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MPINarada RELIABLE BATTERY SOLUTIONS

TITLE

Charging 52.1v and 76.8v Module During Storage

DOCUMENT NO.	SHEET	OF	REV
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1.0 Purpose: This document defines the process for charging the 51.2V and 76.8V modules during storage.

2.0 Scope: This document will cover the process on how to charge the 51.2V and 76.8V modules during storage and the business process used to do so.

3.0 Responsibility: All users who will be performing the task of charging the 51.2V and 76.8Vmodules during storage are responsible for the implementation of this document.

4.0 Definitions: None

5.0 Procedure:

5.1 : Charging 52.1v Module During Storage:

The following section details the process to charge the 51.2V module during storage.

5.1.1 Every 6 months modules should be charged during storage

5.1.2 Tools needed:

5.1.2.1 Module - 51.2V modules

5.1.2.2 60v power supply

5.1.2.3 Multimeter

5.1.2.4 Cables

5.1.3 Set Power supply to 56V – WARNING a higher setting will damage battery.

5.1.4 Set current limit to .2C or less, i.e. For 160 AH batteries this would be 32 amps.

5.1.5 Connect battery to power supply.

5.1.6 Turn on power supply.

5.1.7 Charge until current goes down to 2 amp or below.

5.1.8 Done

5.1.9 When replacing a module in an existing rack the battery to be installed need to match the SOC of the other modules in the series string. The reason for matching the module as closely as possible to the rest of the modules is to reduce the time it would take for the balancing system to match the cells in the string.

5.1.10 There are some options to achieve a matching module:

5.1.10.1 If the battery to be replaced is working and the full string can be charged to 100% with the UPS, this may be the easiest method. The procedure above can be used on the replacement module to match it to 100% SOC. Once the module matches the sting SOC the module can be replaced.

5.1.10.2 If the string is not functional because the module to be replaced is not working, then each module should be charge as above with a power supply to get them all to 100%. To do this, all bus bars should be removed, and the above procedure followed for each module in the string. Once all modules are charged install the new module in the string and replace bus bars per the installation manual procedure.

5.2 Charging 76.8v Module During Storage:

The following section details the process to charge the 76.8v module during storage.

5.2.1 Every 6 months modules should be charged during storage

5.2.2 Tools needed:

5.2.2.1 Module – 76.8v modules

5.2.2.2 100v power supply

5.2.2.3 Multimeter

5.2.2.4 Cables

5.2.3 Set Power supply to 84v – WARNING a higher setting will damage battery

5.2.4 Set current limit to .2C or less, i.e. For 200 AH batteries this would be 40 amps

5.2.5 Connect battery to power supply

5.2.6 Turn on power supply

5.2.7 Charge until current goes down to 2 amp or below

5.2.8 Done

5.2.9 When replacing a module in an existing rack the battery to be installed need to match the SOC of the other modules in the series string. The reason for matching the module as closely as possible to the rest of the modules is to reduce the time it would take for the balancing system to match the cells in the string.

5.2.10 There are some options to achieve a matching module:

5.2.10.1 If the battery to be replaced is working and the full string can be charged to 100% with the UPS, this may be the easiest method. The procedure above can be used on the replacement module to match it to 100% SOC. Once the module matches the sting SOC the module can be replaced.

5.2.10.2 If the string is not functional because the module to be replaced is not working, then each module should be charge as above with a power supply to get them all to 100%. To do this all bus bars should be removed, and the above procedure followed for each module in the string. Once all modules are charged install the new module in the string and replace bus bars per the installation manual procedure.

6.0 Record Retention Duration: Indefinite – ECO information is stored in SharePoint

7.0 Reference Documents: None