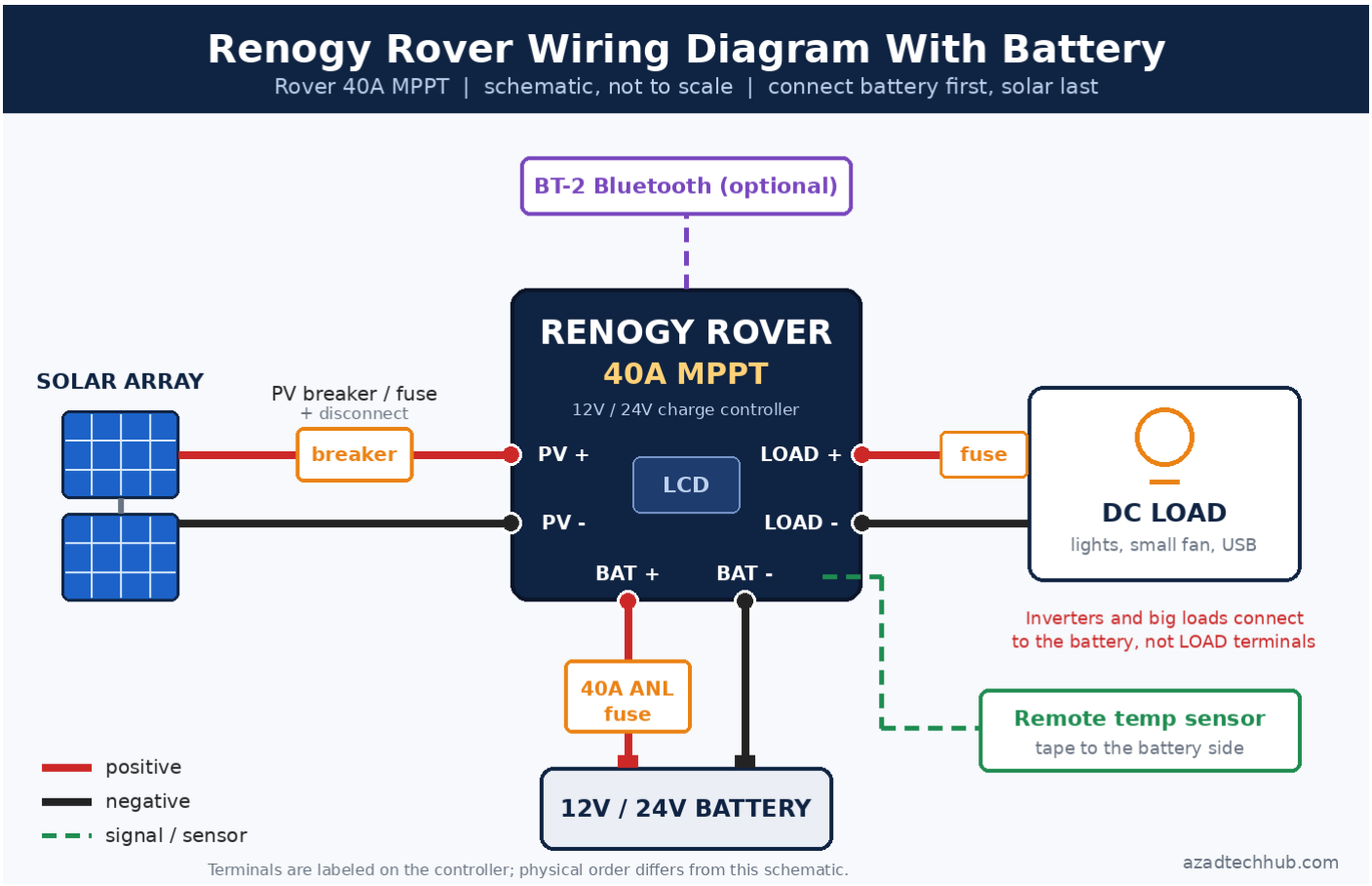
Renogy Rover Wiring Diagram: Quick Reference

Rover 40A MPPT charge controller (12V/24V). Schematic, not to scale. Azad Circuit Hub - azadtechhub.com



Connection order (disconnect in reverse)

1. Open the PV breaker and leave the battery fuse out. Cover panels if they are in sun.
2. Mount the controller on a flat surface with open space around it.
3. Battery: wire BAT+ and BAT-, then insert the 40A ANL fuse last. Set battery type (lithium: set voltage too).
4. Tape the remote temperature sensor to the battery. Optional BT-2 Bluetooth module for the DC Home app.
5. Load (optional): LOAD+ and LOAD-, fused. Inverters and big loads go straight to the battery.
6. Solar last: check polarity, wire PV+ and PV-, close the breaker. PV voltage shows on the LCD.

Wire and fuse sizes

Circuit	Protection	Conductor / note
Battery to controller	40A ANL fuse (Renogy recommendation)	Copper up to 8 AWG (terminal maximum). Keep the run short.
Solar array to controller	Breaker or fuse of at least 1.56 x Isc, not above panel max series fuse	PV wire, commonly 10-12 AWG on short runs. Size for 3% drop or less.
Load terminals	Fuse for every load	Sized per load. Big loads go to the battery.

Rover 40A solar input limits

PV Voc 15V to 100V (use cold-weather Voc). Max PV power 520W on 12V, 1,040W on 24V. Series adds voltage, parallel adds current. Example: four 100W 12V panels (Voc about 22V) wired 2S2P give about 44V and 400W. All four in series is about 88V at STC and can pass 100V in cold weather.

Specs from Renogy's published Rover 40A documentation. Always follow your local electrical code and the manual that shipped with your controller. Official manual: renogy.com support downloads (Rover Li 40A). Full guide: azadtechhub.com/renogy-rover-wiring-diagram/