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Wire Sizing Guide

Models Covered:

- PHI 655 Smart-Tech
- PHI 1310 Smart-Tech
- PHI 2.6 Smart-Tech
- PHI 3.4 Smart-Tech

Operating and Surge Currents

Operating Current – typical maximum current for charge & discharge

Surge Current – peak current for no greater than 5 seconds

The quantities listed in the table below are for parallel connected batteries.

Operating Current = 60 A

Surge Current = 80 A

Qty	Surge Current	Operating Current
1	80	60
2	160	120
3	240	180
4	320	240
5	400	300

Wire Sizing Tips

PHI Smart-Tech Batteries must be wired in parallel only. Wiring in series will void warranty.

Wire lengths from PHI Smart-Tech Batteries should be **identical in length and gauge** in order to balance the load across both (all) PHI Smart-Tech Batteries in the installation. Identical wiring length is a critical feature of parallel power storage systems that must be adhered to throughout all parallel wiring instructions.

Wiring from PHI Smart-Tech Batteries to the DC Bus Bar should be sized at **6 AWG** minimum. **4 AWG** is the most commonly used size for battery connections.

Wiring from the battery DC bus bar to the equipment interface should be sized according to the interfacing equipment's specifications and appropriate code requirements.

An example one-line diagram may be found on the following page.

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