

XL60 Integration kit and assembly instructions

Integration module kit

The kit provides the necessary hardware to connect XL60 supercapacitors in series while balancing the voltage of the two connected cells relative to the buss bar on the opposite side. As shown in Figure 1, the kit includes a balance printed circuit board (PCB) with attached wire, buss bar and rivet. Additional necessary items not included in the kit include a pop rivet tool for 3/32 rivet, washers and nuts. Washer and nut hardware sold by Eaton separately (part number INT-AB-HW).

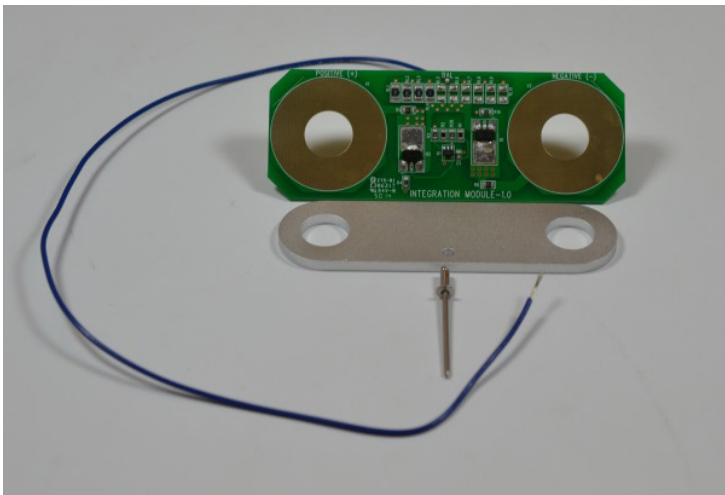


Figure 1. The kit includes the active balance PCB, buss bar, and rivet.

Active balance kit
Part number: INT-AB-KIT

Description	Quantity
Active PCB	1
Buss bar	1
Rivet	1

Passive balance kit
Part number: INT-PB-KIT

Description	Quantity
Passive PCB	1
Buss bar	1
Rivet	1

Hardware kit
Part number: INT-AB-HW

Description	Quantity
M12 x 6 mm nut	4
Lock washer	4



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Assembly

1. Connect the cells in series. Line alternating positive and negative terminals, then place buss bars over threaded terminals. The polarity of the terminal can be seen on the black stripe on the side of each cell as shown in Figure 2.



Figure 2. Connect cells in series. Polarity located on the black stripe

2. The balance PCB is placed on the opposite side of the buss bars facing away from the cells. The polarity marked on the PCB must match the polarity of the threaded terminal. Place a lock washer over each threaded terminal and hand tighten the nut. When assembled properly, each side will alternate between a buss bar and PCB board as shown in Figure 3.



Figure 3. Assembled cells with lock washer and nuts

3. Repeat for each additional number of cells.

4. The blue 24 AWG wire attached to the PCB should be riveted to the opposite buss bar. Place the exposed wire through the hole in the buss bar, insert rivet and trim per standard riveting procedure shown in Figure 4a, 4b and 4c.



Figure 4a. Insert exposed wire into hole



Figure 4b. Insert rivet



Figure 4c. Rivet per standard riveting procedure

5. Tighten all nuts to 15 + 2 Nm.

6. Repeat for each additional number of cells

7. The blue 24 AWG wire attached to the PCB should be riveted to the opposite buss bar. Place the exposed wire through the hole in the buss bar, insert rivet and trim per standard riveting procedure.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com/electronics

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