How To Set Up Fortress Power Lithium Batteries Using Sol-Ark Inverter

Table of Contents

Introduction

This integration guide will help set up the charge/discharge parameters of Fortress Power batteries as they relate to Sol-ark inverters, as well as the setup of closed-loop communication between the eFlex 5.4 and the Sol-ark. For any additional help, please contact techsupport@fortresspower.com

FORTRESS Power
SECURE YOUR ENERGY

How To Set Up Fortress Power Lithium Batteries Using Sol-Ark Inverter

Parameter settings for Fortress batteries with Sol-Ark 8/12kW

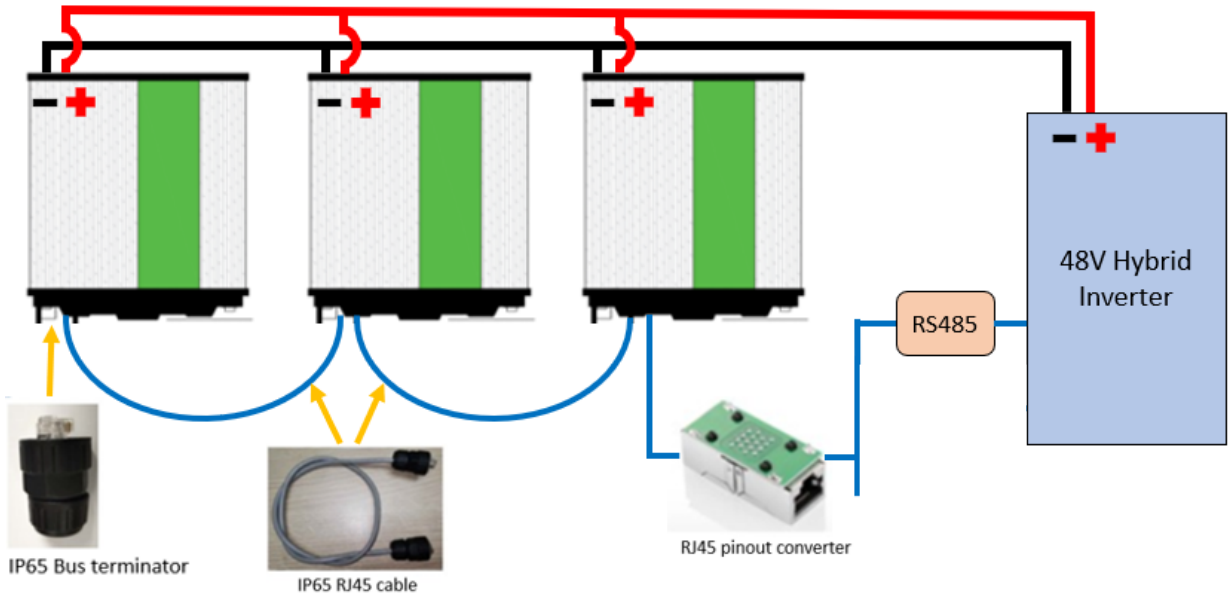
Battery		
	80% DoD, 6000 cycles	90% DoD, 3000 cycles
Battery Capacity	eFlex: 105AH per battery LFP-10: 200AH per battery eVault : 360AH per battery	
Max A Charge Rate	eFlex:55A per battery LFP-10: 50A per battery eVault:100A per battery	eFlex: 60A per battery LFP-10: 80A per battery eVault:150A per battery
Max A Discharge Rate	eFlex: 100A per battery LFP-10: 100A per battery eVault: 160A per battery	
TEMPCO	0	
Use Battery charged	Select	
Use Batt % charged	-	
No Battery	-	
BMS Lithium Batt 01	-	
Active Battery	-	
Charge		
Start V	51.7V / 30%	
A	eFlex:55A per battery LFP-10: 50A per battery eVault:100A per battery	eFlex:60A per battery LFP-10: 80A per battery eVault:150A per battery
Float V	54.4 V	
Absorption V	54.4 V	54.6 V
Equalization V*	55.5	
	30 days	
	0 hours	
Discharge		
Shutdown	51.4V / 20%	
Low Batt	51.7V / 30%	50.7V / 10%
Restart	51.9V / 25%	
Batt Resistance	5mOhms	
Batt Charge Efficiency	98%	

Please reassess capacity and charge/discharge current settings, when Fortress battery quantities change.

How To Set Up Fortress Power Lithium Batteries Using Sol-Ark Inverter

Setting up closed-loop communication between eFlex 5.4 and Sol-ark

All Fortress Power batteries work in open-loop communication mode—that is, with voltage detection. However, closed-loop communication between the eFlex 5.4 and the Sol-ark inverter improves the efficiency of a lithium battery. The following is a guide to setting up closed-loop communication between the eFlex 5.4 and the Sol-ark inverter



Connecting the eFlex to the Sol-ark inverter

Connect a CAT6 cable into the eFlex (Exhibit A) and then into the RJ46 pinout converter. Using another CAT6 cable, connect the pinout converter to the RS485 port in the Sol-ark (Exhibit B).

Power on the eFlex and Sol-ark as usual and navigate to the “battery setup” menu on the Sol-ark. Next, check the “Use Batt % charged” box as well as the “BMS Lithium Batt” box and set it to “04” (Exhibit D). If the communication is successful, a new menu option should open in the battery monitoring page and the screen that appears should show a table of detailed battery information (Exhibit E) for each battery connected.

This data can also be monitored remotely using Sol-ark’s monitoring software and wifi module. For remote monitoring using Sol-ark the wifi module, please refer to the guide on the Sol-ark website.

How To Set Up Fortress Power Lithium Batteries Using Sol-Ark Inverter

Appendix

Exhibit A

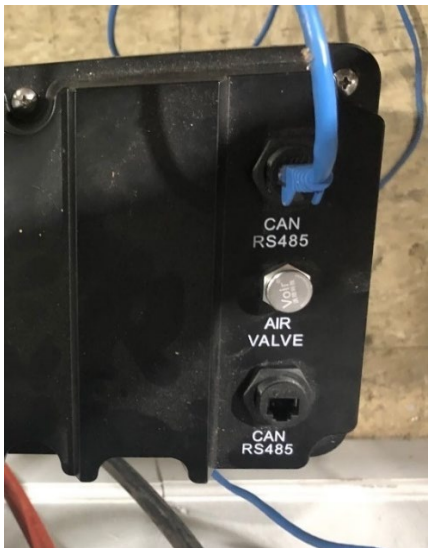
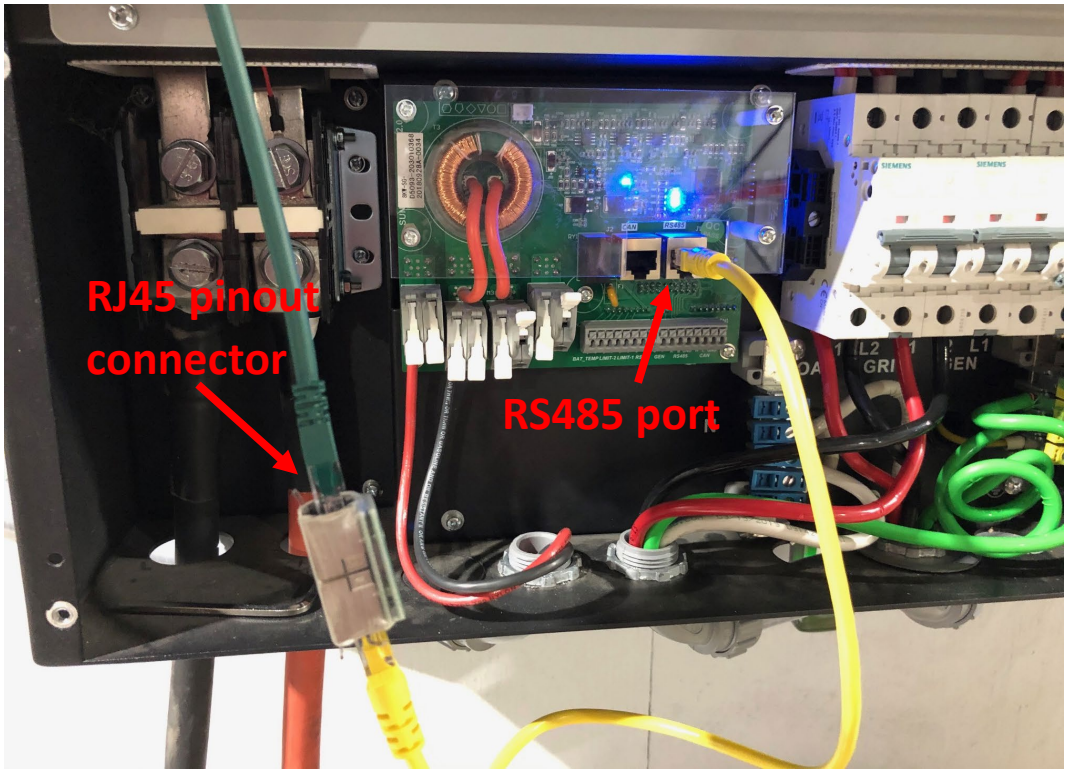


Exhibit B



How To Set Up Fortress Power Lithium Batteries Using Sol-Ark Inverter

Exhibit C

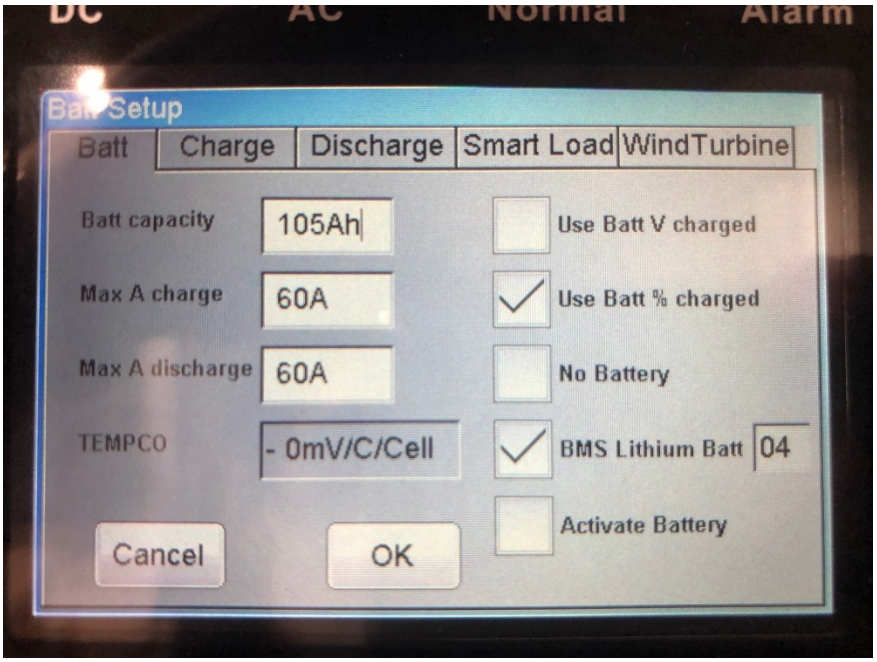


Exhibit D