Low Temperature Charging

LiFePO4 Blue
Lithium Ion Battery

Irreversible damage can happen to any Li-ion battery that is charged when frozen. LiFeBlue PCLT and HCLT model batteries have an internal heater and controller that is managed by the BMS.

How It Works

When you begin to charge the battery and the cell temperature is below 26°F, charge current is diverted to the heater and cell charging is inhibited. The Event page will display "Low-Temp when charging". After the cells reach a safe temperature to begin charging, current is redirected to the cells. No current for the heater is taken from the battery during Standby or Discharge modes.

Each battery in parallel requires a minimum amount of power for the heaters. The heater will attempt to power on but if current is too low, the BMS will start a 5 minute delay and then retry. This will continue until the following power levels are available to each battery:

12V100Ah: 78W (about 6A)

12V150Ah: 96W (about 8A)

12V200Ah: 128W (about 10A)

12V300Ah: 192W (about 15A)

Standard Batteries

All other LiFeBlue Battery models have freeze protection built in. If the cells are below 26°F, charge current will be inhibited until the cell temperature is safe to recharge.