

Keysight 34136A High Voltage Probe



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CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

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Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU

This product complies with the WEEE Directive (2012/19/EU) marking requirements. This affixed product label indicates that you must not discard this electrical or electronic product in domestic household waste.

Product category:

With reference to the equipment types in the WEEE directive Annex 1, this product is classified as a “Monitoring and Control Instrument” product.

The affixed product label is as shown below.



Do not dispose in domestic household waste.

To return this unwanted product, contact your nearest Keysight Service Center, or visit <http://about.keysight.com/en/companyinfo/environment/takeback.shtml> for more information.

WARNING

This high voltage probe is designed to prevent accidental shock to the operator when properly used. This operating note must be read and understood prior to using the probe. Improper procedures or incorrect analysis of the measurement situation can result in serious shock.

General Information

The Keysight 34136A High Voltage Probe is an accessory to be used with analog or digital multimeters having an input resistance of $10\text{ M}\Omega$ ($\pm 1\%$). The 34136A is a 1000:1 divider which extends a voltmeter's measurement capability to 28 kV rms ac (DC+AC p-p 40 kV).

Specifications

Maximum input voltage

DC voltage: 28 kV rms ac (DC+AC p-p 40 kV)

AC voltage: (0 to 300 Hz) 28 kV rms

Typical accuracy

DC voltage: $\pm 2\%$ (1 kV to 20 kV) $\pm 3\%$ (20 kV to 40 kV)

Temperature coefficient

Less than 200 ppm/ °C

Typical division ratio accuracy

1000:1 $\pm 1\%$ when terminated in $10\text{ M}\Omega$

2000:1 $\pm 6\%$ when terminated in $1\text{ M}\Omega$

Note: For the 34401A, 34405A, L4411A, 34410A/11A, and 3458A multimeters, the ACV input impedance function has a $1\text{ M}\Omega$ input impedance.

Pollution degree 2

Other Characteristics

Input resistance

$1000\text{ M}\Omega$

Cable length

1 meter

Altitude

Up to 2000 meters (6561 ft)

Typical accuracy

AC voltage: 5% at 60 Hz

Operating temperature

0 °C to +50 °C

Storage temperature

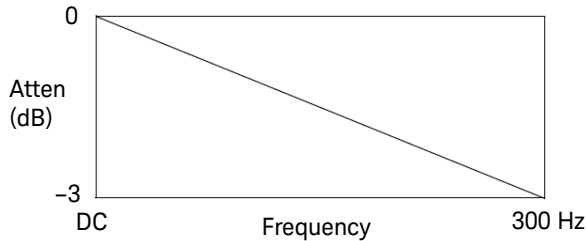
-20 °C to +70 °C

Humidity

Up to 80% relative humidity at +40 °C

AC output derates with frequency to -3 dB at 300 Hz. The graph below shows typical AC accuracy.

Actual AC accuracy varies with the amount of shunted input capacitance.



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 effect the safety of the measurement situation.
- It is advisable to 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

- Connect the plugs to the volts [Hi] and com [Lo] terminals of your voltmeter.
- Select the desired voltage function and range; do not use autoranging.
- Whenever possible, turn the high voltage source off before making any connections.
- 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.
 - The ground lead 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 in contact with the high voltage and must not be removed until the probe tip has been removed from the high voltage source.
 - Do not connect the ground clip lead to the high voltage source for any reason.
 - Before turning the high voltage on, make sure that no part of your body is in contact with the device under test.
 - Measure the voltage remembering that the voltage being measured is **1000** times greater than the voltmeter reading.
 - Turn the high voltage off.
 - Disconnect the probe tip from the high voltage source **BEFORE** removing the ground clip lead.
 - This probe assembly is intended for use within measurement category I. Do not use the probe assembly for measurements within the other measurement categories or transient overvoltages greater than **1500 V**.
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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 be submerged at any time.
- Dry the probe thoroughly before attempting to make voltage measurements.
- Do not subject the probe to solvents or solvent fumes as these can cause deterioration of the probe body and cables.

This information is subject to change without notice. Always refer to the Keysight website for the latest revision.

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