



FORTRESS Power eFlex 5.4 Power Lithium Batteries Using Outback Inverters Instructions

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How To Set Up Fortress Power Lithium Batteries Using Outback Inverters

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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 closed-loop communication

Datasheets / Manuals: <https://www.fortresspower.com/resources/>

Email: techsupport@fortresspower.com

Discord Support: <https://discord.gg/kxX6QMjKFw>

Phone: (877) 497-6937 x 2

Hours: 8:30 AM – 6:30 PM EST

Warranty Submittal: <https://www.fortresspower.com/product-warranty/>



<https://discord.gg/kxX6QMjKFw>

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IMPORTANT! Fortress batteries may require disassembly if the voltage drops below 40V-44V. optics, OutBack's free remote monitoring system, can be configured to send email notifications on a low battery to help warn and avoid a complete discharge of the battery.

Radian / FXR Inverter Settings (divide voltage by 2 for 24V FXR settings)

Inverter	80% DoD, 6000 cycles
Absorb Voltage and Time	54.4 Vdc / 2.0 hr
Float Voltage and Time	54.4 Vdc /0.0 hr
Re-float Voltage	52.4 Vdc
Re-Bulk Voltage	51.2 Vdc
AC Input Mode	Grid-Tied (default, adjust as needed)
AC Charger Limit in AC	LFP10: 15 Aac per battery eFlex: 15 Aac per battery eVault: 30 Aac per battery
Low Battery Cut-Out Voltage	49.6V
LBCO Delay	130 seconds
Low Battery Cut-in Voltage	51.
High Battery Cut-Out Voltage	56.4V
HBCO Delay	10 seconds
High Battery Cut-in Voltage	55.2V
SellIRE (Offset) Voltage Max	51.6V for "zero-outflow", 53.6V for selling at "100% full"
Temp Sensors	Do not use temperature sensors / reduce any temperature coefficients to as close to zero as allowed

SkyBox Inverter Settings

The settings below should be programmed into the unit under the Custom choice.

Inverter	
Maximum SOC	100%
Minimum SOC	20%
Absorb Charge	Timed
Absorb Voltage	54.4 Vdc
Absorb Time	02:00 hr
Float Charge	Disabled
Float Voltage	Can be left at default
Float Time	Can be left at default
Re-float Voltage	54.4 Vdc
Re-bulk Voltage	52.5 Vdc
Equalize Voltage	54.4 Vdc
Minimum Equalize Time	0:00
Max Charge Current (Adc)	LFP-5 & LFP-10: 50Adc eVault: 100Adc eFlex: 55Adc
Max Discharge Current (Adc)	LFP-5 & LFP-10: 90Adc eVault: 125Adc eFlex: 60Adc
Grid Charge Limit (kW)	Site specific
Low Battery Cutout	50 Vdc
LBCO Delay	15 seconds
Low Battery Cut-in	51.0 Vdc
High Battery Cutout	56.0 Vdc
HBCO Delay	10 seconds
High Battery Cut-in	55.5 Vdc
Battery Series	Custom
Battery Model Number	Custom
Battery Description	Fortress Power
Battery Total Amp-Hours	eFlex: 105Ah LFPP-10: 200Ah eVault: 360 Ah
Charge Efficiency Factor	96%
Absorb End Amps	1Adc

Charge Controller Settings

Charge Controller	
Absorb Voltage and Time	54.4, 2 hours
Float Voltage	54.
Rebuck Voltage	52.5 note: higher than inverter
DC Current Limit	LFP-10: 80A per battery ÷ # of controllers eVault: 170A per battery ± # of controllers eFlex: 55A per battery ± # of controllers
Absorb End Amps	1A

Communication Settings

FLEXnet DC (FN-DC)	If FlexNet DC display voltage is not within 0.1V of inverter terminal voltage, calibrate Outback equipment
Battery Amp-hour	eFlex :105Ah per battery LFP-10: 200Ah per battery eVault: 360Ah per battery
Charged Voltage	54.0V
Charged Time	15 minutes
Charged Return Amps	1A
Battery Charge	96%
Relay Invert Logic	No
Relay Voltage	High = 53.8 Low = 51.2
Relay Delay	High = 1, Low = 0
MATE3/MATE3s	
FLEXnet DC Advanced	Low SOC Warning = 15%
FLEXnet DC Advanced	Critical SOC Warning = 10%

Calibrate FlexNet DC Instructions:

https://www.outbackpower.com/downloads/documents/appnotes/fndc_field_cal_app_note.pdf

05 Keystone Rd, Southampton, PA 18966. (877) 497 6937. sales@fortresspower.com. Fortresspower.com

Documents / Resources

	FORTRESS Power eFlex 5.4 Power Lithium Batteries Using Outback Inverters [pdf] Instructions eFlex 5.4, Power Lithium Batteries Using Outback Inverters, eFlex 5.4 Power Lithium Batteries Using Outback Inverters, Using Outback Inverters, Outback Inverters, Inverters
	FORTRESS Power eFlex 5.4 Power Lithium Batteries Using Outback Inverters [pdf] Installation Guide eFlex 5.4 Power Lithium Batteries Using Outback Inverters, eFlex 5.4, Power Lithium Batteries Using Outback Inverters

References

- [Leading Clean Energy Storage Provider | Lithium Battery Storage](#)
- sales@fortresspower.com
- techsupport@fortresspower.com