

TECHNICAL SERVICE BULLETIN

AQ-TB-00001_B

March 20, 2015

Charge Guidance Update

This technical bulletin updates the recommended charge parameters, specifically the sections of the operations manuals titled “Discharge/Charge Cycles.”

Products Affected
S10-0080, S10-008F, S20-0080, S20-008F
M100-L081, M100-LS81, M100-L082, M100-LS82

Documentation Affected
Operations manuals for all above products

Background

Aquion is recommending an updated charge regime that optimizes the performance and lifetime of the battery and is more consistent with traditional lead acid battery profiles.

Details

Aquion batteries can be charged using the same type of three-stage profile used for lead acid batteries. Though not strictly correct for the AHI chemistry, the lead acid terminology (bulk, absorption, float) is included for clarity. Unlike lead acid, AHI batteries do not require a float voltage, but one is included to maintain a full state of charge.

Aquion batteries should be charged using the following set points:

Max Current	12A/stack for stacks in parallel, 15A for individual stacks
Max Voltage (Absorption Voltage)	59V at 5A & 30°C average charge, or use table below
Time at Max V (Absorption Time)	1 hour
Float Voltage	54.4V, or 52.8V if holding for >4 hours (UPS/grid-tied)

Table 1: Recommended charge set points

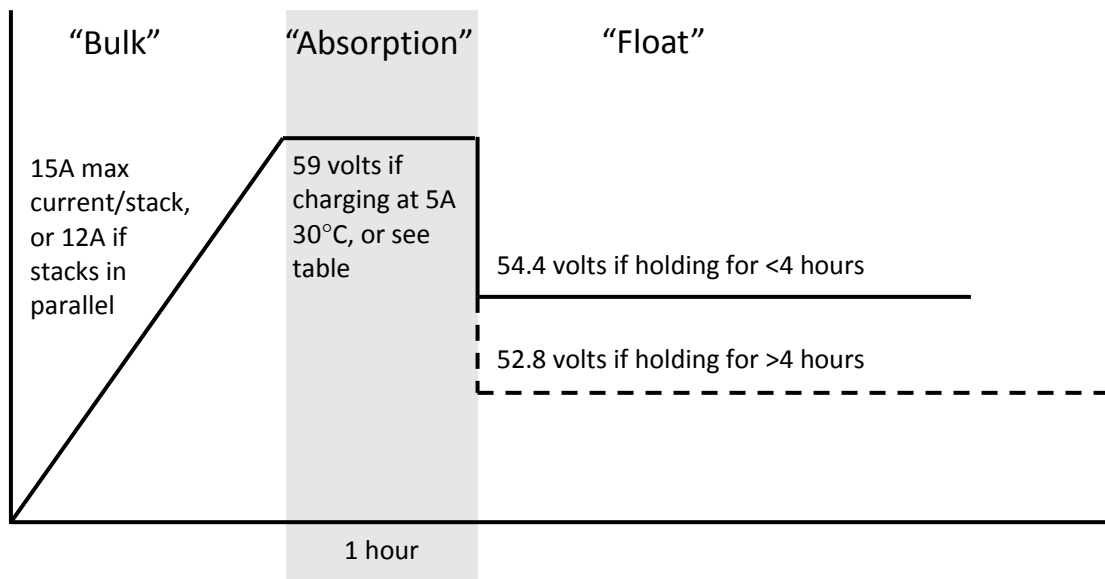


Figure 1: Recommended charge profile

Current (A)	Ambient Temperature (°C)						
	>=5	10	15	20	25	30	35
2	58.1	58.1	57.3	56.8	56.3	56.0	54.8
4	61.0	61.0	60.2	59.7	59.2	58.9	56.8
6	63.9	63.9	63.1	62.6	62.1	61.8	58.8
8	66.8	66.8	66.1	65.5	65.1	64.7	60.8
10	69.7	69.7	69.0	68.4	68.0	67.6	62.8
>12	72.6	72.6	71.9	71.3	70.9	70.5	64.8

Table 2: Maximum voltage (absorption voltage) as a function of average charge current per stack and temperature

Contact Us for More Information

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