



# **FLEXmax™**

## **Charge Controller** (FLEXmax 80/FLEXmax 60) Overview

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## **WARNING: SHOCK HAZARD**

- This information is for use by qualified personnel who meet all local and governmental code requirements for licensing and training for the installation of electrical power systems with DC voltage up to 150 Vdc.
- Consult the *FLEXmax Series Owner's Manual* for detailed information on **safety** and **installation** procedures.

## Models:

- FLEXmax 80: 80 amps maximum continuous output current (up to 40°C without thermal derating)
- FLEXmax 60: 60 amps maximum continuous output current (up to 40°C without thermal derating)

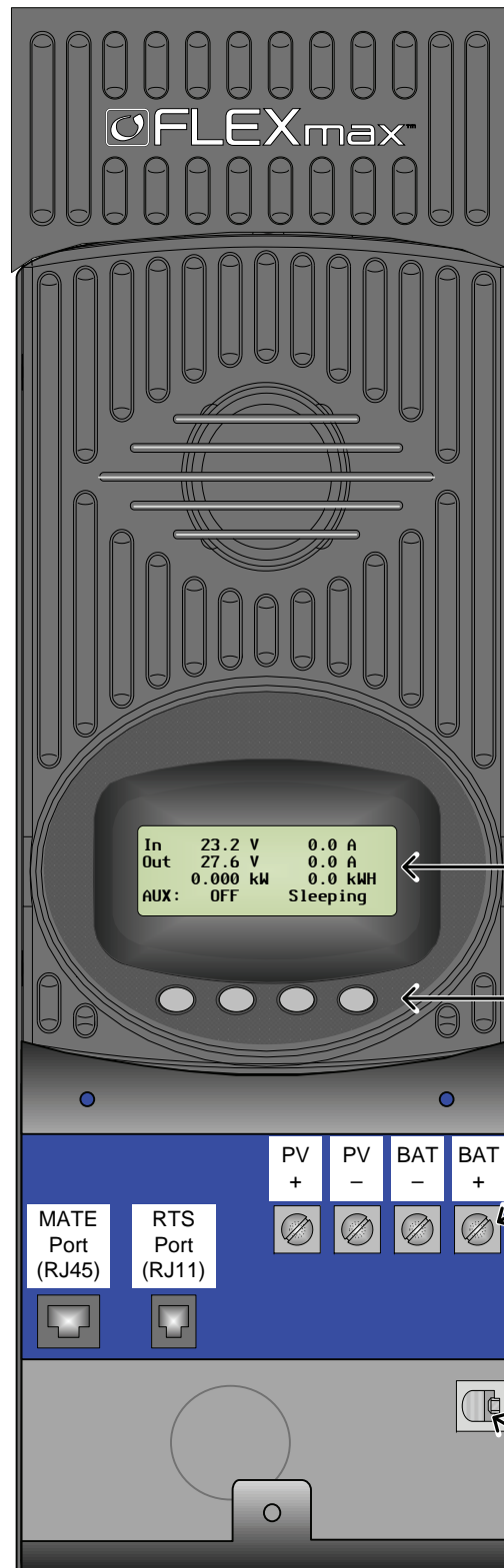
## Features:

- Supports 12, 24, 36, 48, and 60 Vdc battery voltages
- Backlit display screen (LCD) with 80 characters (4 lines, 20 characters per line)
- Last 128 days of operational data logging
- Voltage step-down capability allowing a higher PV array voltage configuration
- Manual and automatic equalization cycles

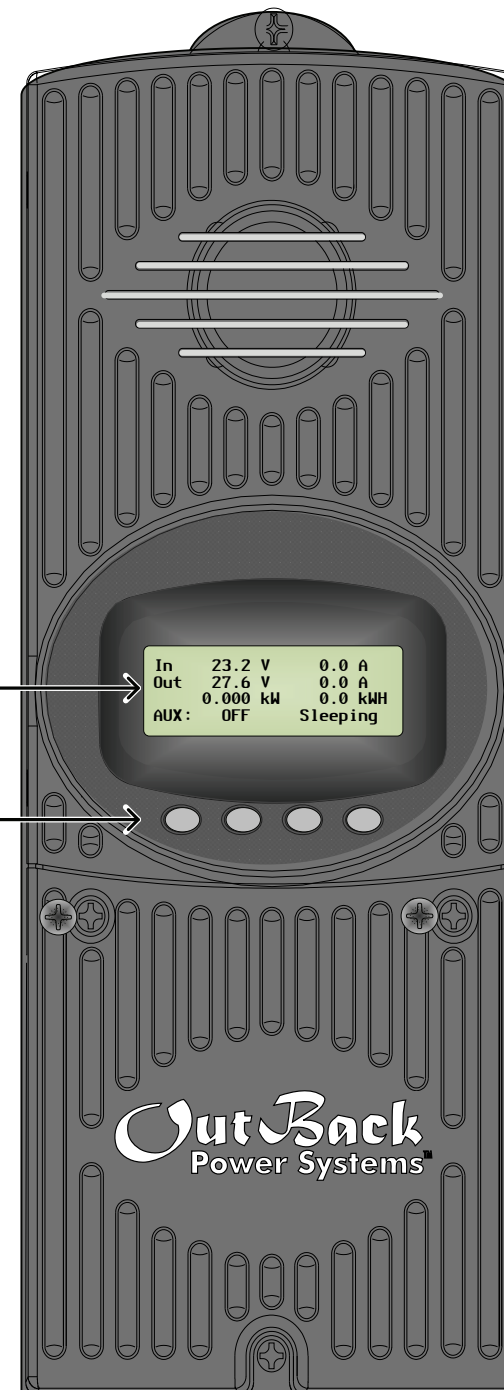
## Screen Versions:

- English
- Spanish
- Australian (English with different default settings)

## FLEXmax 80 Charge Controller



## FLEXmax 60 Charge Controller



LCD Screen  
Soft Keys

Terminals  
Torque = 4 Nm (35 in-lb)

### Recommended Input PV Wattage per Charge Controller\*

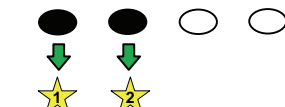
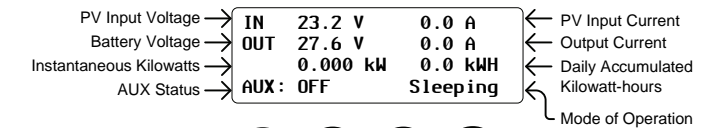
Battery Bank Voltage	Maximum PV Input Wattage for the FLEXmax 80	Maximum PV Input Wattage for the FLEXmax 60
12 Vdc	1000 W	750 W
24 Vdc	2000 W	1500 W
36 Vdc	3000 W	2250 W
48 Vdc	4000 W	3000 W
60 Vdc	5000 W	3750 W

\*Standard Test Conditions

## Startup Screen



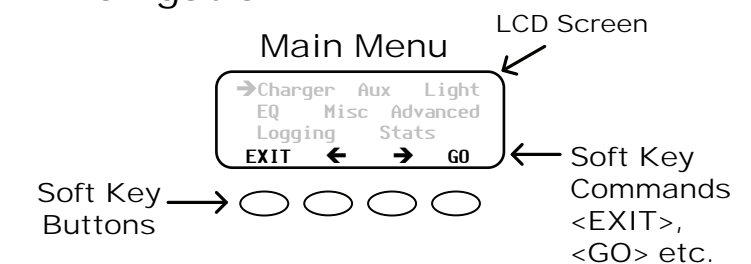
## Status Screen



★ Advances to the main menu screens

★ Advances to the end-of-day screens

## Navigation:

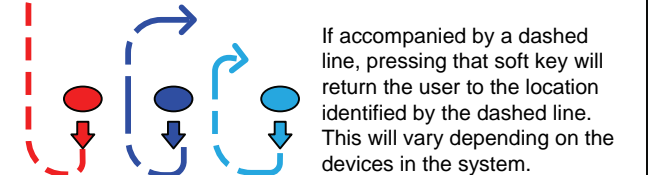


### Soft Key Color Code:

- Available menus
- Select this option to proceed
- Adjusts the set points value
- Selects a function (e.g., ON, OFF, AUTO)
- Switches between devices on the ports of the Communications HUB
- Navigation colors

NOTE: Soft key functions will vary depending on the selected menu and are defined by the word above the key in the LCD.

Indicates a 1-screen movement within a Menu. These are color coded according to their function or purpose.

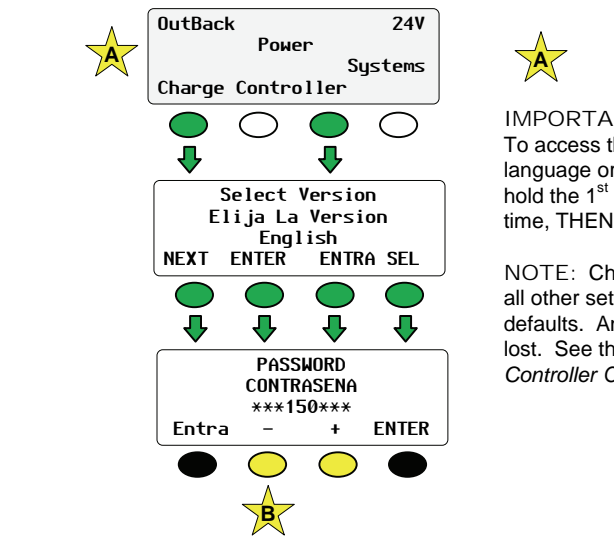


NOTE: See page 2-4 of this guide for menu maps for setting the versions, changing the language of the screens, and accessing the main menu.

See the FLEXmax Series Owner's Manual for details on the settings available in the main menu.

The interior design is identical in each model.

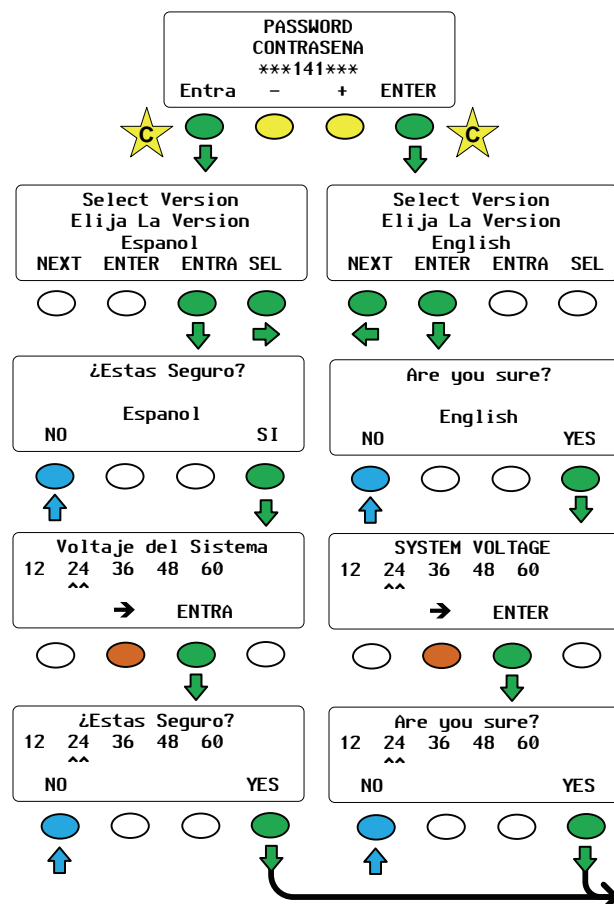
## To change the Language, Screen Version or System Voltage:



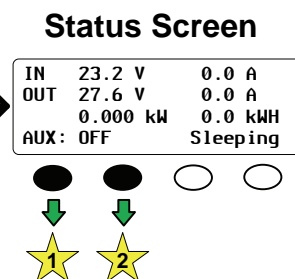
**IMPORTANT:**  
To access the screens to change the language or system voltage, press and hold the 1<sup>st</sup> and 3<sup>rd</sup> soft key at the same time, THEN CLOSE THE DC BREAKERS.

**NOTE:** Changing these setting will revert all other settings back to the factory defaults. Any customized settings will be lost. See the *FLEXmax Series Charge Controller Owner's Manual* for details.

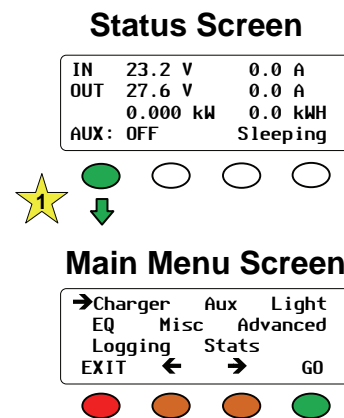
1. Press the <-> soft key until "141" is displayed on the LCD.
2. Press the <ENTER> or <ENTRA> soft key to accept the password and move forward to the Select Version Screen.



The Spanish Status Screen is not shown in this illustration. It is available in the Spanish translation of this document.

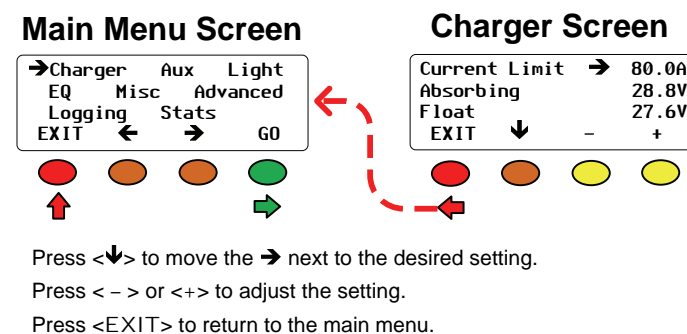


## To access the Main Menu:



To select a menu from the Main Menu, press the <←> or the <→> soft key to move the cursor (→). When the → is next to the desired menu, press <GO>.

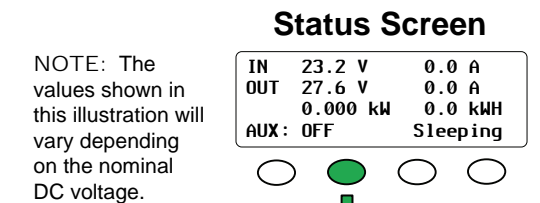
- **Charger**—CHARGER SETUP  
Adjusts the Current Limit, Absorbing, and Float recharging voltage set points
- **Aux**—AUX OUTPUT CONTROL  
Secondary control circuit for a vent fan, AGS, error alarm, and other system-related additions
- **Light**—BACKLIGHT CONTROL  
Adjusts the backlighting of LCD screen and soft key buttons
- **EQ**—BATTERY EQUALIZE  
Activates battery equalization (manually or automatically)
- **Misc**—MISCELLANEOUS  
Additional settings and service information
- **Advanced**—ADVANCED MENU  
Optimizes/fine-tunes the charge controller
- **Logging**—DATA LOGGING  
Displays recorded power production information
- **STATS**—STATISTICS  
Displays recorded peak system information and cumulative kilowatt-hours and amp-hours



Press <↓> to move the → next to the desired setting.  
Press <-> or <+> to adjust the setting.  
Press <EXIT> to return to the main menu.

Continued on the next page.

## End-of-Day (EOD) Summary Screens



**NOTE:** The values shown in this illustration will vary depending on the nominal DC voltage.

### End-of-Day (EOD) Summary Screen (current day)

Today	0000Ah	00.0 KWH
011Vp	00.0Ap	0.00kMp
MAX 29.4V	ABS 01:00	
MIN 29.2V	FLT 00:00	

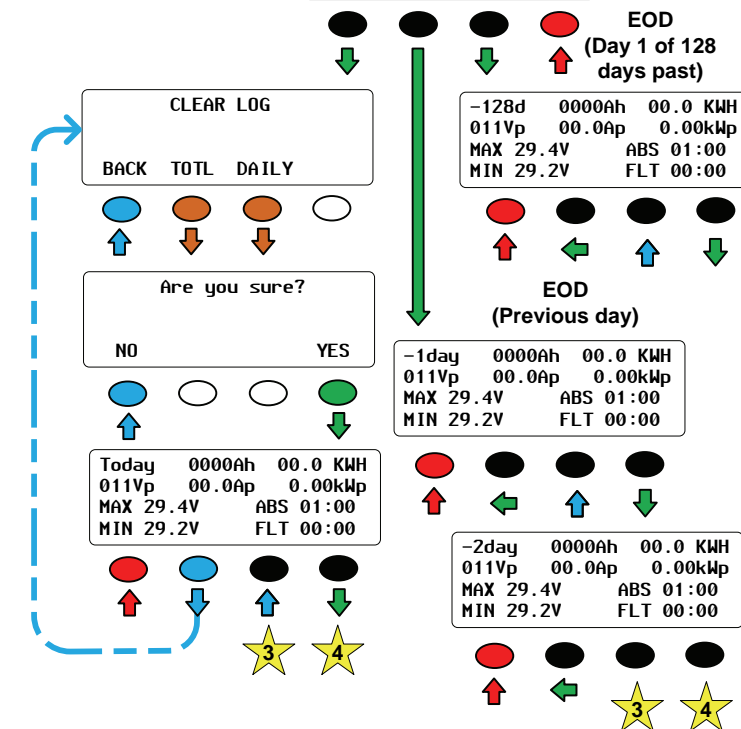
### EOD (Day 1 of 128 days past)

-128d	0000Ah	00.0 KWH
011Vp	00.0Ap	0.00kMp
MAX 29.4V	ABS 01:00	
MIN 29.2V	FLT 00:00	

### EOD (Previous day)

-1day	0000Ah	00.0 KWH
011Vp	00.0Ap	0.00kMp
MAX 29.4V	ABS 01:00	
MIN 29.2V	FLT 00:00	

-2day	0000Ah	00.0 KWH
011Vp	00.0Ap	0.00kMp
MAX 29.4V	ABS 01:00	
MIN 29.2V	FLT 00:00	



Continuing to press this soft key will cycle backwards by 1 day up to 128 days.

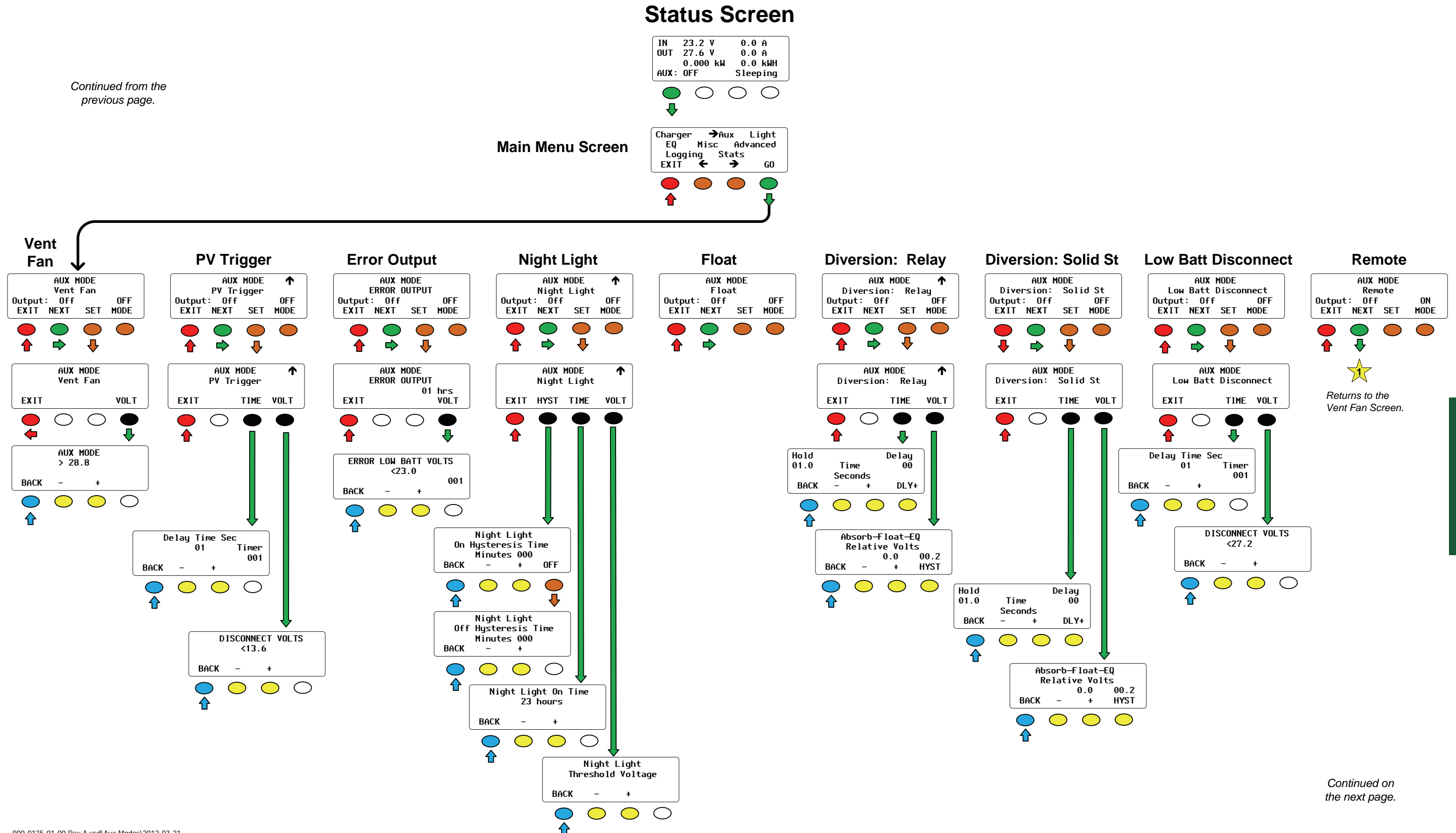
Press and hold this soft key to automatically scroll backwards through the available days.

Continuing to press this soft key will cycle forward by 1 day up to 128 days.

Press and hold this soft key to automatically scroll forward through the available days.

## Aux Modes

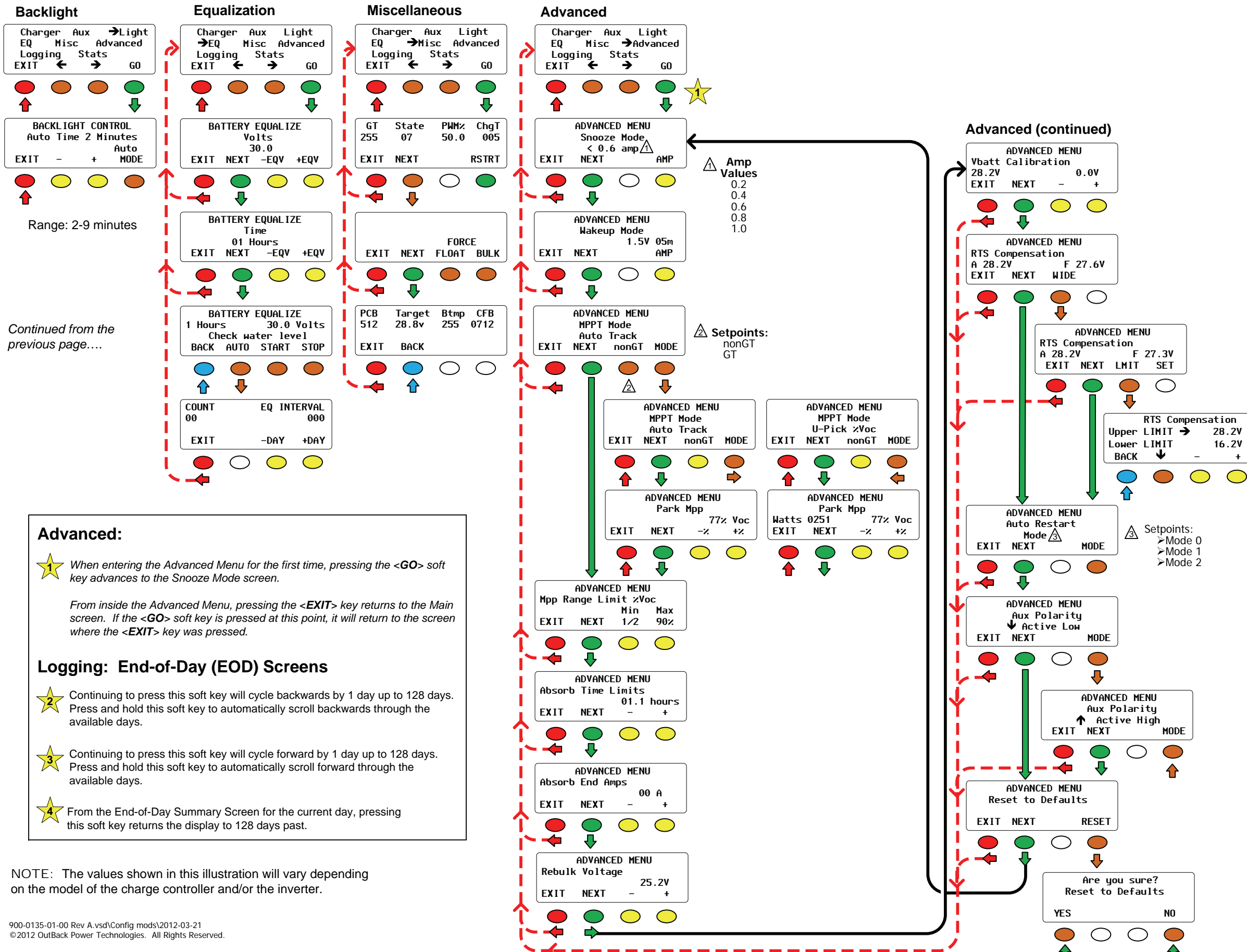
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Auxiliary Modes

Continued on the next page.

## Main Menu Screens (continued)



Continued from the previous page....

**Advanced:**

★ When entering the Advanced Menu for the first time, pressing the <GO> soft key advances to the Snooze Mode screen.

From inside the Advanced Menu, pressing the <EXIT> key returns to the Main screen. If the <GO> soft key is pressed at this point, it will return to the screen where the <EXIT> key was pressed.

**Logging: End-of-Day (EOD) Screens**

★ Continuing to press this soft key will cycle backwards by 1 day up to 128 days. Press and hold this soft key to automatically scroll backwards through the available days.

★ Continuing to press this soft key will cycle forward by 1 day up to 128 days. Press and hold this soft key to automatically scroll forward through the available days.

★ From the End-of-Day Summary Screen for the current day, pressing this soft key returns the display to 128 days past.

NOTE: The values shown in this illustration will vary depending on the model of the charge controller and/or the inverter.

# About OutBack Power Technologies

OutBack Power Technologies is a leader in advanced energy conversion technology. Our products include true sine wave inverter/chargers, maximum power point tracking charge controllers, and system communication components, as well as circuit breakers, batteries, accessories, and assembled systems.

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## Disclaimer

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## Warranty Summary

OutBack Power Technologies warrants that the products it manufactures will be free from defects in materials and workmanship for a period of five (5) years subject to the conditions set forth in the warranty detail, found in the product manual.

OutBack Power Technologies cannot be responsible for system failure, damages, or injury resulting from improper installation of their products.

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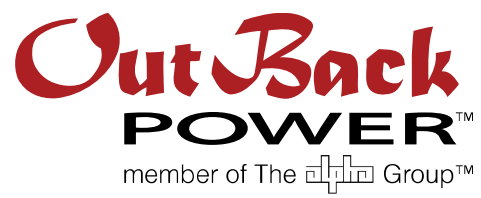
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## Date and Revision

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