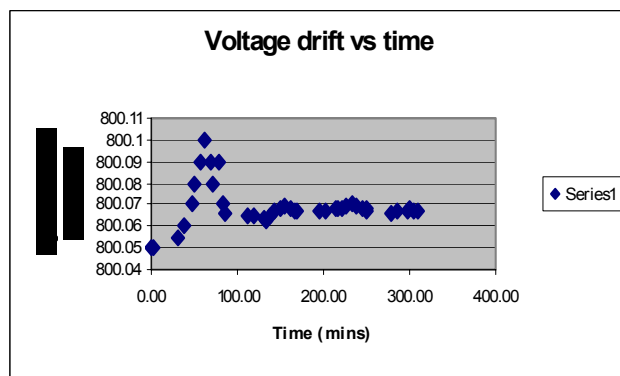


# LM Series Advanced High Voltage Technology



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A considerable effort has been invested into a new technology of the resonance mode power supplies that gives low ripple high response time and high accuracy and stability.



A record of the spectrometer voltage drift over 5 hours of measurement period.

## Computer Controlled Power Supply

Two sets of 5 computer controlled modules of bipolar power supplies. Modules built in the latest resonance-mode technology

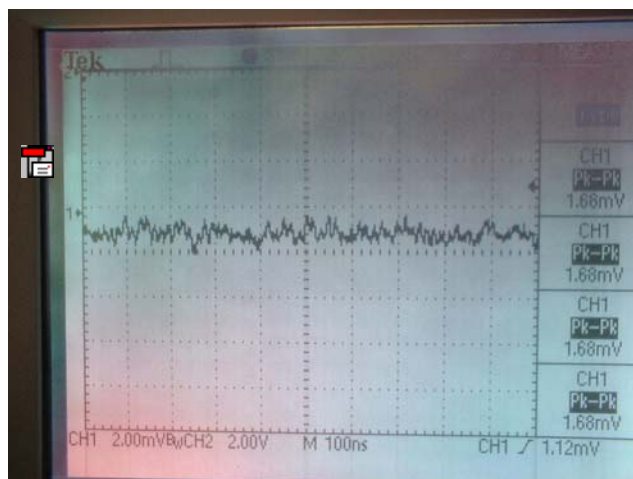
3 gain ranges computer adjustable

- UPS/ELS 0-150 eV
- XPS standard 0-1500eV
- XPS extended energy 0-2500eV.

All essential functions such as CRR, CAE value Emin, Emax, step size, step time etc. are computer controlled

For all modules there is an accurate and continuous computer monitoring and control of gain, offset and calibration values to within  $\pm 1$  LSB in 16 bits.

Accurate readouts for voltage and current outputs ensure remote diagnostics and servicing.



Storage scope record of the ripple at the output of the spectrometer energy module.



Each PSU contains 5 easily exchangeable PSU modules, that give out 2 independent voltages. The PSU is computer controlled via opto-coupled link.

System Power supplies	Lens modules	Analyser modules
Accuracy/min. step (bits)	16	16
Ripple UPS mode (mV)	10	0.5
Ripple XPS mode (mV)	20	5
Stability XPS mode (mV/5hours)	100	10

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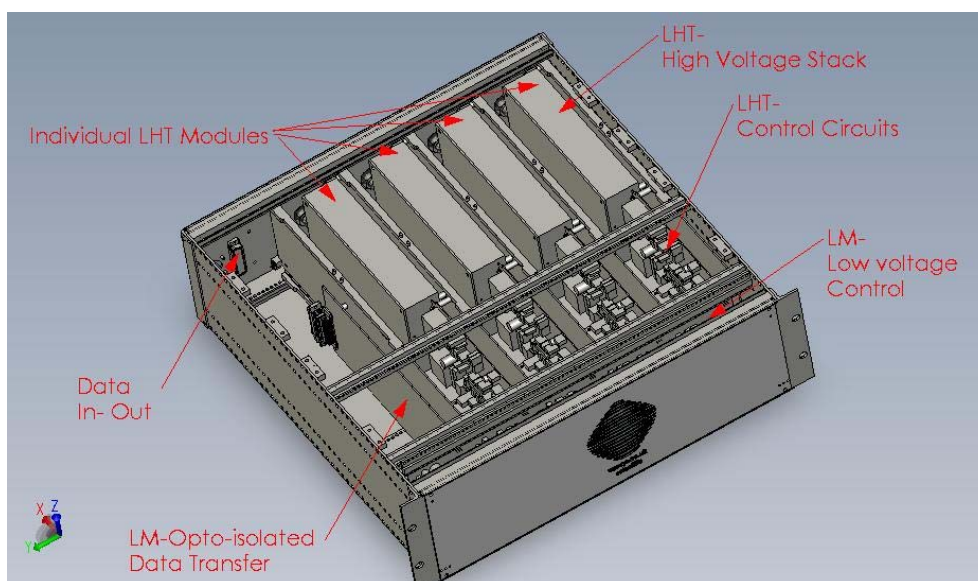
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# LM– MkII Series of 20-bit Accuracy in High Voltage Technology



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A newly developed computer control has been improved to 20-bit resolution. The power supply modules have been equipped to match temperature and voltage stability to that resolution. All parameters are monitored and displayed using standard software interfacing techniques and a PC.



*A new LM12 MKII with the top lid open. Each PSU contains 4 easily exchangeable PSU modules, that give out 4 independent voltages . The PSU is computer controlled via opto-coupled USB link.*

## Control & Monitoring

- 20-bit monolithic DAC for Voltage control
- 16-bit ADC monitor
- Parallel in-out data connection
- Opto-isolated data lines to 2kV
- Via a separate board
- Standard Connection to a computer via USB
- Standard service port for manual operation
- Standard software for computer control
- Remote diagnostic service standard

## LHT– Lens High Voltage Modules

- New robust modular construction
- Improved HT tracking distances to allow higher maximum voltages now to 20kV
- New development of high stability analog feedback
- Modular construction of LHT control and High Voltage stacks
- High voltage stacks are interchangeable for different maximum output voltages

VS MicroAnalysis

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