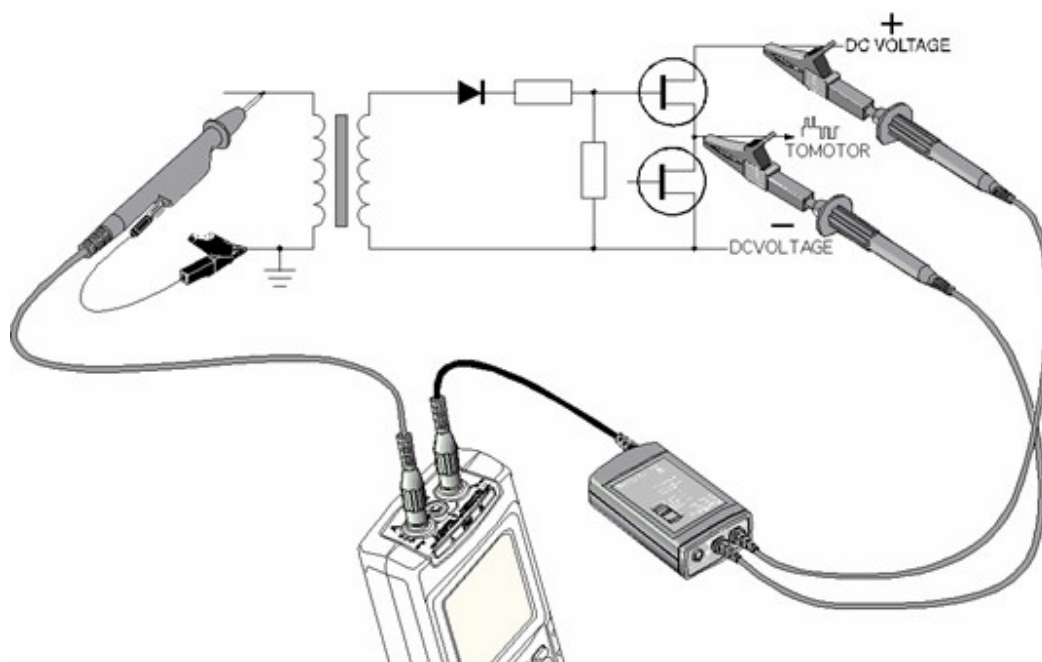


Model 6731 Active Differential Probe

Features:

- ✓ Allows user to safely make floating high voltage measurements while using general purpose oscilloscopes.
- ✓ Maximum differential voltage up to 1000V.
- ✓ Differential amplifier converts and scales floating input signal to a low-voltage signal referenced to earth ground.
- ✓ The probe can be used on circuits associated with electronic high-power converters, motor speed controllers, switching power supplies, and other high voltage circuits requiring isolation.
- ✓ Switchable attenuation settings.
- ✓ High impedance to ground for both positive and negative sides of the balanced input.
- ✓ Input uses shrouded banana test probe tip.
- ✓ Probe tip accepts large alligator clips and pin-grabber test clips (included).
- ✓ The output to the oscilloscope is a BNC cable with a safety insulated BNC male connector.
- ✓ Optional Universal Power Adapter.



Specifications:

Input Characteristics

Input Probe Tip Style: Shrouded banana probe tip

Probe Cable Length: 1.5 meter (60 inch)

⚠️ Maximum Input Voltage to Ground:

600V CAT III

1000V CAT II

Installation Category III refers to distribution level and fixed installation circuits inside a building. Installation Category II refers to local level, which is applicable for appliances, and portable equipment.

⚠️ Maximum Differential Input Voltage:

1000 VDC, or

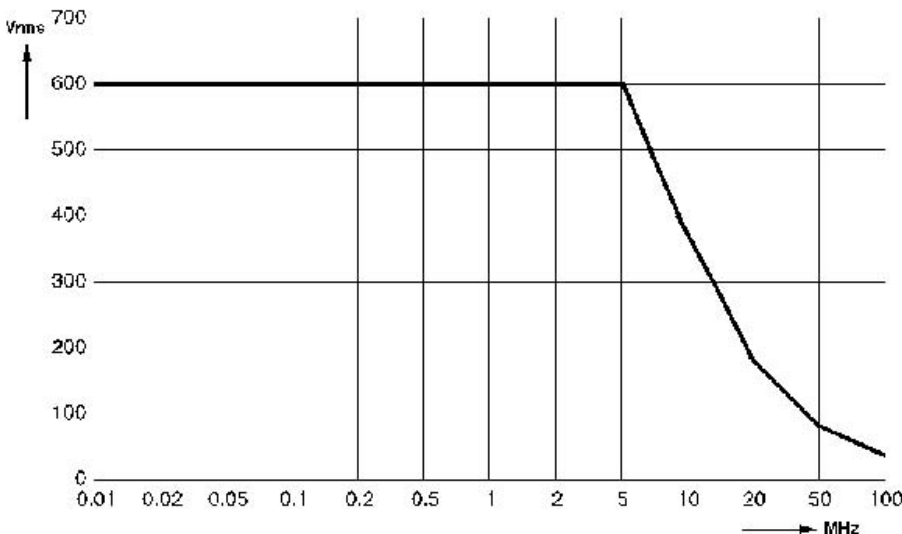
1000 Vrms, or

1200V (DC+AC peak)

Note:

(DC+AC peak) limit is determined by the point at which the differential voltage probe starts clipping.

For derating of each input probe (red or black), see figure below.



Output Characteristics

Output Cable: Safety designed BNC cable

Cable Length: 0.5 meter (20 inch)

Max. Output Voltage Range: $\pm 6.5V$ into $1 M\Omega$

Electrical Characteristics

Attenuation: 200x and 20x

Bandwidth: (into $1 M\Omega$, $50 pF$)

200x: DC to 20 MHz (-3 dB)

20x: DC to 20 MHz (-3 dB)

Accuracy: $\pm 2.5\%$ into $1 M\Omega$

Rise time:

200x: 17.5 ns
20x: 17.5 ns

CMRR:

200x: @60Hz= >80 dB, @1 MHz= >50 dB
20x: @60Hz= >70 dB, @1 MHz= >40 dB

Input Impedance:

Between each input to shielding BNC: 5 M Ω , 6 pF
Between the inputs: 10 M Ω , 5 pF

Output Impedance: 50 Ω **Noise:**

200x: <2 mVrms
20x: <3 mVrms

Offset: \leq 10 mV into 1 M Ω **Switch positions:** OFF, 200x, 20x**Power****External:**

Via power adapter 6732 (optional)

Internal:

Battery Power: Alkaline 9V, IEC6LR61

Battery life measured @ 25 °C with Duracell® alkaline battery. (Delivered with probe.)

Battery Life: 8 hour operation
400 hour in auto standby

Power indicators:

Green LED: ON at normal operation.
Blinks in standby.

Red LED: ON when battery needs to be replacing. (To change from standby to normal operation turn switch from OFF to 20x or 200x.)

Auto Stand By:

After 30 minutes, only when battery operated

Environmental**Meets requirements of:**

MIL-T-28800E, Type III, Class 3.

EN 50081-1, Electromagnetic Compatibility Generic Emission Standard: EN55022 and EN60555-2.

EN 50082-2, Electromagnetic Compatibility Generic Immunity Standard: IEC801-2, -3, -4, -5. (see also Tables 1 and 2)

This product is in conformity with Electromagnetic Compatibility Directive 89/336/EEC and Low Voltage Directive 73/23/EEC.

This conformity is indicated by the symbol CE , i.e. "Conformité Européenne".

Temperature:

Operating: 0°C to +50°C (+32°F to +122°F)

Storage: -10°C to +60°C (+14°F to +140°F)

Altitude:

Operating: 3 km (9850 feet)
Storage: 12 km (40 000 feet)

Safety Specifications

Meets requirements of:

EN61010-2-31 (IEC1010-2-31).

Compliant with:

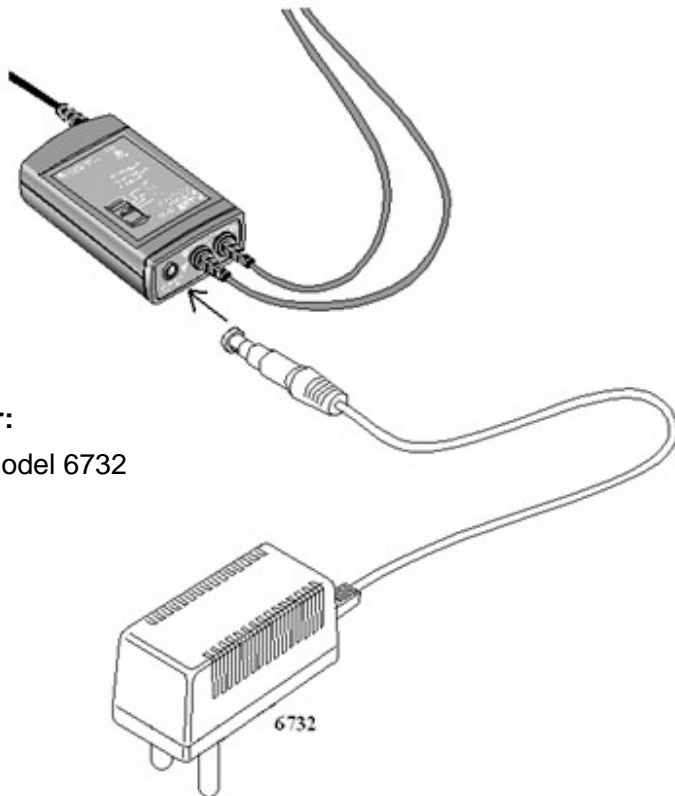
UL3111-1 (including listing)

CSA C22.2 No.1010.1-92 (including approval)

Max. Floating Output Voltage:

600V Category III, up to 400 Hz. (From shielding to ground)

The 6731 conforms with the EEC directive 89/336 for EMC immunity, as defined by IEC801-3, with the addition of the following tables.



Optional power adapter:

Universal 115V/230V: Model 6732