MION

Aerosol Electrometer

Aerosol electrometer with half rise time of 25 ms and rms noise level < 0.15 fA

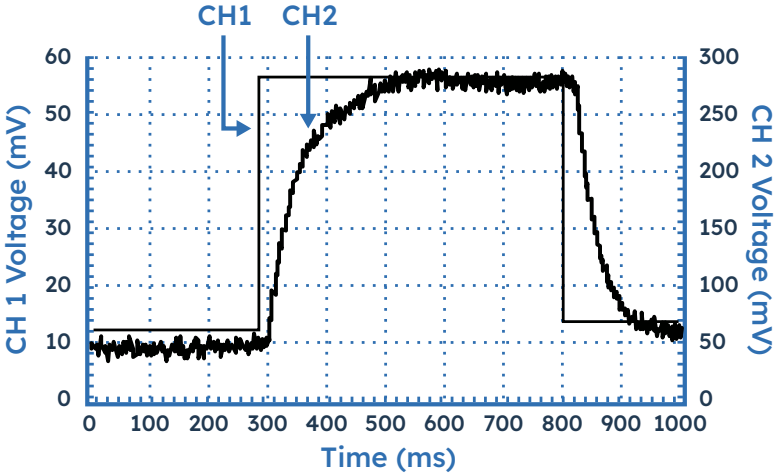

Figure 1: 10^{12} V/A Electrometer time response when detecting DMA-selected ions showing a half-rise time of 25 ms. The square wave (CH2) is the DMA voltage divided by 1000.

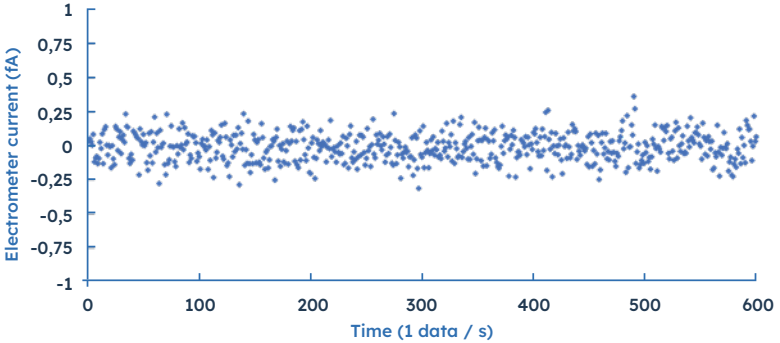

Figure 2: Time dependence of amplified background for a data series of ten minutes (600 data - 1 data/s). The standard deviation σ of those points is only 0.104 fA.

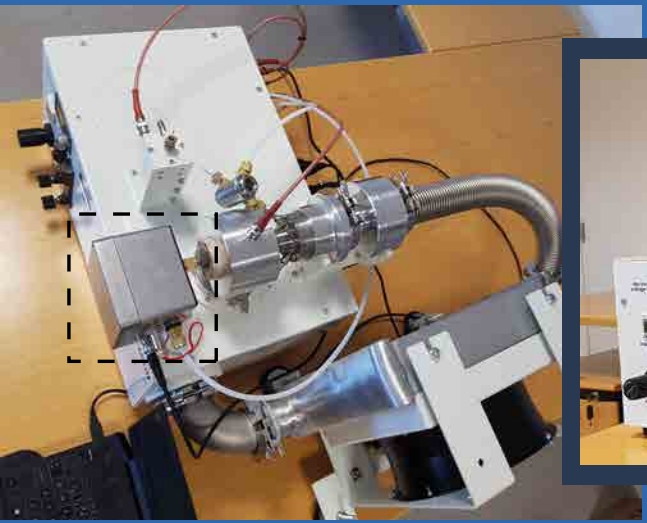

Figure 3: MION's aerosol electrometer coupled to a Half-mini DMA. The optimal amplification for the Half-mini DMA is 10^{12} V/A.

Figure 4: MION's aerosol electrometer coupled to a Planar DMA. The optimal amplification for the planar DMA 10^{11} V/A.

Technical characteristics

MION E12 version (specially suited for planar DMA)

- ✔ Amplification: 10^{12} V/A
- ✔ RMS Noise level: < 0.15 fA
- ✔ Dynamic range: 70,000
- ✔ Half rise time: 25 ms

MION E11 version (specially suited for Half-mini DMA)

- ✔ Amplification: 10^{11} V/A
- ✔ RMS Noise level: < 0.4 fA
- ✔ Dynamic range: 200,000
- ✔ Half rise time: 4 ms

Common characteristics

- ✔ Dimensions: 130x110x100 mm
- ✔ Weight: 1 kg
- ✔ Power: Internal 16 V Li rechargeable battery (battery charger included)
- ✔ Inlet/outlet ports: 1/4" tube Swagelok connectors
- ✔ Amplified output signal: BNC

For more information, visit miontechnologies.com

This technology is developed by MION