

# Pico FLEX

High Voltage Multi-Channel Floating Picoammeter



## HIGHLIGHTS

### FEATURE

Floating high voltage capability

Based on the FLEX platform

For best performance, combine with FLEX Power Supply

### BENEFIT

Allows the user to measure currents with high precision on objects biased at high voltage (up to  $\pm 6000$  V)

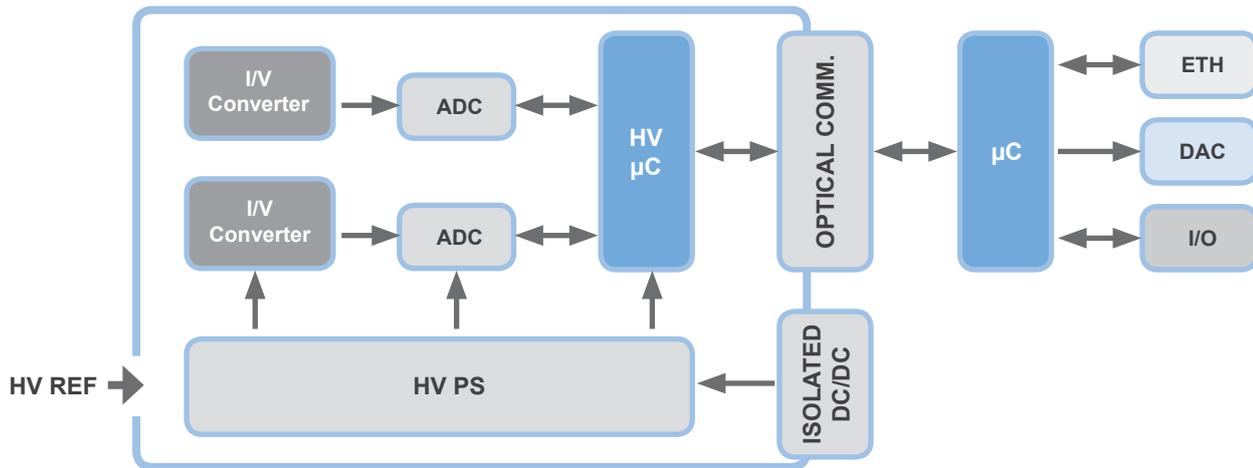
Modules for different applications (picoammeters, power supplies, DAC, ADC) can be housed together in the same 3U-19" chassis

When housed in the same chassis, it is straightforward to optimise the performance

## APPLICATIONS

- I-V characterisation on semiconductor and optoelectronic devices
- Positive intrinsic negative (PIN) and avalanche photodiodes (APDs) testing
- Measurement of photoemission current from high voltage floating samples
- Measurement of MCP and Channeltrons currents irrespective of bias polarity
- Measurement of polarized electrostatic lenses leakage currents

## PICO FLEX BLOCK DIAGRAM



## HOW DOES IT WORK?

The PicoFlex high voltage floating picoammeter is composed of a particular transimpedance input stage for current sensing, combined with several analogue signal conditioning and filtering stages with state-of-the-art electronics. A high-speed fibre-optic interface combined with a high-voltage isolated DC/DC converter allow the input stage to be biased up to 6 kV with respect to the ground, allowing measurements to be made of ultra-low currents referred to an external high voltage power supply.

Samples may be acquired from the PicoFlex in digital form directly from the Ethernet interface, using either TCP/IP or UDP transmission protocols. A DAC output is provided for user convenience if an analogue signal is required for the type of measurement.

## DELIVERABLES

- Pico FLEX, 2-channel, high-voltage floating picoammeter
- Power supply unit

## REFERENCES

- FERMI, Elettra Sincrotrone Trieste
- Elettra, Elettra Sincrotrone Trieste
- Diamond Light Source

## SPECIFICATIONS

Input channels	2
Effective current range	From $\pm 25$ nA to $\pm 2.5$ mA
ADC Resolution bits	24
Analogue bandwidth	10kHz@ $\pm 2.5$ mA, 10kHz@ $\pm 2.5$ $\mu$ A, 1kHz@ $\pm 25$ nA
Polarity	Bipolar
Noise	<10ppm@ $\pm 2.5$ mA, <10ppm@ $\pm 2.5$ $\mu$ A, <200ppm@ $\pm 25$ nA
HV Bias	up to 6kV with respect to earth ground
DAC Resolution bits	16
DAC output range	0-10V
Communication	Ethernet TCP-IP and UDP
Supply voltage	+12 V
Supply current	350mA
Dimensions	70 x 128 x 260 mm
Weight	750 g

## Contact us!

### Industrial Liaison Office

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