

## Specifications for Electrochemical Impedance Spectroscopy Channels

**No. of. Channels required: 02 independent channels and facility to add 6 or more channels**

Electrode connection: 2, 3 & 4

### Channel 1 Specifications

Compliance Voltage:  $\pm 20V$  or more

Applied voltage:  $\pm 15 V$  or more

Voltage accuracy: 0.1% or better

Current accuracy: 0.1% or better

Current ranges:  $\pm 10nA$ - $\pm 1A$  (with or without booster)

### Channel 2 Specifications

Specifications same as channel 1 except the current range

Current ranges:  $\pm 100\mu A$ - $\pm 10A$  (With or without booster)

### EIS specifications

Impedance Spectroscopy (EIS) Frequency range from 10  $\mu Hz$  to 5 MHz or better – One channels must have EIS facility and quote the price of the second EIS in optional item.

Impedance Analyzer for EIS and HFR measurements during charge, discharge and at OCV

Amplitude: 10  $\mu Volt$  to 5 Volt or better

### Other requirements:

Computer interface: USB/Ethernet

An Auxillary cable and automatic logging of the counter electrode potential ( during the experiment for both the channels

Additional voltage recording input ( ADC ) for 0-10V range. Input received in this channel should be scalable and interpretable to control the software measurement protocols. (e-g: recording optical sensor info, LED light source info etc..)

### Software requirements:

- Voltammetry Software- CV, LSV, Staircase Voltammetry
- Impedance Spectroscopy software- Potentiostatic EIS, Galvanostatic EIS
- Pulse software: DPV, SWV, Stripping voltammetry, Chrono amperometry , Chronopotentiometry
- Corrosion: Potentiostatic/Galvanostatic- Gavanodynamic, Tafel ,Electrochemical noise
- Battery/Super capacitor: charge/discharge Constant potential, GITT, PITT, Constant current, constant power

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- Complete analysis software for CV
- EIS circuit fitting facility and software
- Free Life time up gradation of the software.

**Warranty**

5 years Manufacturer's warranty should be provided .



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