

## Technical Note      Voltage Setting Control

Truecharge

512-0053-01-01 Rev 1

### Overview

The temperature settings for gassing and float voltage are preset in the computer and cannot be adjusted. If the remote temperature sensor is connected however, it will override the program's Cold/Warm/Hot settings table to provide a range of V gassing voltage ranging from approximately 14.0–14.8 V, and corresponding V float 13.1–13.9 V.

The Truecharge temperature sensor and circuit provides a voltage to the internal computer to set the voltage dependent on temperature. The remote temperature sensor is an RTD (resistive temperature device) with a negative temperature coefficient. The table below shows the temperature sensor/RTD's approximate resistance values for the various temperatures:

Degrees Celsius	Ohms	+/- 10% tolerance
0	9369	
5	7240	Corresponds to approximately 14.8 V gassing/13.9 V float in flooded setting.
10	5640	
15	4427	
20	3500	Corresponds to approximately 14.4 V gassing/13.5 V float in flooded setting.
25	2886	
30	2232	Corresponds to approximately 14.4 V gassing/13.1 V float in flooded setting.
40	1460	
50	977	
60	669	

A 10 K potentiometer in series with a 680R resistor would allow some control, or a resistor network could give discrete settings. The charger program will cap the upper voltage at 14.8 V regardless of the temp sensor input. The higher the resistance the higher the TC's output voltage since the RTD and charge algorithm both have inverse equations, that is, two negatives make a positive coefficient.

#### Note:

The warranty may be void if the charger is modified.

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Part number: 512-0053-01-01 Rev 1

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