

**Technical Support Bulletin: S3-FRBVS-01**

**Field Reprogramming of the BVS-S3**

**Date: 7-10-00**

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***This procedure outlines the steps required to locate blown fuses and enable the BVS-S3 to relearn the battery configuration.***

**Note: Before performing this procedure, read this entire document. If you have any questions, contact BTECH Technical Support. We are here to assist you!**

**ELECTROCUTION HAZARD!**

**This procedure involves working with high voltage. The voltage sensing leads and load current leads carry full battery voltage. Battery Voltage can be as high as 600Vdc depending on the battery system! If you are not trained to work with high voltage equipment, do not attempt to use this procedure!**

**Troubleshooting Procedure Option #1:**

1. Clear any alarms by pressing the # key.
2. Turn on the printer.
3. Press 3 to display the Upper Battery Voltage. Record this value.  
**Upper Battery Voltage:** \_\_\_\_\_ Volts
4. Unlock the keypad by pressing B and then the 4-digit password.  
**NOTE:** The password can be found on a hangtag located on the bracket in the upper left-hand corner of the BVS. The password also can be found by pressing BBADC and the password will be displayed momentarily (press the # key to exit this mode).
5. When the unit is unlocked, a "uuu" will be displayed.
6. In the unlocked mode, set the Upper Battery Voltage Limit to zero. To do this, press the 3 key to reset the Upper Battery Voltage Limit and then 0 three times to set the limit to zero.
7. To exit the unlocked mode, press the # key.
8. With the upper voltage set to 000, press the \* key and the unit will printout the voltages between the leads.
9. Compare the pattern of voltages you obtained from the printout with what should be the expected the battery configuration. A zero voltage where a long interconnect is not present would indicate a bad fuse. Remove and check the fuse. If the fuse is good, use a piece of #8 multi-stranded wire with about 1/8 inch of insulation stripped to clean the fuseholder. Be sure to insulate the other end of the wire before inserting it into the fuseholder.  
**NOTE:** The printout will stop when it finds two voltages at approximately 0 volts. If the printout did not read all the way to the end, a bad fuse or a fuse with some corrosion is located at the point where the printout stopped (usually just before or after a long interconnect).
10. Continue obtaining printouts until the pattern of voltages matches your battery configuration.

11. Once the printout matches, repeat steps 4, 5, 6, & 7 but instead enter the upper voltage you found in step 3 above.
12. Press the \* key to allow the BVS to relearn the correct battery configuration.

### **Troubleshooting Procedure Option #2:**

1. Open the BVS cabinet and remove the Weidmuller connector in the first position.
2. Using a multimeter set for voltage readings, place one lead in the first position of the connector and the other lead in the second.
3. Check for the appropriate voltage.
4. Continue moving the other multimeter lead up one position and check for the appropriate increase in voltage.
5. If at any point the multimeter reads 0 volts, a bad fuse is located in the voltage sense lead (VSL) at the point of the other multimeter lead.
6. Remove and check the fuse. Replace the fuse if it is bad. If the fuse is good, use a piece of #8 multi-stranded wire with about 1/8 inch of insulation stripped to clean the fuseholder. Be sure to insulate the other end of the wire before inserting it into the fuseholder.
7. Continue removing successive Weidmuller connectors and checking in a similar fashion until all bad fuses have been found and replaced.
8. Reconnect all Weidmuller connectors, making sure they are firmly seated in the unit.
9. Press the \* key to allow the BVS to relearn the correct battery configuration.

If you are unsuccessful at repairing the unit, please fax a copy of the tape you obtained in step 8 above to the attention of the Service Department at (973) 983 - 1125.