

ZAHNER

PRECISION IN ELECTROCHEMISTRY



FRA - X - Made in Germany

FRA-X

INTERFACE FOR HIGH-POWER EIS

High
Dynamic
Precision

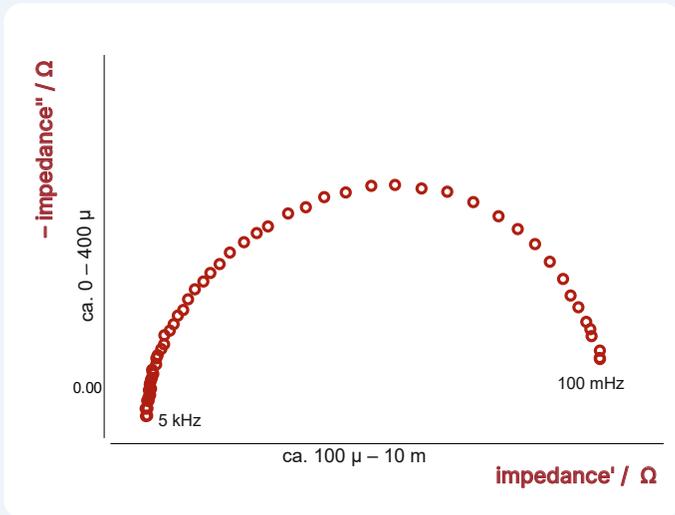
Technology

Main Specifications

- Current ranges: ± 500 A, ± 1000 A, ± 2000 A, ± 4000 A, or ± 6000 A
- Voltage ranges: ± 5 V, ± 70 V, ± 140 V, ± 700 V, or ± 1400 V
- Control voltage range for analog interface: ± 10 V
- EIS frequency range*: 10 μ Hz to 100 kHz
- Up to 17 true parallel measurements on a stack
- Remote integration possible via Python or C++

*Impedance frequency range defined for the FRA-X

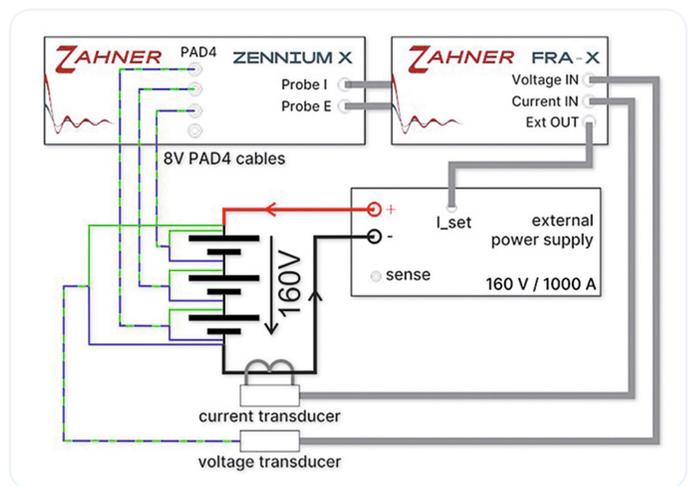
” INTERFACE FOR HIGH-POWER EIS “



Impedance spectrum measured on industrial-scale **PEM electrolyzer cell** using an FRA-X interface and a Regatron power supply.

Connection Scheme

- Sine signal for EIS is regulated by a ZENNIUM via an FRA-X interface
- Output current is sourced/sunk by an external power supply/load
- Input current and voltage are directly monitored by the FRA-X
- Current and voltage recording is galvanically isolated from the external power supply/load
- In-phase current/voltage recording by FRA-X enables high-precision EIS



Connection scheme among a ZENNIUM potentiostat, a FRA-X, a third-party power supply, and a test object.



Check out the QR code for useful examples and complete API documentation.



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