

# HIGH VOLTAGE DIFFERENTIAL PROBES



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**Differential active probes are like two probes in one. Instead of measuring a test point in relation to a ground point (like single-ended active probes), differential probes measure the difference in voltage of a test point in relation to another test point.**

LeCroy  
High Voltage  
Differential Probe  
Model Numbers:

**AP031**  
**ADP300**  
**ADP305**

*Opposite page:  
ADP305 High Voltage Differential Probe*

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Model Numbers:

**AP031**  
**ADP300**  
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The AP031 is a low cost, battery operated active differential probe intended for measuring higher voltages. The differential techniques employed permit measurements to be taken at two points in a circuit without reference to the ground, allowing the oscilloscope to be safely grounded without the use of opto-isolators or isolating transformers.

## Features

- Safe floating measurements
- 15 MHz bandwidth
- 700 V maximum input voltage
- Works with any 1 M $\Omega$  input oscilloscope

## AP031 Specifications

Attenuation	$\div 10 / \div 100$
Bandwidth	15 MHz
Input R	4 M $\Omega$
Differential Mode Range	$\pm 70$ V / $\pm 700$ V DC + Peak AC
Common Mode Range	$\pm 700$ V DC + Peak AC
CMRR	86 dB @ 50 Hz 56 dB @ 200 kHz

Power Requirements: four AA batteries

# HIGH VOLTAGE DIFFERENTIAL PROBES

ADP30X high-voltage active probes are safe, easy-to-use, and ideally suited for measuring power electronics. The ADP300 is designed for troubleshooting low-frequency power devices and other circuits where the reference potential is elevated from the ground or the location of the ground is unknown. The ADP305 is designed for measuring the high-speed floating voltages found in today's power electronics.



## Features

- 20 MHz and 100 MHz bandwidth
- 1,000 V rms common mode voltage
- 1,400 V peak differential voltage
- EN 61010 CAT III
- 80 dB CMRR at 50/60 Hz
- ProBus system
- Full remote control

## ADP30X Specifications

### Electrical Characteristics

Bandwidth	20 MHz (ADP300) 100 MHz (ADP305)
Differential Voltage	1,400 V peak
Common Mode Voltage	1,000 V rms CAT III
Low-Frequency Accuracy (probe only)	1% of Reading
CMRR	50/60 Hz 80 dB (10,000:1) 100 kHz 50 dB (300:1)
Max. Slew Rate (referenced to input)	60,000 V/ $\mu$ s (ADP300) 300,000 V/ $\mu$ s (ADP305)
AC Noise (referenced to input)	50 mV rms
Attenuation	$\div 100/\div 1000$ (automatically selected by scope)
Input Impedance	Between inputs 8 M $\Omega$ , 6 pF Each input to ground 4 M $\Omega$ , 1 pF
Sensitivity	1 V/div to 350 V/div (ADP300) 200 mV/div to 350 V/div (ADP305)
Interface	ProBus, 1 M $\Omega$ *

### General Characteristics

Overall Length	2 m
Input Connectors	4 mm Shrouded Banana Plug
Operating Temperature	0 °C to 50 °C
Warranty	1 year

\*Requires AP-1M for oscilloscopes with 50  $\Omega$  only inputs

## Ordering Information

### Product Description

Product Description	Product Code
700 V, 15 MHz Differential Probe ( $\div 10$ , $\div 100$ )	AP031
1,400 V, 100 MHz High-Voltage Differential Probe	AP305
1,400 V, 20 MHz High-Voltage Differential Probe	AP300