Harness Testing Instructions

Each BMS harness MUST be tested before connecting to BMS measurement devices. If the cell harness is wired incorrectly, the BMS device may be irreparably damaged.

The cell harness tester is used to verify that cells are connected in the proper order and polarity. After wiring the harness to the pack, plug the connector into the harness tester and use a voltmeter to verify proper hookup. Connect the voltmeter negative probe to the C0 pad on the board, and use the positive probe to measure the other pads, in order. If the upper cells in the group are unused, then they will have the same readings as the last connected cell. An example of a 4-volt 10 cell group with a 12-cell harness would read similar to the following:

| 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 40 | 40 | (volts, all positive values)

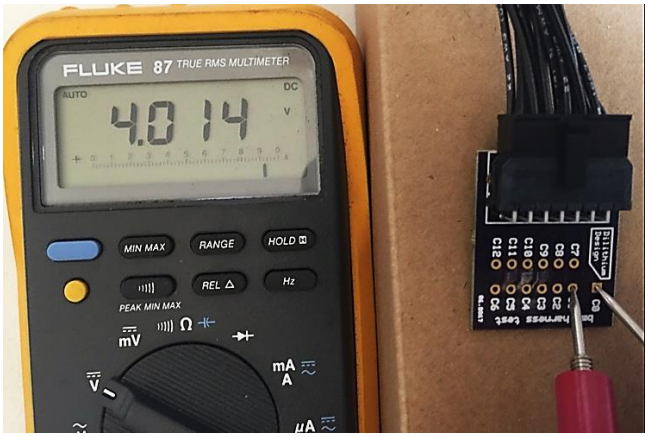

Figure 1 – Using the Cell Harness Tester

NOTE: The Harness Tester is connected directly to pack voltage and so there may be up to 60V present on the harness. When using the Harness Tester, be careful with metal tools and use a nonconductive work surface. Optional: tape voltmeter probes to prevent shorts during measurement.

Once the cell harness is wired and the connections verified, it is safe to plug the harness into the BMSS24 or BMSS18. In general, Cell Harness connectors may be plugged in or unplugged in any order. However, if pack connections are being changed or cells disconnected, it is important to unplug harnesses from the BMS units first, and connect to the BMS last after verification with the test board.

Verify all tested connections by entering “show cells” in the BMS user interface, to confirm that all cell voltages are within expected values.

For a demonstration covering harness wiring and testing, please see our online video covering this process. Take the “Videos” link in our website top bar – it is one of the first links.

https://www.youtube.com/watch?v=kQzoaa_59wQ