

## Instruction sheet for Battery Holders

Gamry Instruments' dual-18650 (992-00158) and dual-CR2032 (992-00159) battery holders allow measurements on single batteries or two cells in series.



Warning: Improper operation creates a safety hazard which can lead to fire, explosion, and emission of hazardous chemicals, potentially causing severe damage, personal injury, or death. Gamry Instruments, Inc. is not responsible for battery failures caused by misuse of the equipment or defects in battery construction.

### Specifications

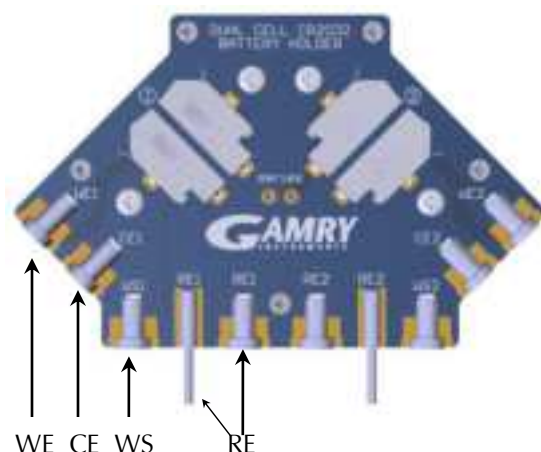
Maximum current rating	10 A @ 20°C
Operating temperature range (holder only)	-50 to +125°C
Dimensions:	
Dual-18650	W: 120 mm, L: 134 mm, H: 32 mm
Dual CR2032	W: 120 mm, L: 89 mm, H: 30 mm

For single-cell measurements, the descriptions on the battery holder indicate connections for the cell cable. The dual-battery holders have two reference lead (RE) connections for each cell. Each pair is shorted, hence you can use either one of them to connect the reference lead, depending on your cell cable. We also provide an accessory kit (990-00406) to connect the smaller 2 mm banana connectors.

### For single-cell measurements:



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.



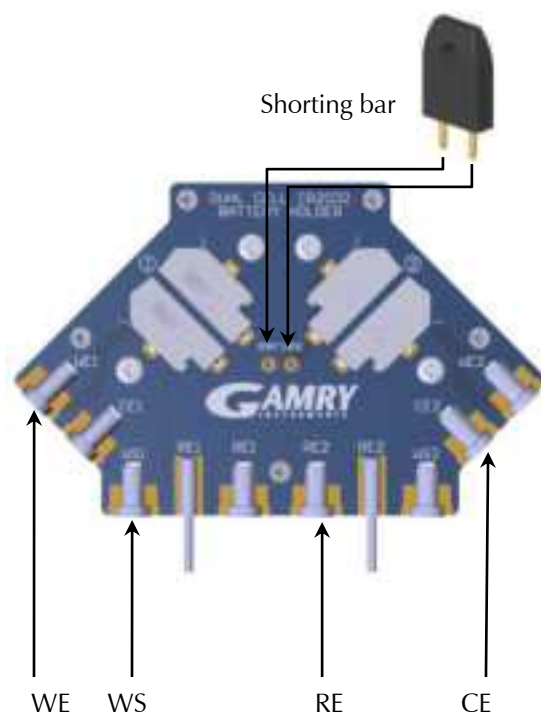
Note: Gamry strongly recommends that you measure the potential of your cells once they are mounted in the battery holders. A stable voltage measurement will ensure that good contact is being made between the holder and your cells.

### For series measurements:

We provide a shorting bar to connect both batteries. The figure on the right shows how to connect the cell leads of a potentiostat to the battery holder.

1. Place the shorting bar into the connectors labeled **series**.
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.



### Connecting to other potentiostats:

You may connect the battery holders 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.