innovative solutions for electrochemical research

CE link module

Make a bipotentiostat out of two Ivium potentiostats

In modern potentiostats the WE is grounded and the CE is used to apply the potential. The CE link module inverts that WE/CE grounding principle so that the WE and CE of the connected potentiostat can now be used in the same cell as another potentiostat, without the necessity of galvanic isolation. Both potentiostats can now share the same ground. In this way the potentiostat with CE link can, for example, be used as a bipotentiostat to the other potentiostat in the same solution, using its full current capability. With multiple CE link modules, multiple potentiostats can be combined in a single cell.

The CE link is compatible with single channel potentiostats as well as with Ivium-n-Stat channels

Advantages over conventional bipotentiostat:

- Both channels can use full current compliance, up to 5A
- Channels can be programmed independently:
  both in potentiostatic/galvanostatic mode, or in unequal modes
- Channels with CE link can use a grounded Counter Electrode
- Each channel can use its own set of RE/S electrodes

Advantages over using 2 floating channels:

- Better Signal/Noise ratio: both channels can be grounded to the same point (Faraday cage)
- Better AC signal separation: no capacitive coupling as with floating channels (AC crosstalk)
- No high common mode voltages (possible consequence of floating operation)

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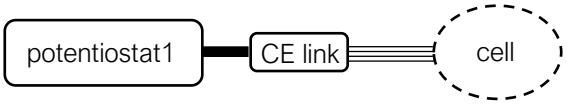
Technical specifications

The technical specifications for potentiostats/channels with CE link are in principle determined by the potentiostat/channel, but may be limited by the CE link:

- Possible current ranges: 10nA – 10A,
- Maximum compliance: ±5A and ±10V
- Maximum bandwidth: standard stability (5kHz)
- Accuracy is determined by potentiostat/channel
- CE link is powered from the potentiostat/channel cell connector (no separate power supply needed)

Connection

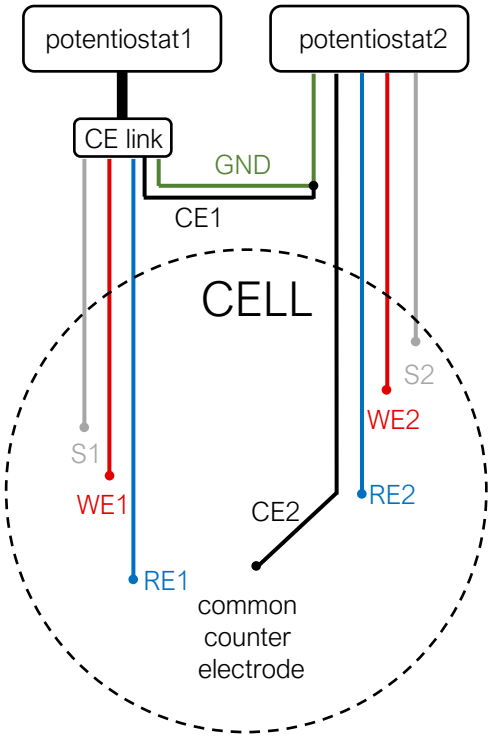
The CE link connects in-line with the potentiostat cell cable and is powered from the cell cable connector, no separate power supply is required. No additional software (settings) necessary.



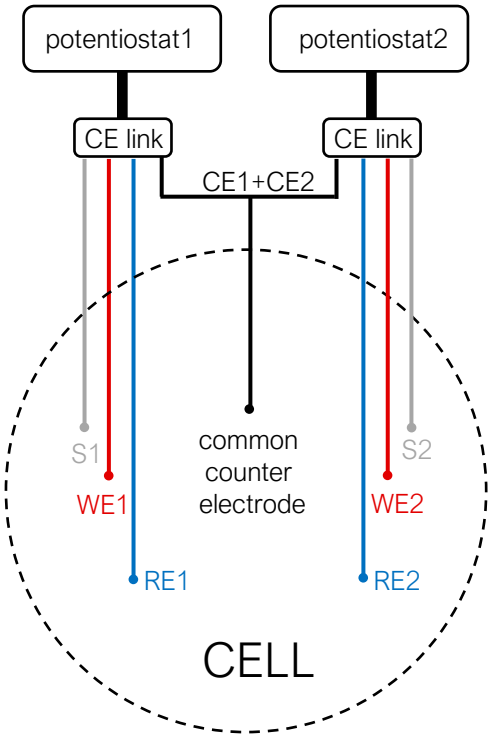
front view

rear view

Connection of the electrodes in case of 2 potentiostats/channels and 1 CE link, for example for bipotentiostat use.



Connection of the electrodes in case of 2 potentiostats/channels and 2 CE links, for example for Devanathan measurement.



> Recommended for high current applications