## A6901
### Ground Isolation Monitor

- *Permits Elevation of Test Instrument Chassis to 40 V Peak (28 V RMS)*
- *Aids in Circuit Analysis or Circumventing Ground Loop Noise Problems*
- *UL and VDE Safety Certification*

## A6902B
### Voltage Isolation Amplifier

- *For 50 Ω or 1 MΩ Inputs*
- *Two Independently-Isolated Channels*
- *High Voltage Isolation*
- *UL Certified to 3000 V/Channel (6000 V Maximum Channel Differential)*[1]
- *DC to 20 MHz Bandwidth*

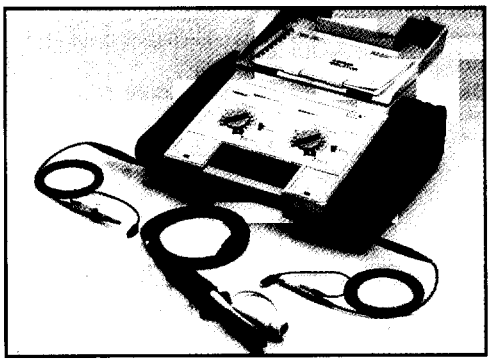
## ORDERING INFORMATION

| | |
|---|---|
| **A6901** Ground Isolation Monitor<br>Includes: Operator manual (070-3618-00). | **$1,200** |
| **A6902B** Voltage Isolator (500 V Max)<br>Includes: Two 500 V isolation probes (010-0411-15); Right angle power cord (161-0104-00); 98 in (249 cm), 50 Ω output cables (012-0204-00); Operator manual (070-5614-00). | **$2,200** |
| **Opt. 02**[*2] – Add two large probes. (010-0409-01) | **+$630** |
| **Opt. 09**[*2] – Add two large probes plus two 4 mm banana adapters | **+$725** |
| **INTERNATIONAL POWER PLUG OPTIONS** | |
| **Opt. A1** – Universal Euro 220 V, 50 Hz. | **NC** |
| **Opt. A2** – UK 240 V, 50 Hz. | **NC** |
| **Opt. A3** – Australian 240 V, 50 Hz. | **NC** |
| **Opt. A4** – North American 240 V, 60 Hz. | **NC** |
| **Opt. A5** – Switzerland 220 V, 50 Hz. | **NC** |

[*1] *When ordered with Option 02 or 09.*

[*2] *Extends range to 3,000 volts per channel.*

*For A6901 (North American 240 V not available. Neutral not grounded in 240 V North American Systems.)*



## A6902B VOLTAGE ISOLATION AMPLIFIER

The A6902B is a dual-channel, optical- and transformer-coupled voltage isolator. It allows safely grounded test instruments to make floating measurements at high sensitivity levels in the presence of large common mode signals. Placed between your grounded test instrument and the circuit you are testing, it allows you to safely make floating measurements up to ±500 V (DC plus peak AC) with the small signal probes or ±3000 V (DC + peak AC) with the optional large probes. Both probes are quickly interchangeable at the cable connectors and can be stored in convenient, removable side pouches.

Designed for use with any dual-channel oscilloscope, the A6902B permits simultaneous observation of two signals at two different points in the same circuit, or signals in two different circuits without respect to common lead voltages.

Separate, calibrated controls for volts per division on each channel allow precise floating measurements. The plastic case and external controls protect the user during control settings and other operations. Other than probe tip connections, the user is never in close proximity to hazardous voltages.

## CHARACTERISTICS

### ELECTRICAL

***Deflection Factor*** – Probe Tip Sensitivity: 20 mV/div to 500 V/div in 1-2-5 sequence with oscilloscope set to 100 mV/div. Accuracy: ≤ 5% of indicated V/div switch setting.

***Frequency Response Bandwidth*** – DC coupled (to –3 dB point) is ≥ 20 MHz. AC coupled (to lower –3 dB point) is ≤ 5 Hz to ≥ 20 MHz. (50 to 500 V/div not specified).

***Transient Response*** – Rise time: ≤ 17.5 ns.

### MAXIMUM WORKING VOLTAGE

***Small Probe (500 V)*** – Probe Center Tip to Earth Ground: 500 V (dc + peak ac). Probe Center Tip to Probe Common: 500 V (dc + peak ac) to 3 MHz. Maximum voltage derates above 3 MHz. Probe Common to Earth Ground: 500 V (dc + peak ac) to 6 MHz. Maximum voltage derates above 6 MHz.

***Large Probe (AC Coupled)*** – Probe Center Tip to Earth Ground: 500 V (dc + peak ac).

***Large Probe (DC Coupled)*** – Probe Center Tip to Earth Ground: UL 3000 V. Probe Center Tip to Probe Common: UL 3000 V (dc + peak ac) to 450 kHz. Maximum voltage derates above 450 kHz. Probe Common to Earth Ground: UL 3000 V (dc + peak ac) to 250 kHz. Maximum voltage derates above 250 kHz.

***Maximum Input dV/dt*** – 100 V/ns.

***Input Impedance*** – Resistance: 10 MΩ ±3%. Capacitance: ≈19 pF with either probe.

***Output Impedance*** – 50 Ω ±5%.

***Output Drive*** – 4 V p-p into 1 MΩ.

***Common-Mode Capacitance*** – 100 pF from probe common to earth ground.

***Max Common to Ground Slew Rate*** – 500 V/μs

***Tangential Noise*** – ≤ 20 mV.

***DC Drift with Temperature*** – ≤10 mV/°C or (0.1 div/°C) at output.

***Range of Output DC Level*** – At least + 5 div from center screen.

***Channel Isolation*** – Maximum Voltage: Using two 3,000 V UL probes is 6000 V (dc + peak ac) UL. Using two 500 V probes is 1000 V (dc + peak ac).

***Delay*** – 51 ns ±3 ns (large probe), 52 ns ±3 ns (small probe), from probe input to instrument input. CH 1, CH 2 delay difference is ≤ 4 ns.

***Common Lead Signal Feedthrough*** – –106 dB from probe input to output BNC to 100 Hz. Derated above 100 Hz.

### POWER REQUIREMENTS

***Line Voltage Ranges*** – Low: 90 to 132 V. High: 180 to 250 V.

***Line Frequency Range*** – 48 to 440 Hz.

***Maximum Power Consumption*** – 24 W at 115 V, 60 Hz.

## A6901 GROUND ISOLATION MONITOR

Placed between a measurement instrument and its power source, the A6901 Ground Isolation Monitor acts as an indirect grounding device, allowing floating measurements to be made with operator protection. When the isolated voltage exceeds 40 V peak (28 V RMS), the A6901 interrupts the power to the instrument, connects it to the power source grounding system and sounds an audible signal. The A6901 also tests for a functional ground between the power source and the instrument before the monitor goes into the isolation mode.

## CHARACTERISTICS

### ELECTRICAL

***Trip Voltage (DC)*** – 40 V peak (28 V RMS) or ±40 V (within 5%).

***Trip Current*** – 0.5 mA, 3.5 to 5 mA selectable.

***Neutral-to-Ground Continuity*** – Between 3 and 10 V RMS (8.5 and 28.3 V p-p), 50 Hz.

***DC Voltage Trip Delay*** – < 20 ms.

***Line Voltage Ranges*** – 90 to 128 V RMS, 180 to 250 V RMS.

***Line Frequency Range*** – 48 to 66 Hz.

***Maximum Power Consumption (No External Load)*** – 12 W at 115 V, 60 Hz.

***Load Power*** – 500 W maximum.