# BMS-730 Application Note - Battery to External DC Power Conversion

The following is a procedure for converting a battery powered BMS-730 into an externally powered, or solar powered BMS-730 burner management system.

Prior to conversion, Table 1 and Figure 1 indicate the jumper settings of the BMS-730 battery operated burner management system:

Jumper	Jumper Designator	State
1	LNKBBIN	Open
2	BB_BYP	Shorted
3	BB_OUT	Open

Table 1
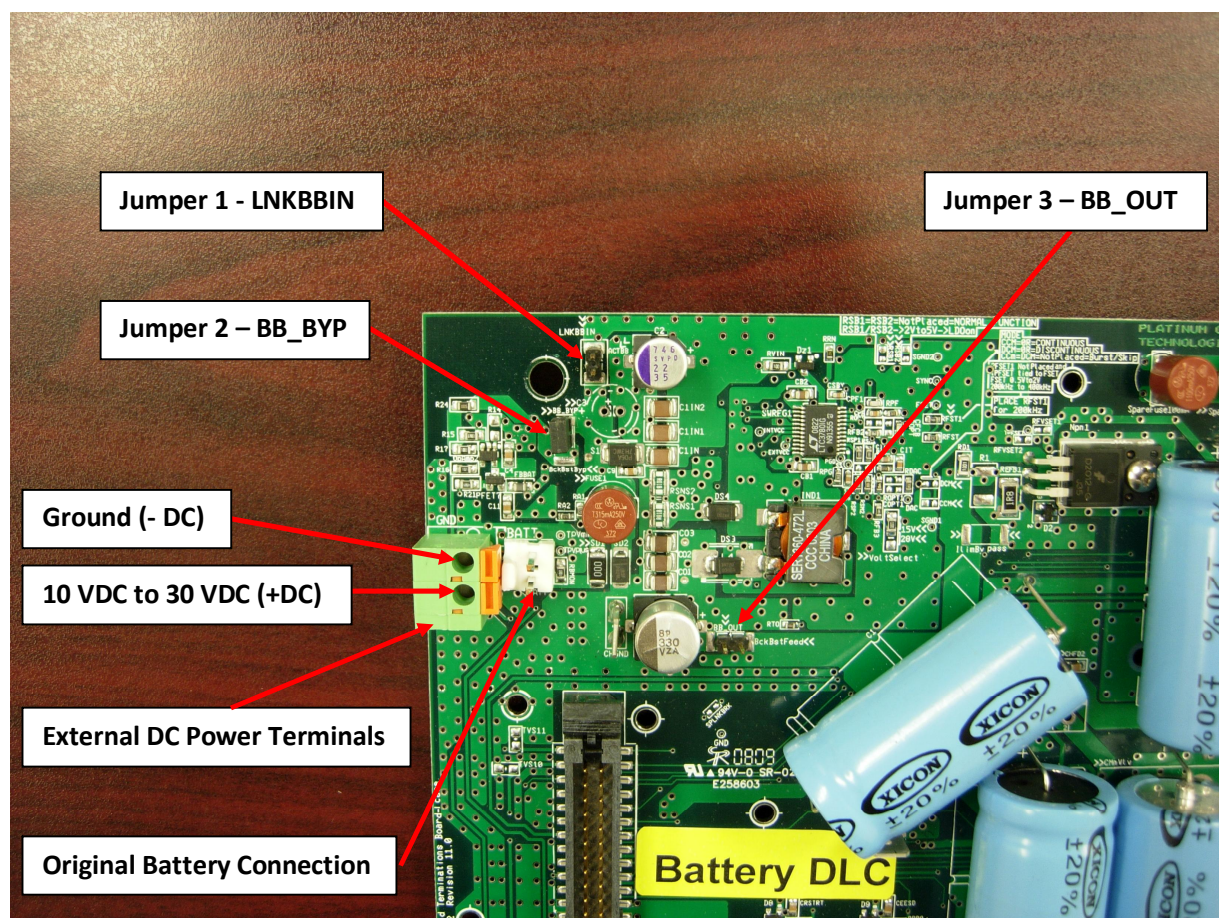
Figure 1

The following steps are required to complete the internal to external DC power conversion:

1) Fully remove the battery from the burner management controller cabinet. It is critical that the battery is never connected to the BMS once DC power is externally connected. **Connecting the two power supplies simultaneously will damage the BMS circuitry!**

2) Remove the jumper from the Jumper 2 position and place it over the pins at the Jumper 1 position (see Figure 2)

3) Borrow one of the 6 jumpers on the bottom left hand corner of the printed circuit board and insert it at the Jumper 3 position. (These 6 jumpers are used for the Modbus communications interface, and their removal will not affect the systems operation - see Figure 3)

4) Make sure that the battery has been disconnected and removed from the BMS controller cabinet. Connect the external 10 – 30 VDC supply voltage. (See Figure 1)

Important!!! – The negative of the DC supply is connected to the uppermost terminal and the positive of the supply is connected to the lower terminal on the Green connector block.
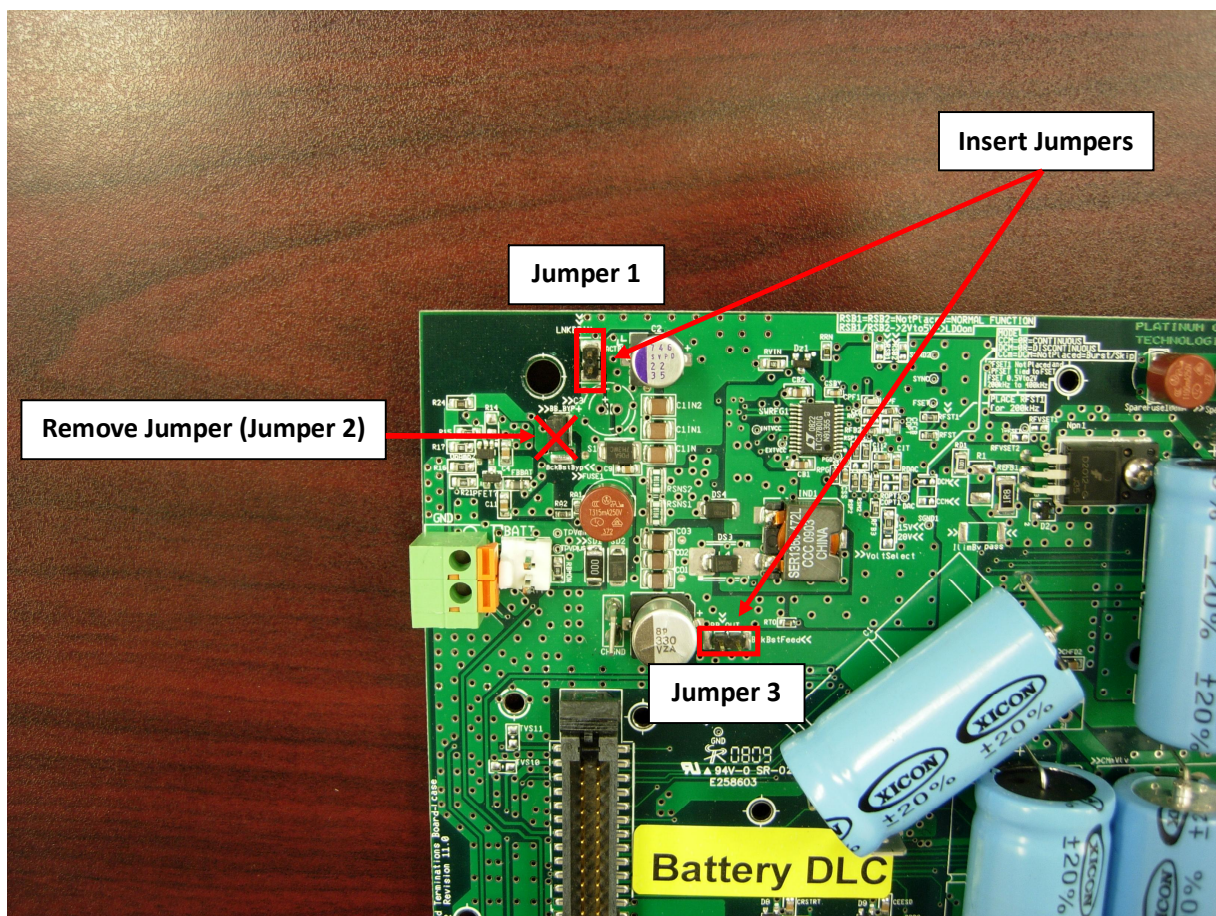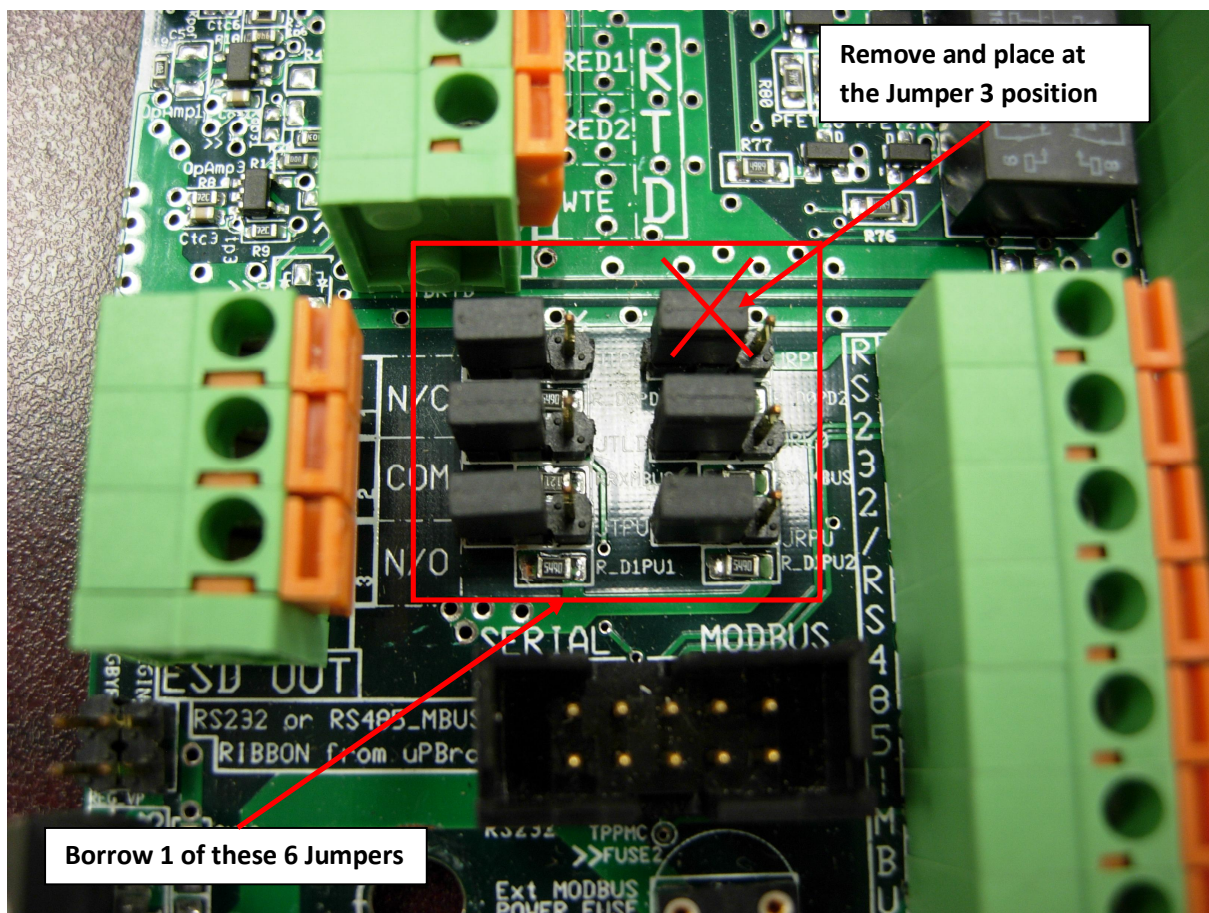

Figure 2

Figure 3

Table 2 indicates the Jumper settings of the BMS-730 battery operated burner management system once the conversion is complete:

Jumper	Jumper Designator	State
1	LNKBBIN	Shorted
2	BB_BYP	Open
3	BB_OUT	Shorted

Table 2