembering that the voltage being measured is 1000 times greater than the voltmeter reading.
6. Turn the high voltage off.
7. Disconnect the probe tip from the high voltage source **BEFORE** removing the ground clip lead.

Cleaning

Clean only the exterior probe body and cables. Use a soft cotton cloth lightly moistened with a mild solution of detergent and water. Do not allow any portion of the probe to submerge at any time.

Dry the probe thoroughly before attempting to make voltage measurement.

Do not subject the probe to solvent fumes as these can cause deterioration of the probe body and cables.