

Appendix B - Battery Information

Battery Wiring Configurations

The battery bank must be wired to match the inverter's DC input voltage specifications (12 VDC). In addition, the batteries can be wired to provide additional run time. The various wiring configurations are:

Series Wiring

Wiring batteries in series increases the total battery bank output voltage. A series connection combines each battery in a string until the voltage matches the inverter's DC requirement. Even though there are multiple batteries, the capacity remains the same. In the example below (figure B-1), two 6 VDC, 200 Ahr batteries are combined into a single string resulting in a 12 VDC, 200 Ahr bank.

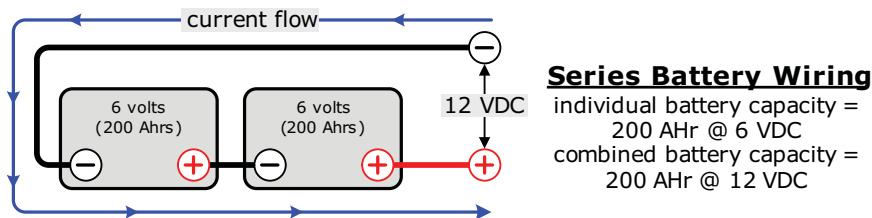


Figure B-1, Series Battery Wiring

Parallel Wiring

Wiring the batteries in parallel increases the total run time the batteries can operate the AC loads. A parallel connection combines overall battery capacity by the number of batteries in the string. Even though there are multiple batteries, the voltage remains the same. In the example below (figure B-2), two 6 VDC, 200 Ahr batteries are combined into a single 6 VDC, 400 Ahr battery bank.

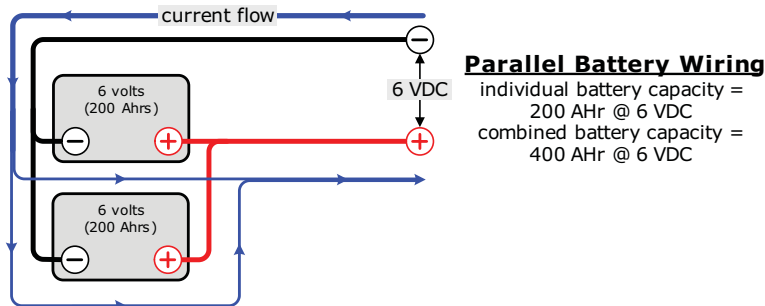


Figure B-2, Parallel Battery Wiring

Series-Parallel Wiring

A series/parallel configuration increases both voltage (to match the inverter's DC requirements) and capacity (to increase run-time for operating the loads) using smaller, lower-voltage batteries. In the example below (figure B-3) four 6 VDC, 200 Ahr batteries are combined into two strings resulting in a 12 VDC, 400 Ahr battery bank.

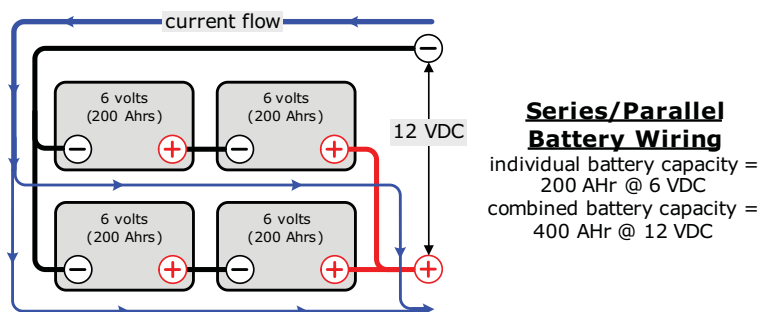


Figure B-3, Series-Parallel Battery Wiring

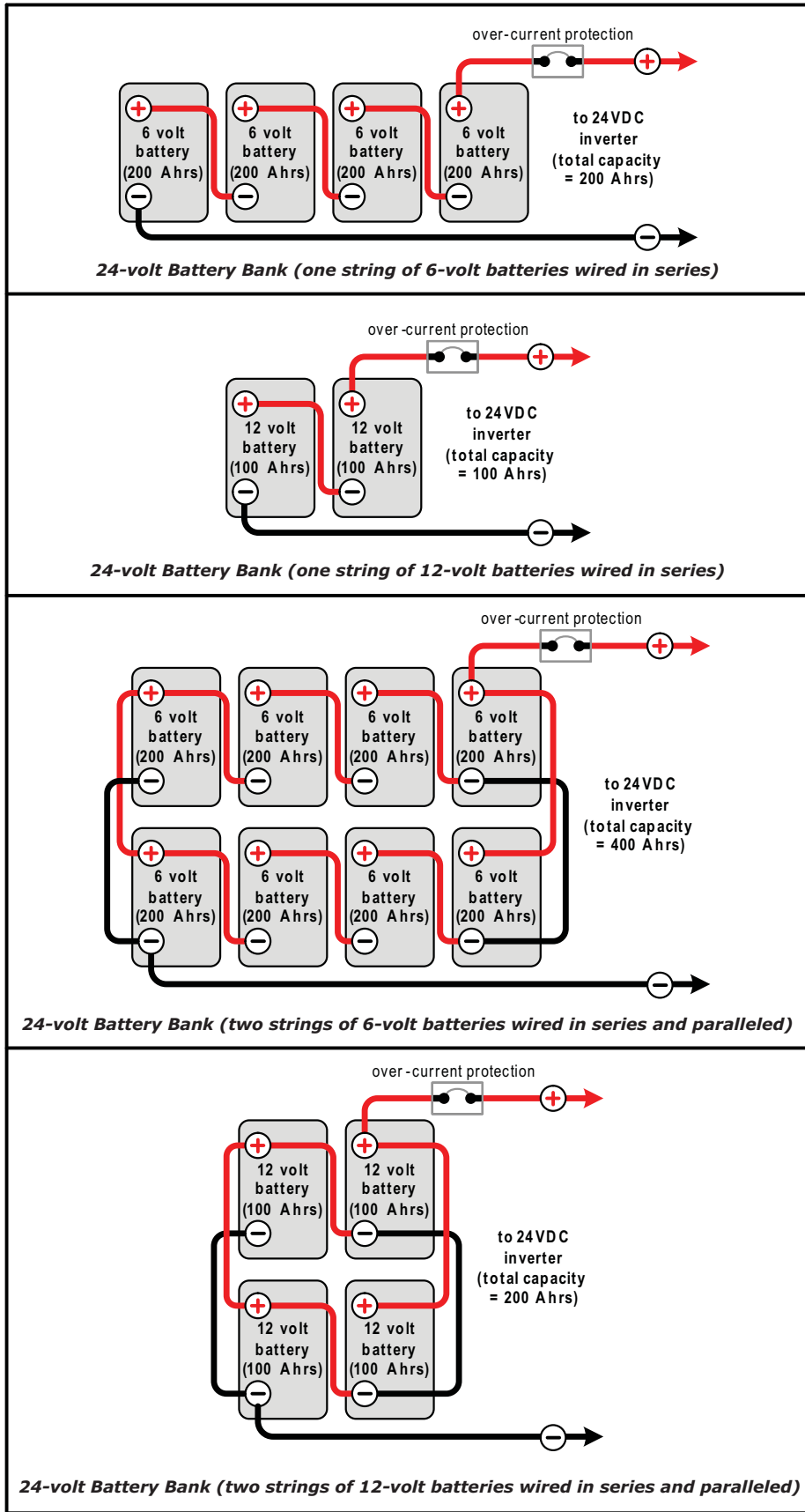


Figure B-4, Battery Bank Wiring Examples (24-volt)

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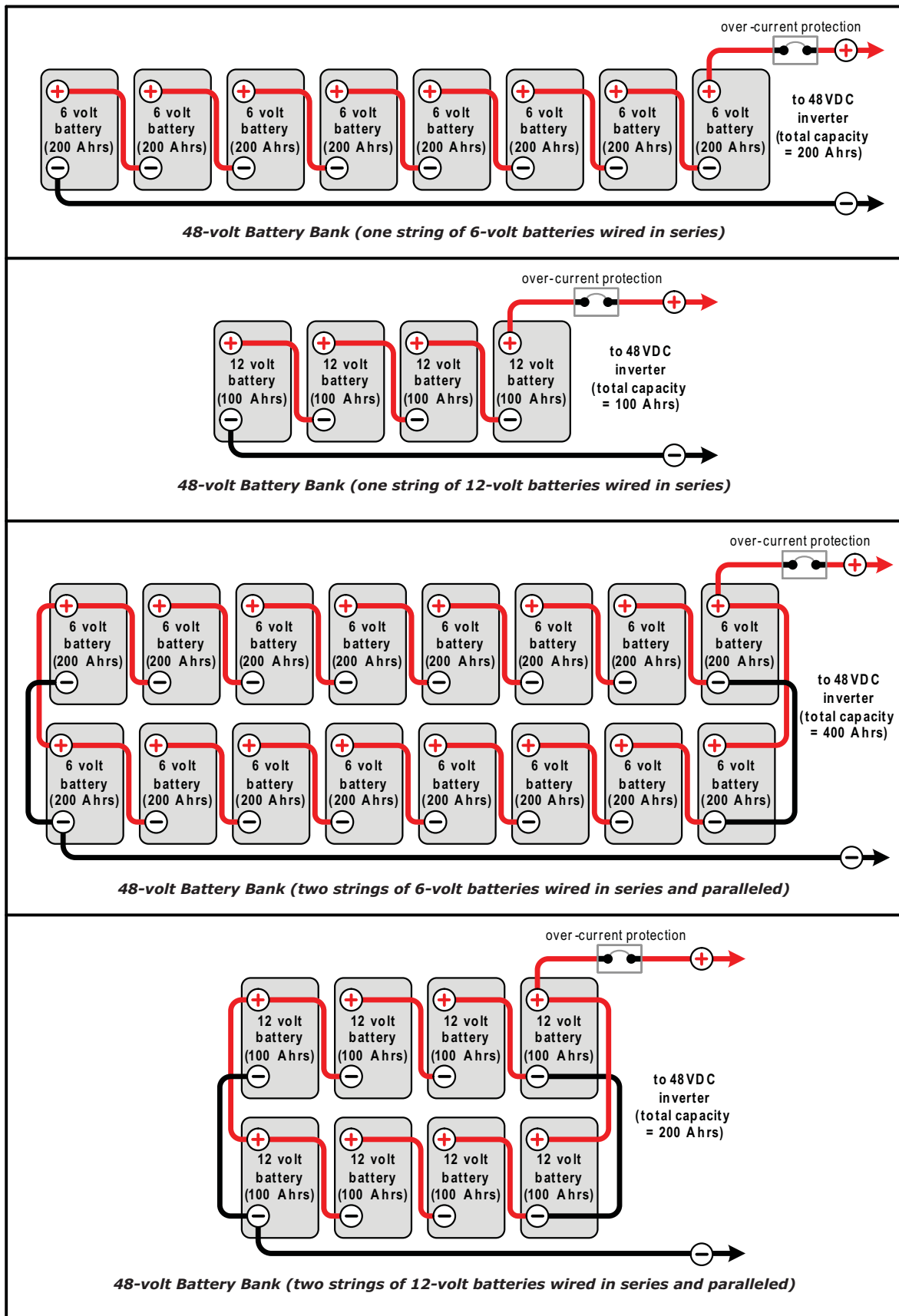


Figure B-5, Battery Bank Wiring Examples (48-volt)