Technical Data Sheet

Differential Probe for Power Measurement- Model 4231

The 4231 is designed to safely analyze floating signals. The built in amplifier scales and converts the high voltage differential input to a low, voltage single-ended BNC output, compatible with any oscilloscope. The inputs are useful in measurements of power semiconductor circuits,
robotic drives, NC machines and the latest switching circuits.

Applications
-Switching Power Supply Design
-Motor Drive Design
-Electronic Ballast Design
-CRT Display Design

Features
-Up to +1400V (DC +Peak AC) Differential
and Common Mode
-Safety Certified
-Economical Cost

Price Includes
-Black Storage Box
-Red & Black Sprung Hooks
-Calibration Certificate
-4ea AA Batteries
-9 VDC Adapter

Model 4231 Specifications

Bandwidth	DC to 25 MHz (-3dB)
Attenuation Ratio	1:20/200
Accuracy	+/- 2%
Rise Time	14ns
Input Impedance	4 Mohm//5.5pF each side to ground
Input Voltage)** -Category -Differential Range -Common Mode Range -Absolute Max. Voltage(Differential or Common Mode)	 Cat III 140 Vrms and +/- 140V(DC + Peak AC) @ 1/20 1000 Vrms and +/-1400V(DC + Peak AC)@ 1/200 1000 Vrms and +/-1400V(DC + Peak AC) @ 1/20 & 1/200 1000 Vrms and +/-1400V(DC + Peak AC) @ 1/20 & 1/200 CAT III at 1/20 & 1/200
Output Voltage -Swing -Offset (typical) -Noise (typical) -Source Impedance (typical)	 +/- 7V(into 50 kohm load) <+/-5mV 0.7mVrms 50 ohm (for using 1 Mohm input system oscilloscope)
CMMR (typical)	-80dB @ 50 Hz, -60dB @ 20kHz
Ambient Operating Temperature	-10 to 40 degrees centigrade
Ambient Storage Temperature	-30 to 70 degrees centigrade
Ambient Operating Humidity	Up to 85% RH
Ambient Storage Humidity	Up to 85% RH
Power Requirements*	- Standard-4 x AA Cells , 9VDC/40mA Mains Adapter (Both Included) -Options-USB Power cord Power leads
Length of BNC Cable	37"
Length of Input Leads	17"
Dimensions	7 1/4" x 2 3/4" x 1"
Weight	.583 lb
Plugs 4mm Banana plugs	- Use with accessories below

* a. The supplied voltage must be less than 12V and greater than 4.4V, or the probe could be damaged or will not operate properly.

b. polarity is "+" inside and "V" outside. For wrong polarity, built-in circuit protects the probe, no danger or damage will occur.

c. When the voltage of the cells become too low, the power indicator on the panel will flicker.

** (Input Voltage)The differential and common mode voltage range is the operating voltage range and the absolute voltage range is the safety voltage range.