

FlexP 0160 current & voltage booster

The Full Pack Solution

Unique features

- Max current ± 50 A
- Voltage range 1-60 V
- EIS up to 10 kHz
- Stackable ± 200 A
- Power 3 kW



The **FlexP 0160** is designed for battery stack/pack characterizations. The continuous maximum current of ± 50 A for a single unit can be extended up to ± 200 A by connecting four units in parallel. The control voltage range is 1-60 V.

When connected to a multichannel potentiostat/galvanostat VMP3, the system is able to measure each element in series within a pack. This provides valuable information to improve the cell balancing, overdischarge/charge protection, gauge management of the Battery Management System (BMS).



APPLICATIONS

- Batteries
- Supercapacitors
- Fuel Cell
- Electrolyzer



Full pack solution with EC-Lab[®] software

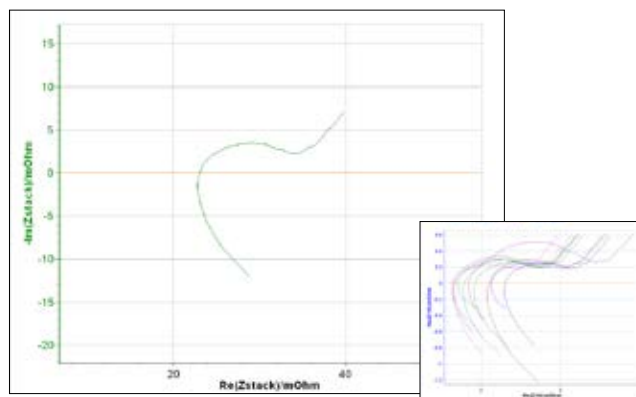
The **FlexP 0160** is a **plug and play** module of the multichannel benchmark, VMP3. It is also compatible with SP-150 & VSP.

As such, the **FlexP 0160** is extended all the benefits available in the EC-Lab[®] software including:

- Measure each element in series within a pack
- Sequence builder for quick and easy assembly of complex experiments such as Urban Profiles
- Real time data display of advanced graphs such as Coulombic Efficiency vs cycle number
- Advanced data processing and analysis such as EIS equivalent circuit modeling with **Z Fit**

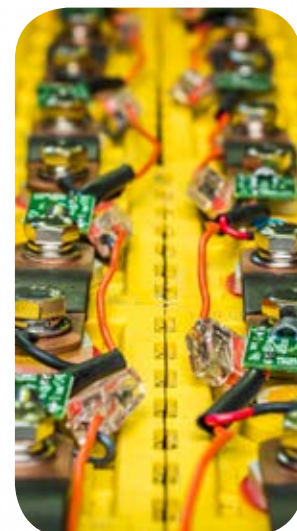
EIS measurement for each element within the pack

Galvano EIS at 5A on 40 A.h battery pack.



EIS data for the whole pack

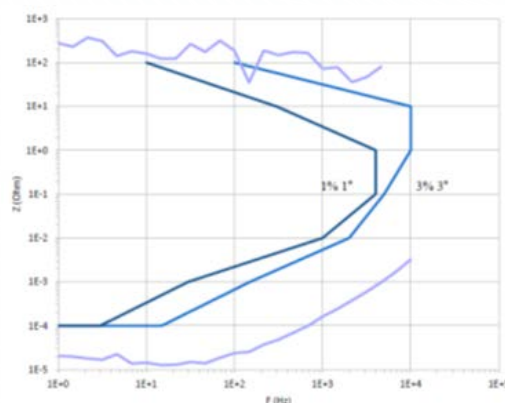
EIS data of each element (10 elements shown here)



SPECIFICATIONS

| Voltage | |
|-------------------------|-----------------------------------------------------------|
| Ranges | 1 - 60 V |
| Accuracy | 0.2% of value ± 0.1 % FSR |
| Current | |
| Max | ± 50 A per unit (± 200 with 4 units in parallel) |
| Ranges | 50 A |
| Accuracy | 0.2% of value ± 0.1 % FSR |
| Parallel | yes (up to 4 units) |
| General | |
| Rise/Fall | 20 μ s |
| Slew rate | 1 V/ μ s |
| Mechanical & electrical | |
| Power consumption | 3600 W, 200-264 V, 47-440 Hz |
| Dimension | 500 x 450 x 133 mm (L x W x H) |
| Weight | 27 kg |
| Rack mounted | yes (19" x 3U) |

| EIS | |
|-----------------|----------------------|
| Frequency range | 10 kHz - 10 μ Hz |
| Accuracy | See contour plot |



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