


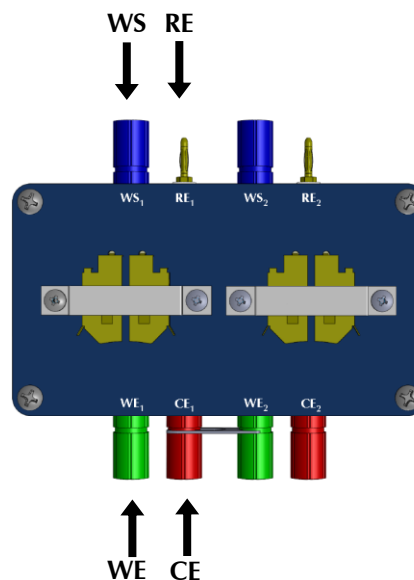
## Instruction sheet for Battery Holders

Gamry Instruments' 18650 (P/N 992-00112) and CR2032 (P/N 992-00113) battery holders allow measurements on single batteries or two cells in series.

**For single-cell measurements**, the descriptions on the battery holder indicate connections.

 We recommend that you place the positive pole of the coin cell **upward** when you insert the coin cells into the CR2032 holder. When you place 18650 batteries into the 18650 holder, follow the printed + and - notations on the holder.

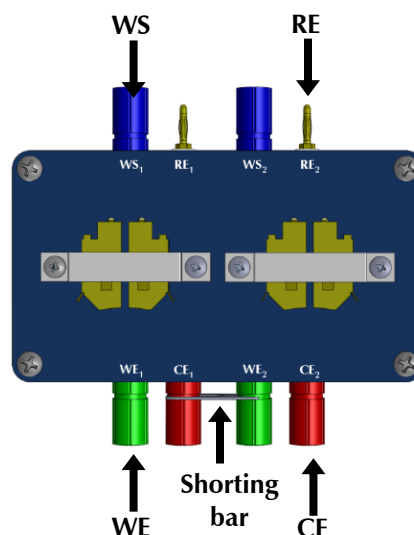
Positioning the batteries and connecting the cables as we recommend means you will measure positive voltages during your experiments.



**For series measurements**, a shorting bar is provided to connect both batteries. The figure on the right shows how to connect the cell leads of a potentiostat to the battery holder.

1. Connect  $CE_1$  and  $WE_2$  of the battery holder with a shorting bar.
2. Connect the working lead (green) of the potentiostat to  $WE_1$  and the counter lead (red) to  $CE_2$ .
3. Connect the working sense lead (blue) to  $WS_1$  and the reference lead (white) to  $RE_2$ .

The shorting bar leads to an additional impedance in your system. EIS spectra can be corrected when measuring the impedance between  $CE_1$  and  $WE_2$  connected by a shorting bar. Afterwards, it can be easily subtracted from any EIS spectrum in the Echem Analyst™ software.



### Other Potentiostats

The battery holders may be connected to potentiostats made by other manufacturers, but ensure that you follow the manufacturer's guidelines for connecting current-carrying cables (counter and working) as well as the sense leads (reference and working sense). Their color-coding of the cables may not follow our scheme.