HV1000f

Fast high voltage amplifier for high impedance loads

The high voltage amplifier HV1000f is a linear regulated, ultra fast high voltage power supply which delivers voltages up to 1000V.

Voltages and current

- Supply voltage is 12V nominal with a maximum current of 0.2A. Tolerated input voltage range is 10-14V.
- Output voltage 6...1000V. Voltages below 6V are possible but not with the current and dynamic specifications mentioned below.
- Peak output current around +/-5mA, average current 1.5mA max.
- maximum average output power 1.5W.
- The device works internally with a fixed voltage supply and a linear amplifier attached to it.
- The output is short circuit proof.
- The control voltage at the input should be in the range 0-10V, the amplification is 100V/V

dynamic behavior

- Rise and fall time (10%-90%) around 10µs for a voltage change of 1000V and a maximum load capacity of 50 pF. This corresponds to a slew rate of 80V/µs.
- Load capacities exceeding 50 pF are possible, but will compromise slew rate, rise and fall times.
- Small signal bandwidth of the amplifier around 50 kHz.

environmental

- Temperature range 0-35 °C
- humidity 0-80%, the supply is designed for operation in dry laboratory rooms.
- Protection class III, IP42.

Connections, indicators

- BNC connector for control signal in.
- BNC connector for monitor voltage out.
- SHV connector for output voltage.
- Plug for supply voltage input from 12V wall plug power supply.
- LED for operational status.

size and delivery content

- Housing, size around 170*110*50mm
- Wall plug power supply 12V.
- Manual.

Safety, EMC

- The output of the supply may deliver even more than 2mA at very low impedance and therefore has to be considered as dangerous for touching.
- The device is conformal to laws about electromagnetic compatibility.

The device is under development. Small changes are reserved.

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