

## Fortress Power – Schneider XW Pro Inverter Guide

### Fortress Power Lithium Batteries Using Schneider Insight

Schneider XW Pro and Insight Home Facility or Gateway support operating Fortress Power batteries in closed loop communication mode. It is best practice to have the inverters programmed in the open loop settings before setting up closed loop communication. For any additional help, please contact [techsupport@fortresspower.com](mailto:techsupport@fortresspower.com)

#### 1. Table of Contents

1. Introduction .....	2
2. Communication Settings.....	3
Step 1: Hardware Integration .....	3
eFlex 5.4kWh.....	3
eVault Classic 18.5kWh.....	5
eVault Max 18.5kWh .....	6
Step 2: Software Integration.....	7
1. Mode Settings.....	10
Standard Settings.....	10
Ac Coupling & Back up Settings .....	12
Grid-Tied Export .....	13
Self-Consumption (Zero Grid Export).....	14
Off-Grid .....	15
2. Open Loop Settings.....	16
Settings for Fortress Batteries with Schneider Inverters.....	16
Settings with Schneider Charge Controllers .....	17
3. Additional Options .....	17
Generator Settings (Applicable to all Mode Settings) .....	17

## Fortress Power – Schneider XW Pro Inverter Guide

### 1. Introduction

Battery Datasheets / Manuals: See “Downloads” section of individual product pages

Email: [techsupport@fortresspower.com](mailto:techsupport@fortresspower.com)

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

Phone: (877) 497-6937 x 2

Hours: 9:00AM - 6:00PM EST – Use Discord for After Hours / Weekends

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



*Join Our Discord Chat*

**Step 1 – Getting Started.** Turn each battery on individually while unpacking the batteries and note the voltage of each battery as well as the serial numbers. The batteries must be within +/- 0.5V of each other before commissioning. Turn off the batteries and install in parallel. Install the battery-to-battery communication cables and proceed with system commissioning.

**Pro tip:** If the battery voltages are significantly different, wire the batteries in parallel without communication cables and only turn on the lowest voltage battery. Use the inverter or external charger to charge the battery to the voltage of the 2<sup>nd</sup> lowest battery. Turn the 2<sup>nd</sup> battery on and charge the battery bank to the 3<sup>rd</sup> lowest battery voltage. Repeat until all batteries are at the same voltage. Keep total charging voltages under 15A per battery during this process.

**Pro tip:** If the batteries are just slightly outside the +/- 0.5V range, you can avoid using an inverter or an external charger to balance the batteries by only turning the lowest voltage batteries on (ONLY if within 0.5V relative to each other) and allowing those batteries to balance. Repeat this process with the highest voltage batteries. This brings the lowest and highest voltage battery towards to the middle of the group.

**Pro tip:** It is not usually necessary to apply a firmware update to Fortress batteries during system commissioning, but our installer firmware update tool can help speed up commissioning times.

### Step 2 – Update Schneider Firmware

Please refer to Schneider’s step-by-step guide for the commissioning of a system with 1 XW Pro hybrid inverter, 1 MPPT charge controller, and a Gateway/InsightHome/InsightFacility.

<https://solar.schneider-electric.com/xw-pro-commissioning-guide/>

The first step is to download the latest firmware of all your devices – it is strongly recommend doing so before heading to the site. Find your products in the table below and visit its product page to download the firmware. Scroll down to the Downloads section and click on Firmware. The firmware file is contained in a ZIP file.

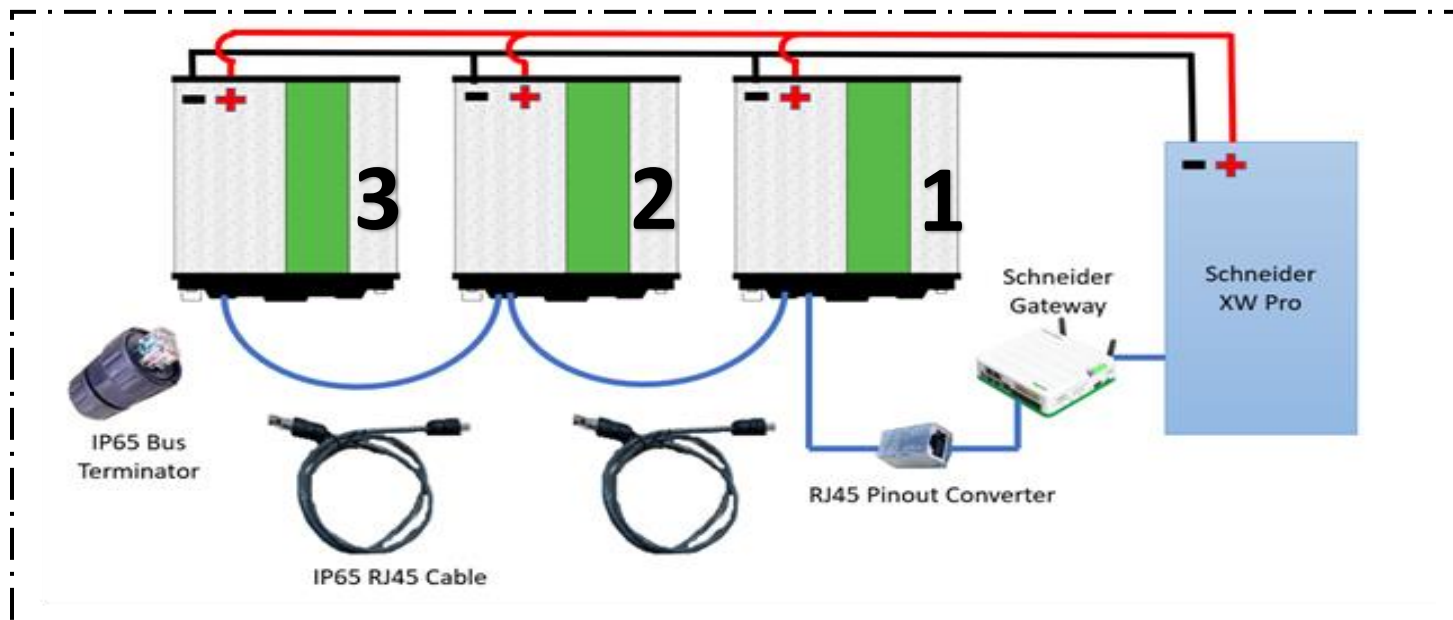
Unzip downloaded files and extract the .epkg or .xfo file into the root directory of a USB drive.

## Fortress Power – Schneider XW Pro Inverter Guide

### 2. Communication Settings

#### Step 1: Hardware Integration

#### eFlex 5.4kWh

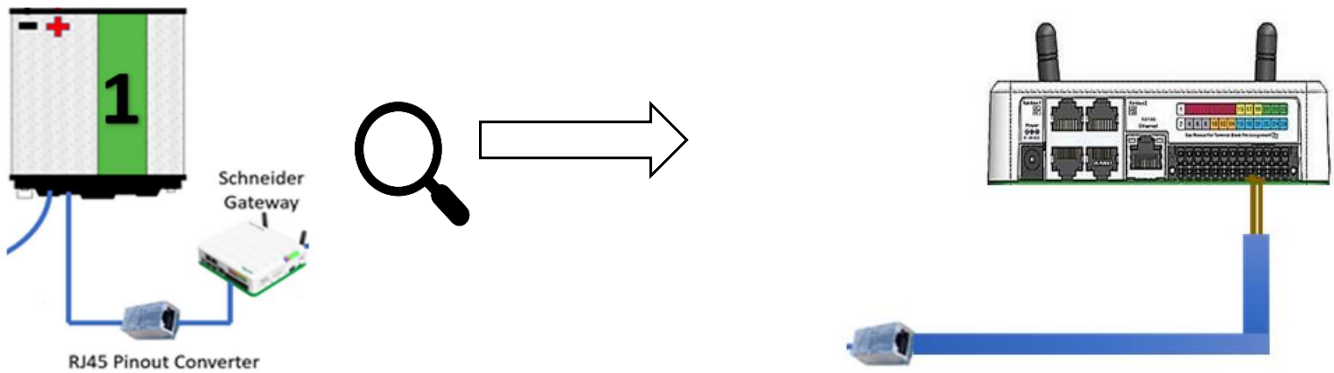


**IMAGE 2.1: EXAMPLE OF COMPLETE HARDWARE SETUP BETWEEN 3 eFLEX 5.4kWh AND SCHNEIDER XW PRO. THE SAME CONFIGURATION APPLIES TO INSTALLATIONS OF 1 BATTERY TO 15 BATTERIES CONNECTED IN PARALLEL**

**\*\*\*Important! Before paralleling each battery, make sure the voltage difference between them is less than 0.5v from one another. Pairing batteries with voltages above 0.5v may damage parts of your battery due to over surge current. If the battery/ies have voltage differences use the inverter or charge controller to charge the battery/ies up to the desired voltage. Otherwise, place the terminator in one of the communication ports and the communication cable in another.**

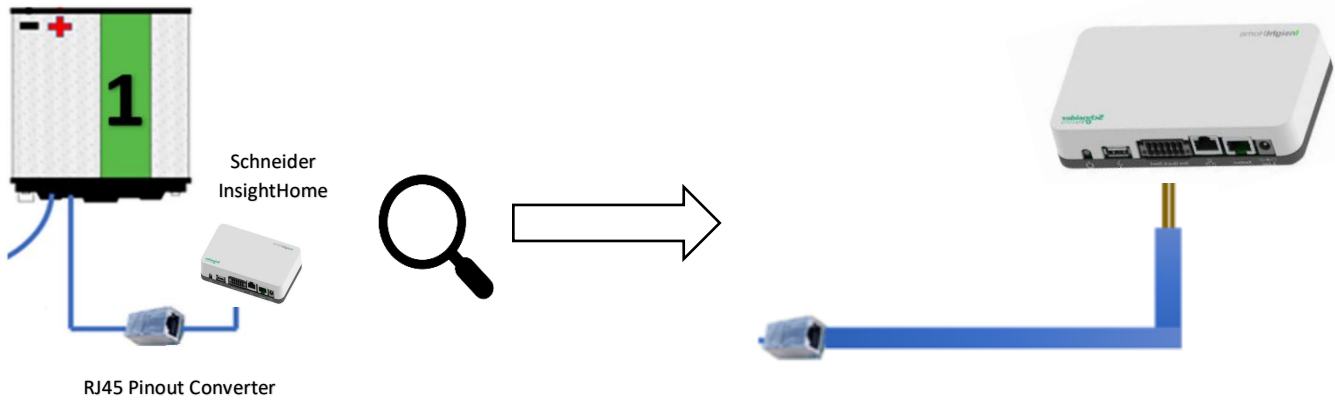
1. While batteries are off, connect the communication cables from one battery to another (RS485 ports are common) and end communication with terminator on battery 3 as referred on **Image 2.1**. Insert the remaining cable from battery 1 to the Rj45 Pinout Converter to terminate the CAN communication from battery to battery.
2. Plug a Format B Ethernet Cable (**not included**) to the other side of the Rj45 Pinout Converter.
3. Cut and strip the end of the Format B cable and connect wire 7 (brown/white) to port 9 of the Insight Home (18 on the Gateway & Insight Facility) and wire 8 (brown) to port 11 of the Insight Home (20 on the Gateway) as described in **Image 2.2** & **Image 2.3**
4. Turn battery #1 first and wait 5 seconds, then proceed turning battery #2 on, wait 5 seconds, finalize turning battery #3 on.

**Fortress Power – Schneider XW Pro Inverter Guide**



From Battery	<u>eFlex5.4kWh</u>	<u>eVault Classic &amp; Max 18.5kWh</u>
Gateway/Insight Facility port 18	brown-white, (wire 7)	green-white (wire 3)
Gateway/Insight Facility port 20	brown, (wire 8)	blue-white (wire 5)

**IMAGE 2.2: CONNECTION WITH THE MODIFIED CABLE AND INSERTED TO THE PINOUTS 18 & 20 OF THE GATEWAY/INSIGHT FACILITY**



From Battery	<u>eFlex5.4kWh</u>	<u>eVault Classic &amp; Max 18.5kWh</u>
InsightHome port 9	brown-white (wire 7)	green-white (wire 3)
InsightHome port 11	brown, (wire 8)	blue-white (wire 5)

**IMAGE 2.3: CONNECTION WITH THE MODIFIED CABLE AND INSERTED TO THE PINOUTS 9 & 11 OF THE INSIGHT HOME**

## Fortress Power – Schneider XW Pro Inverter Guide

### eVault Classic 18.5kWh

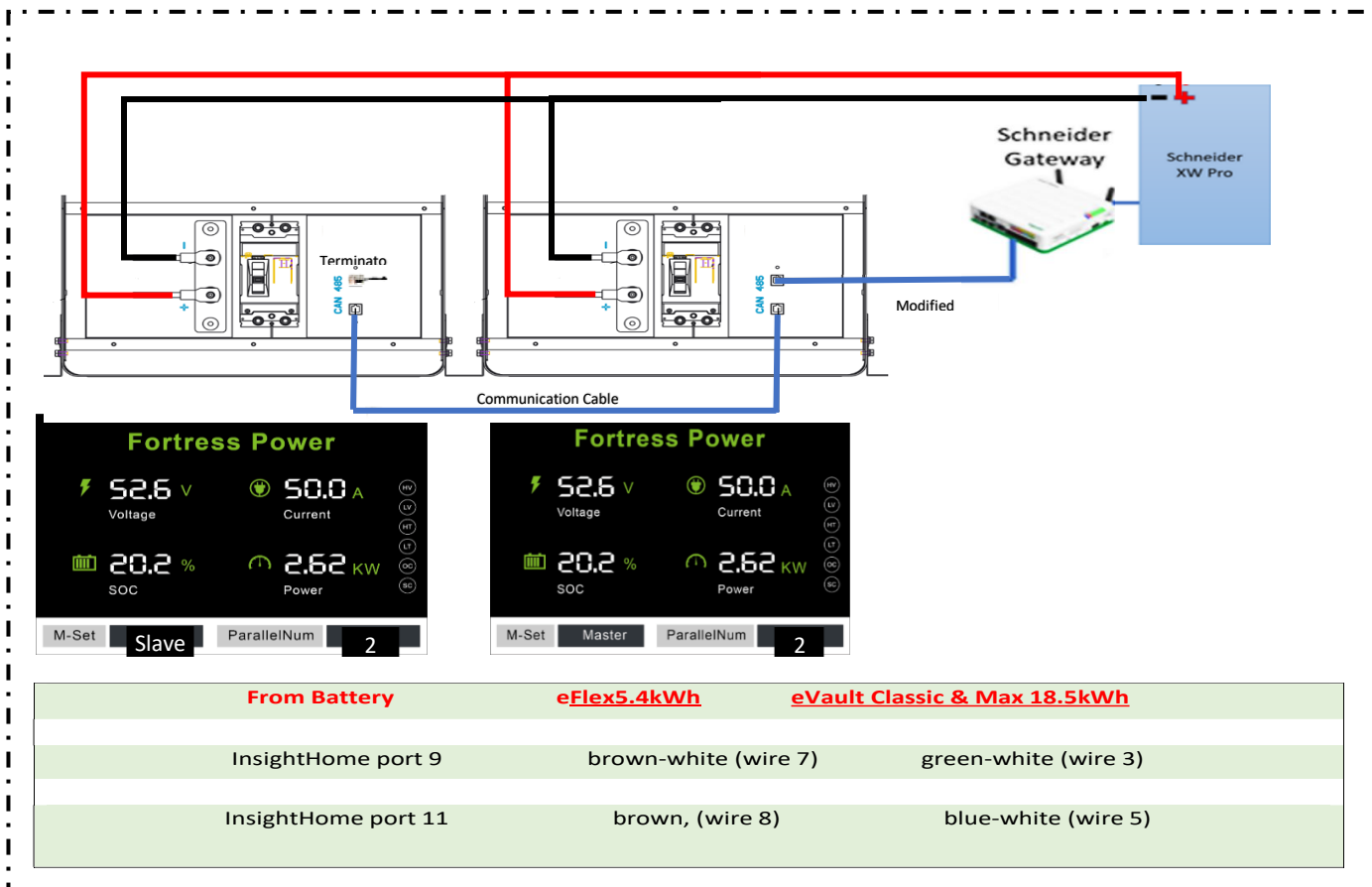


IMAGE 2.4: EXAMPLE OF COMPLETE HARDWARE SETUP BETWEEN 2 eVAULT CLASSIC 18.5kWh AND SCHNEIDER XW PRO.

\*\*\*Closed loop is only compatible for up to 2 batteries connected in parallel. Make sure that each battery are updated to firmware version 7.7. Important! Before paralleling each battery, make sure the voltage difference between them is less than 0.5v from one another. Pairing batteries with voltages above 0.5v may damage parts of your battery due to over surge current. If the battery/ies have voltage differences use the inverter or charge controller to charge the battery/ies up to the desired voltage. Otherwise, place the terminator in one of the communication ports (Both TX and RX are common ports) and the communication cable in the other. Set Battery to Master 1.

1. To pair both batteries, turn them on pressing the pushbutton for about 10 seconds and set both batteries to Slave with Parallel Number 2. Turn them off. While batteries are off, connect the communication cables from one battery to another (RS485 ports are common) and end communication with a terminator to the battery that you will choose to be the Slave.
2. Turn Both batteries on. Set one of the batteries to Master. Note: The Master battery will communicate directly with the inverter. If paralleling is successful, you should hear a clicking sound on both batteries after this step. Insert the remaining Format B Ethernet cable from the Master battery to the Gateway/Insight Home/Insight Facility.
3. Cut and strip the end of the Format B cable and connect wire 3 (green/white) to port 9 of the Insight Home (18 on the Gateway & Insight Facility) and wire 5 (blue/white) to port 11 of the Insight Home (20 on the Gateway) as described in *Image 2.4*.

## Fortress Power – Schneider XW Pro Inverter Guide

### eVault Max 18.5kWh

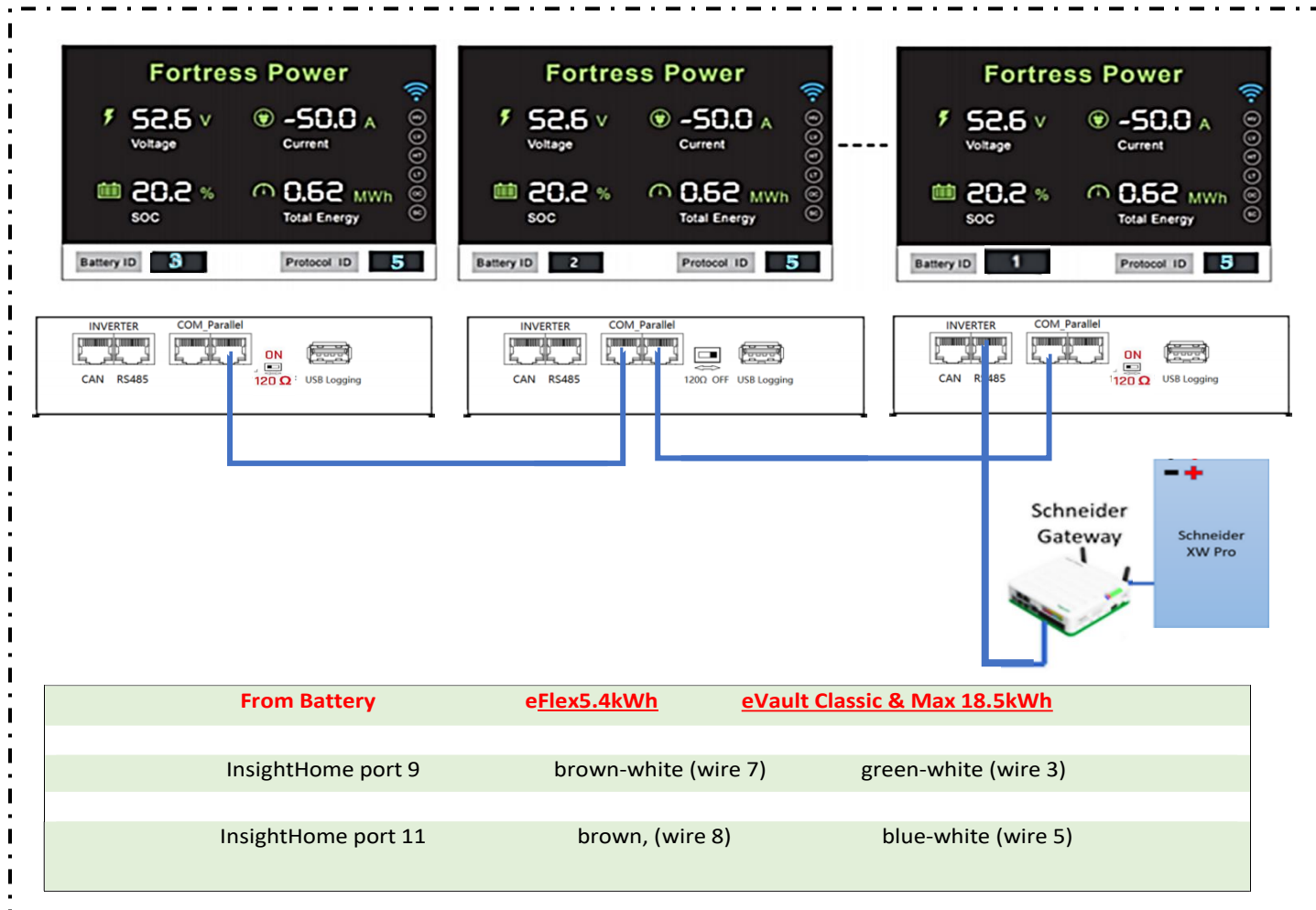


IMAGE 2.5: EXAMPLE OF COMPLETE HARDWARE SETUP BETWEEN 3 eVAULT Max 18.5kWh AND SCHNEIDER XW PRO.

\*\*\*Closed loop is compatible for up to 20 batteries connected in parallel. Make sure that each batteries are updated to the latest firmware version. Important! Before paralleling each battery, make sure the voltage difference between them is less than 0.5v from one another. Pairing batteries with voltages above 0.5v may damage parts of your battery due to over surge current. If the battery/ies have voltage differences use the inverter or charge controller to charge the battery/ies up to the desired voltage.

If using only one battery, set the battery ID to 0, Protocol to 5. Turn the terminator switch to 120ohms and place the communication cable into the RS485 port. Turn the battery off then on and confirm Battery ID 0, Protocol 5.

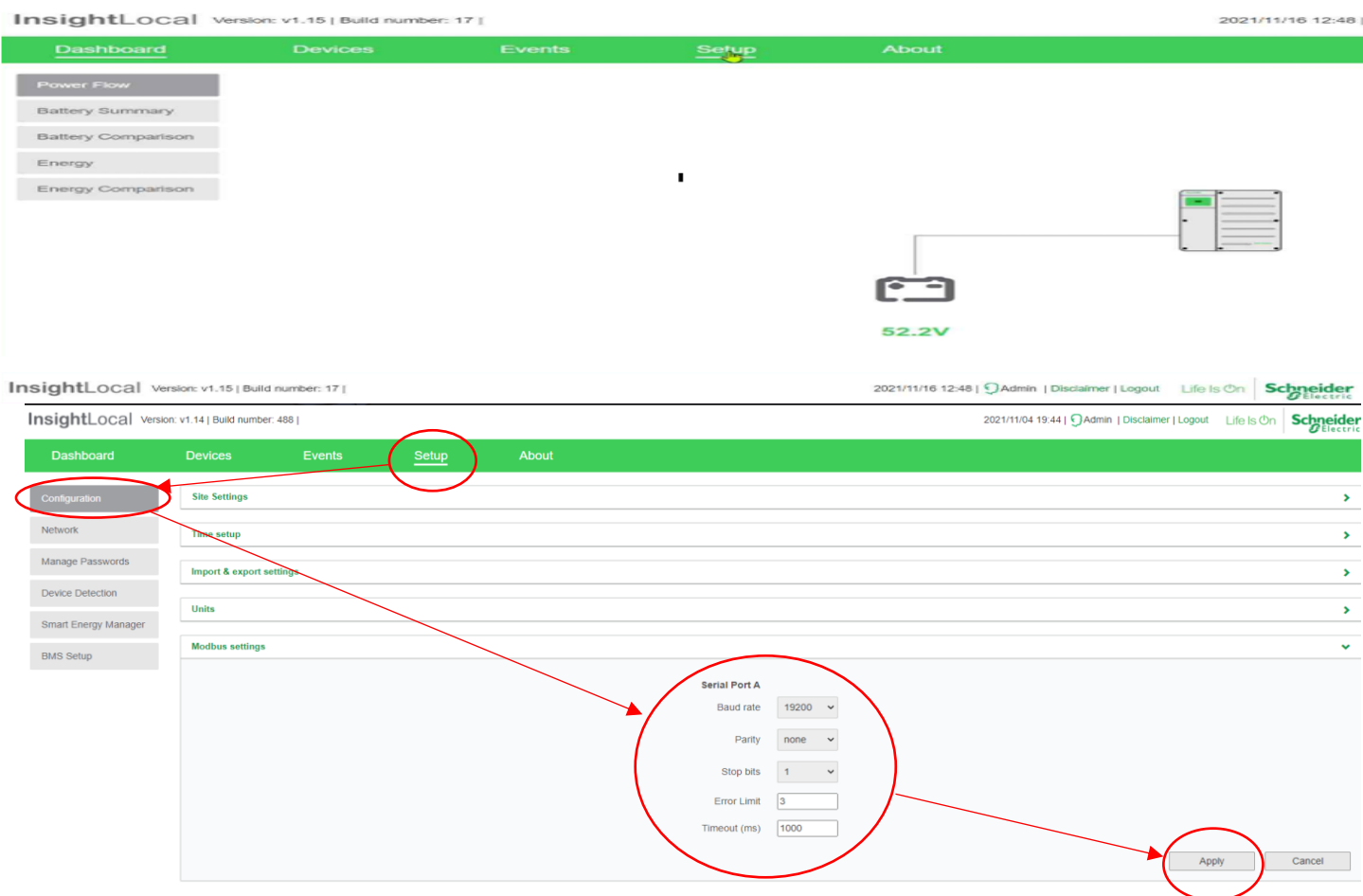
1. For multiple batteries: turn off or open eVault MAX breaker. Turn on the battery: record voltage, set the battery ID and protocol as described below. If the battery voltages are not within 0.5V, the battery that is not in the range should be charged or discharged.
2. When paralleling multiple batteries, you need to choose which battery will be the master and which will be the slaves. You do this by Setting the Master battery ID to 1 and set the rest in chronological order as describes in Image 2.5. If the install is only a single eVault set battery ID to 0.
3. Set the protocol ID to 5 on all batteries. This identifies the Schneider communication protocol.
4. Turn off all batteries. Take note to identify which battery is Master Battery 1

## Fortress Power – Schneider XW Pro Inverter Guide

5. Place the communication cable on the Comm Parallel ports between each battery. The first and last battery in the communication string need to have the termination set to 120 ohms, the other batteries termination is set off.
6. Turn on all batteries except master Battery 1. Batteries should have green run light on and red BMS light blinking.
7. Turn on Master Battery 1. Batteries should parallel within 5 minutes. To confirm that each battery is properly commissioned, each battery's status light must be solid green.
8. The batteries are ready to supply power to the inverter(s). For a single eVault Battery install the power on sequence is different from multiple batteries. For a single evault the last step is to turn on the battery to take advantage of the pre-charge resistor. So for a single battery install with the battery off make (turn on) the battery connection all the way to the inverter including the inverter breaker then turn on the battery. For multiple batteries the last connection made is the inverter battery breaker.
9. Cut and strip the end of the Format B cable and connect wire 3 (green/white) to port 9 of the Insight Home (18 on the Gateway & Insight Facility) and wire 5 (blue/white) to port 11 of the Insight Home (20 on the Gateway & Insight Facility) as described in **Image 2.5**.
10. Connect the other end of the Format B Ethernet Cable onto the eVault MAX Identified as ID 1, Rs485 port.

### Step 2: Software Integration

**\*\*\*Follow these steps to successfully integrate the battery's BMS to the XW PRO.**



The screenshot shows the InsightLocal web interface. At the top, there's a navigation bar with 'Dashboard', 'Devices', 'Events', 'Setup', and 'About'. Below this, there's a sidebar with 'Configuration' highlighted. The main content area shows 'Serial Port A' settings: Baud rate (19200), Parity (none), Stop bits (1), Error Limit (3), and Timeout (ms) (1000). The 'Apply' button is highlighted with a red circle.

**\*\*\*Note: Choose a 19200 BAUD Rate for the eVault Max. Otherwise use a 9600 BAUD Rate for the eFlex and the eVault Classic.**

## Fortress Power – Schneider XW Pro Inverter Guide

InsightLocal Version: v1.15 | Build number: 17 | 2021/11/16 12:48 | Admin | Disclaimer | Logout | Life Is On | Schneider Electric

Dashboard Devices Events Setup About

Configuration  
Network  
Manage Passwords  
**Device Detection**  
Smart Energy Manager  
BMS Setup

**Detect devices**

Port	Range
RS-485-1	1 to 2
RS-485-2	to

New tab | Schneider Electric - HMI Application | Not secure | https://192.168.100.1/#/gateway/detection

InsightLocal Version: v1.15 | Build number: 17 | 2021/11/16 12:49 | Admin

Dashboard Devices Events

**Device detection**

Progress: 100%

Detection completed successfully. Devices found: 1

InsightLocal Version: v1.15 | Build number: 17 | 2021/11/16 12:49 | Admin

Dashboard **Devices** Events Setup About

2 devices Display

**Device Overview**  
Inverter/Chargers  
Other Devices

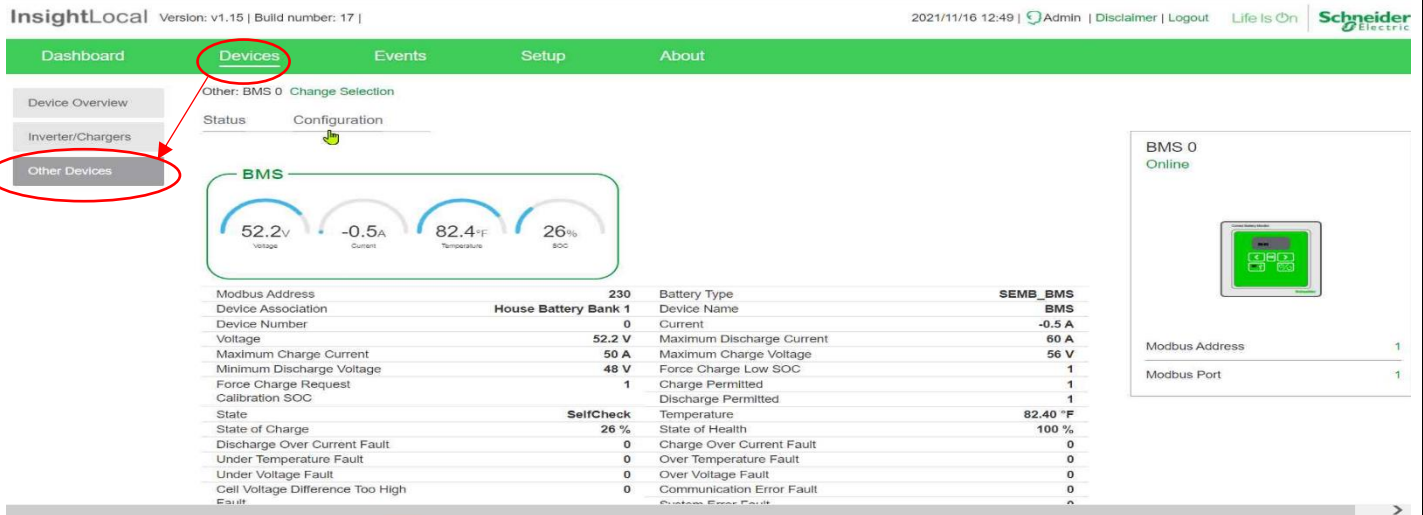
**XW6848-21 0** Online

Operating Mode	Operating
Inverter Status	APS Only
Charger Status	Qualifying AC
Unit Configuration	Split Phase Master
AC Load Active	0 W
Power	
AC Load Voltage	0 V
AC Load	0 Hz
Frequency	
AC1 Input Power (W)	0 W
AC1 Voltage	0 V
AC1 Frequency	0 Hz
AC2 Active Power	0 W
AC2 Voltage	0 V
AC2 Frequency	0 Hz
DC Power	0 W

**SEMB\_BMS 0** Online

Device Name	BMS
Device Association	House Battery Bank 1
Current	-0.5 A
Voltage	52.199 V
Temperature	82.40 °F
State of Charge	26 %
State of Health	100 %

## Fortress Power – Schneider XW Pro Inverter Guide



InsightLocal Version: v1.15 | Build number: 17 | 2021/11/16 12:49 | Admin | Disclaimer | Logout | Life Is On | Schneider Electric

Dashboard **Devices** Events Setup About

Device Overview  
Inverter/Chargers  
**Other Devices**

Other: BMS 0 Change Selection  
Status Configuration

**BMS**

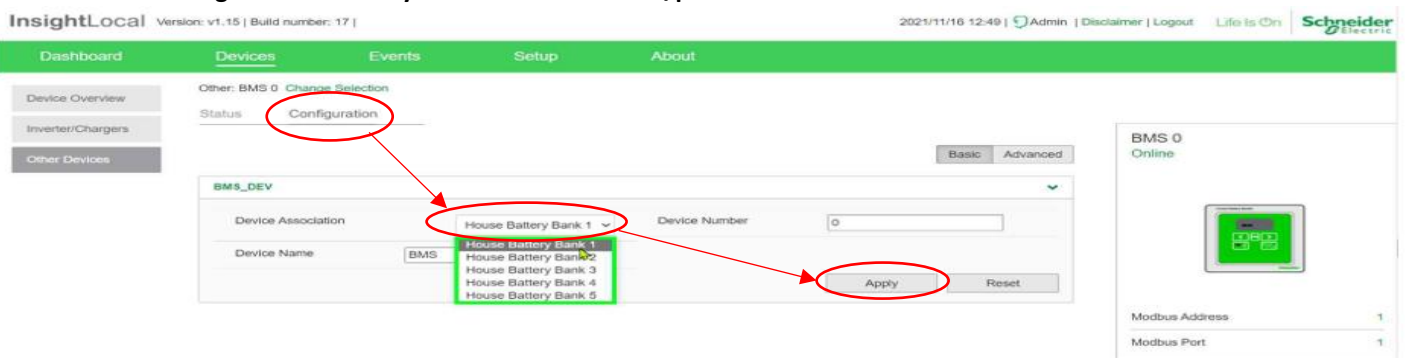
52.2v Voltage -0.5A Current 82.4°F Temperature 26% SOC

Modbus Address	230	Battery Type	SEMB_BMS
Device Association	House Battery Bank 1	Device Name	BMS
Device Number	0	Current	-0.5 A
Voltage	52.2 V	Maximum Discharge Current	60 A
Maximum Charge Current	50 A	Maximum Charge Voltage	56 V
Minimum Discharge Voltage	48 V	Force Charge Low SOC	1
Force Charge Request	1	Charge Permitted	1
Calibration SOC		Discharge Permitted	1
State	SelfCheck	Temperature	82.40 °F
State of Charge	26 %	State of Health	100 %
Discharge Over Current Fault	0	Charge Over Current Fault	0
Under Temperature Fault	0	Over Temperature Fault	0
Under Voltage Fault	0	Over Voltage Fault	0
Cell Voltage Difference Too High Fault	0	Communication Error Fault	0
		System Error Fault	0

BMS 0 Online

Modbus Address 1  
Modbus Port 1

To confirm that the BMS was successfully integrated into the inverter you will see the image of the battery's BMS on the devices section along with the battery's internal information/parameters.



InsightLocal Version: v1.15 | Build number: 17 | 2021/11/16 12:49 | Admin | Disclaimer | Logout | Life Is On | Schneider Electric

Dashboard **Devices** Events Setup About

Device Overview  
Inverter/Chargers  
Other Devices

Other: BMS 0 Change Selection  
Status **Configuration**

Basic Advanced

BMS\_DEV

Device Association: House Battery Bank 1 Device Number: 0

Device Name: BMS

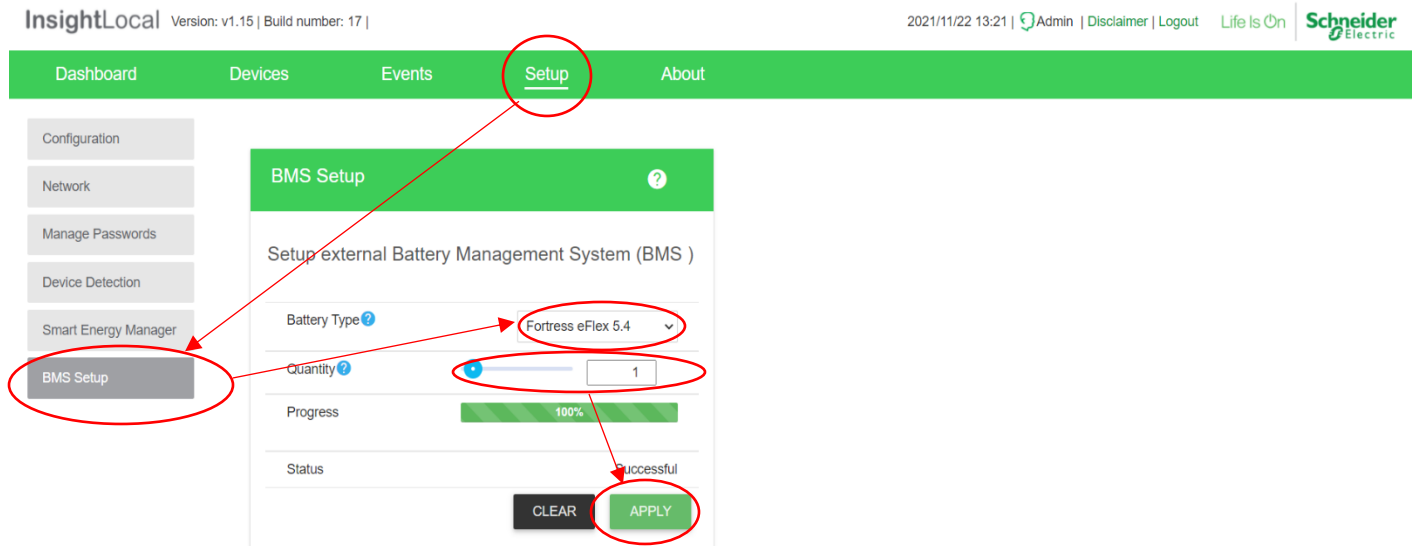
House Battery Bank 1  
House Battery Bank 2  
House Battery Bank 3  
House Battery Bank 4  
House Battery Bank 5

Apply Reset

BMS 0 Online

Modbus Address 1  
Modbus Port 1

Associate the Battery//s as House Battery Bank 1



InsightLocal Version: v1.15 | Build number: 17 | 2021/11/22 13:21 | Admin | Disclaimer | Logout | Life Is On | Schneider Electric

Dashboard **Devices** Events **Setup** About

Configuration  
Network  
Manage Passwords  
Device Detection  
Smart Energy Manager  
**BMS Setup**

**BMS Setup** ?

Setup external Battery Management System (BMS )

Battery Type: Fortress eFlex 5.4

Quantity: 1

Progress: 100%

Status: Successful

CLEAR APPLY

Specify The quantity of the batteries connected in parallel.

## Fortress Power – Schneider XW Pro Inverter Guide

### 1. Mode Settings

**\*\*Note: Follow each diagram for parameter settings according to End User’s desired application. For each setting, please input the following closed and open loop settings in case the battery loses communication with the inverter. To view all features, click on Advanced rather than Basic**

#### Standard Settings

**Battery Settings** ▼

<p>Battery Type <span>?</span> <input type="text" value="Li-Ion"/></p> <p>Charge Cycle <span>?</span> <input type="text" value="External BMS"/></p> <p>SOC Control Enable <span>?</span> <input checked="" type="checkbox"/> Enabled</p> <p>Battery Bank Capacity <span>?</span> <input type="text" value="105AH per eFlex"/> Ah  <small>360AH per eVault</small></p> <p>Maximum Charge Rate <span>?</span> (Recommended charge per battery / maximum inverter DC charge) = x 100 %</p> <p>Maximum Bulk Charge Current <span>?</span> <input type="text" value="55A per eFlex"/> A  <small>100A per eVault, 140A per eVault Max</small></p> <p>Maximum Absorption Charge Current <span>?</span> <input type="text" value="55A per eFlex"/> A  <small>100A per eVault, 140A per eVault Max</small></p> <p>Maximum Float Charge Current <span>?</span> <input type="text" value="55A per eFlex"/> A  <small>100A per eVault, 140A per eVault Max</small></p> <p>Default Battery Temperature <span>?</span> <input type="text" value="Warm"/></p> <p>Absorption Time <span>?</span> <input type="text" value="3600"/> s</p> <p>Bulk/Boost Voltage Set Point <span>?</span> <input type="text" value="56.2"/> V</p> <p>Absorption Voltage Set Point <span>?</span> <input type="text" value="56"/> V</p>	<p>Maximum Discharge Current <span>?</span> <input type="text" value="60A per eFlex"/> A  <small>170A per eVault, 170A per eVault Max</small></p> <p>Maximum Discharge Time Interval <span>?</span> <input type="text" value="8"/> s</p> <p>Low Battery Cut Out <span>?</span> <input type="text" value="48"/> V</p> <p>Low Battery Cut Out Delay <span>?</span> <input type="text" value="10"/> s</p> <p>Low Battery Cut Out Hysteresis <span>?</span> <input type="text" value="2"/> V</p> <p>High Battery Cut Out <span>?</span> <input type="text" value="61"/> V</p> <p>Charge Cycle Timeout <span>?</span> <input type="text" value="1440"/> min</p> <p>High SOC Cut Out <span>?</span> <input type="text" value="98"/> %</p> <p>High SOC Cut Out Delay <span>?</span> <input type="text" value="2"/> s</p> <p>Low SOC Cut Out <span>?</span> <input type="text" value="10"/> %</p> <p>Low SOC Cut Out Delay <span>?</span> <input type="text" value="60"/> s</p>
--	---

**Battery Management System Settings** ▼

<p>BMS Communication Loss Triggers Fault or Warning <span>?</span> <input type="text" value="Warning"/></p> <p>BMS Communication Loss Trip Time <span>?</span> <input type="text" value="60"/> s</p> <p>SOC Communication Loss Triggers Fault or Warning <span>?</span> <input type="text" value="Warning"/></p> <p>SOC Communication Loss Trip Time <span>?</span> <input type="text" value="7"/> s</p> <p>Comms Lost Battery Charge Voltage Limit <span>?</span> <input type="text" value="54.4"/> V</p> <p>Comms Lost Battery Discharge Voltage Limit <span>?</span> <input type="text" value="51.4"/> V</p> <p>Comms Lost Battery Charge Current Limit <span>?</span> <input type="text" value="30"/> A</p> <p>Comms Lost Battery Discharge Current Limit <span>?</span> <input type="text" value="60"/> A</p>	<p>Charge Overcurrent Offset <span>?</span> <input type="text" value="10"/> A</p> <p>Charge Overcurrent Trip Time <span>?</span> <input type="text" value="900"/> s</p> <p>Discharge Overcurrent Offset <span>?</span> <input type="text" value="20"/> A</p> <p>Discharge Overcurrent Trip Time <span>?</span> <input type="text" value="900"/> s</p> <p>Overvoltage Offset <span>?</span> <input type="text" value="2"/> V</p> <p>Overvoltage Trip Time <span>?</span> <input type="text" value="5"/> s</p> <p>Undervoltage Offset <span>?</span> <input type="text" value="1"/> V</p> <p>Undervoltage Trip Time <span>?</span> <input type="text" value="10"/> s</p>
--	--

## Fortress Power – Schneider XW Pro Inverter Guide

**Battery Settings** ▼

---

Battery Type	<input type="text" value="Custom"/>	Battery Bank Capacity	<input type="text" value="360"/> Ah
Nominal Battery Voltage	<input type="text" value="48"/>	Battery Temperature Coefficient	<input type="text" value="0"/> mV/°C

### MPPT Charger Setting

**Charger Settings** ▼

---

<table style="width: 100%;"> <tr> <td style="width: 70%;">Equalize Voltage Set Point</td> <td style="width: 30%;"><input type="text" value="56"/> V</td> </tr> <tr> <td>Equalize Support</td> <td><input type="checkbox"/> Equalization Not Allowed</td> </tr> <tr> <td>Bulk/Boost Voltage Set Point</td> <td><input type="text" value="54.6"/> V</td> </tr> <tr> <td>Float Voltage Set Point</td> <td><input type="text" value="54.6"/> V</td> </tr> <tr> <td>Recharge Voltage</td> <td><input type="text" value="53.0"/> V</td> </tr> <tr> <td>Absorption Voltage Set Point</td> <td><input type="text" value="54.6"/> V</td> </tr> </table>	Equalize Voltage Set Point	<input type="text" value="56"/> V	Equalize Support	<input type="checkbox"/> Equalization Not Allowed	Bulk/Boost Voltage Set Point	<input type="text" value="54.6"/> V	Float Voltage Set Point	<input type="text" value="54.6"/> V	Recharge Voltage	<input type="text" value="53.0"/> V	Absorption Voltage Set Point	<input type="text" value="54.6"/> V	<table style="width: 100%;"> <tr> <td style="width: 70%;">Absorption Time</td> <td style="width: 30%;"><input type="text" value="60"/> min</td> </tr> <tr> <td>Charge Cycle</td> <td><input type="text" value="2 Stage (No Float)"/></td> </tr> <tr> <td>Maximum Charge Rate</td> <td>Recommended charge per battery /maximum DC charge) = x 100</td> </tr> <tr> <td>Equalize Now</td> <td><input type="checkbox"/> Disabled</td> </tr> <tr> <td>Charge Mode</td> <td><input type="text" value="Primary"/></td> </tr> <tr> <td>Default Battery Temperature</td> <td><input type="text" value="Warm"/></td> </tr> </table>	Absorption Time	<input type="text" value="60"/> min	Charge Cycle	<input type="text" value="2 Stage (No Float)"/>	Maximum Charge Rate	Recommended charge per battery /maximum DC charge) = x 100	Equalize Now	<input type="checkbox"/> Disabled	Charge Mode	<input type="text" value="Primary"/>	Default Battery Temperature	<input type="text" value="Warm"/>
Equalize Voltage Set Point	<input type="text" value="56"/> V																								
Equalize Support	<input type="checkbox"/> Equalization Not Allowed																								
Bulk/Boost Voltage Set Point	<input type="text" value="54.6"/> V																								
Float Voltage Set Point	<input type="text" value="54.6"/> V																								
Recharge Voltage	<input type="text" value="53.0"/> V																								
Absorption Voltage Set Point	<input type="text" value="54.6"/> V																								
Absorption Time	<input type="text" value="60"/> min																								
Charge Cycle	<input type="text" value="2 Stage (No Float)"/>																								
Maximum Charge Rate	Recommended charge per battery /maximum DC charge) = x 100																								
Equalize Now	<input type="checkbox"/> Disabled																								
Charge Mode	<input type="text" value="Primary"/>																								
Default Battery Temperature	<input type="text" value="Warm"/>																								

## Fortress Power – Schneider XW Pro Inverter Guide

### Ac Coupling & Back up Settings

**Controls** ▼

---

**Controls**

<p>Operating Mode <span style="float: right;">Operating ▼</span></p> <p style="text-align: right;">Apply</p>	<p>Force Charger State <span style="float: right;">-- Select an option -- ▼</span></p> <p style="text-align: right;">Apply</p>
<p>Reset <span style="color: blue;">?</span> <span style="float: right;">Reboot ▼</span></p> <p style="text-align: right;">Apply</p>	<p>Charger <span style="float: right;"><input checked="" type="checkbox"/> Enabled</span></p> <p style="text-align: right;">Apply</p>
<p>Clear <span style="float: right;">-- Select an option -- ▼</span></p> <p style="text-align: right;">Apply</p>	<p>Auxiliary Output Control <span style="float: right;">-- Select an option -- ▼</span></p> <p style="text-align: right;">Apply</p>
<p>Backup Mode <span style="float: right;"><input checked="" type="checkbox"/> Enabled</span></p> <p style="text-align: right;">Apply</p>	

---

**Configurations**

<p>Sell Enable/Disable <span style="float: right;"><input type="checkbox"/> Disabled</span></p>	<p>Apply    Reset</p>
---	-----------------------

**\*\*\*Note: If DC Coupled, disable AC Coupling**

**Backup Mode Settings** ▼

---

<p>AC Coupling <span style="float: right;"><input checked="" type="checkbox"/> Enabled</span></p>	<p>Maximum Search Watts <span style="float: right;">50 W</span></p>
<p>AC PV Charge SOC <span style="color: blue;">?</span> <span style="float: right;">90 %</span></p>	<p>Search Delay <span style="float: right;">2 s</span></p>
<p>Search Mode Enable <span style="float: right;"><input type="checkbox"/> Disabled</span></p>	

Apply    Reset

**Charger Settings** ▼

---

<p>Recharge Voltage <span style="color: blue;">?</span> <span style="float: right;">53 V</span></p>	<p>Charge Block Start <span style="color: blue;">?</span> <span style="float: right;">12 : 00 AM</span></p>
<p>Recharge SOC <span style="color: blue;">?</span> <span style="float: right;">85 %</span></p>	
<p>Recharge SOC Delay <span style="float: right;">60 s</span></p>	<p>Charge Block Stop <span style="color: blue;">?</span> <span style="float: right;">12 : 00 AM</span></p>

Apply    Reset

**\*\*\* Note: Disable Grid Selling since Pv is directly connected to meter in AC Coupling settings.**

## Fortress Power – Schneider XW Pro Inverter Guide

### Grid-Tied Export

**Controls** ▼

---

**Controls**

<p>Operating Mode <span style="float: right;">Operating ▼</span></p> <p style="text-align: center;">Apply</p>	<p>Force Charger State <span style="float: right;">▼</span></p> <p style="text-align: center;">Apply</p>
<p>Reset <span style="float: right;">Reboot ▼</span></p> <p style="text-align: center;">Apply</p>	<p>Charger <span style="float: right;"><input checked="" type="checkbox"/> Enabled</span></p> <p style="text-align: center;">Apply</p>
<p>Clear <span style="float: right;">▼</span></p> <p style="text-align: center;">Apply</p>	<p>Auxiliary Output Control <span style="float: right;">▼</span></p> <p style="text-align: center;">Apply</p>
<p>Backup Mode <span style="float: right;"><input checked="" type="checkbox"/> Enabled</span></p> <p style="text-align: center;">Apply</p>	

---

**Configurations**

<p>Sell Enable/Disable <span style="float: right;"><input checked="" type="checkbox"/> Enabled</span></p>	
---	--

Apply    Reset

**Charger Settings** ▼

---

<p>Recharge Voltage <span style="float: right;">51.3 V</span></p>	<p>Charge Block Start <span style="float: right;">12 : 00 AM</span></p>
<p>Recharge SOC <span style="float: right;">20 %</span></p>	<p>Charge Block Stop <span style="float: right;">12 : 00 AM</span></p>
<p>Recharge SOC Delay <span style="float: right;">60 s</span></p>	

Apply    Reset

**Grid Energy Management (Grid Support)** ▼

---

<p>Grid Support <span style="float: right;"><input checked="" type="checkbox"/> Enabled</span></p>	
<p>Grid Support Voltage <span style="float: right;">64 V</span></p>	
<p>Grid Support SOC <span style="float: right;">99 %</span></p>	
<p>Grid Support SOC Exit Delay <span style="float: right;">60 s</span></p>	
<p>Maximum Export (Sell) Sell Amps <span style="float: right;">PV array size ÷ 240V ÷ total inverters. A</span></p>	

**\*\*\*Note: Enabling Enhanced Grid Support (64V, 99%) will allow the charge controllers to fully charge the batteries and then export the excess power to the Grid. Export Block, Grid Peak load shave can be left disabled (Default)**

## Fortress Power – Schneider XW Pro Inverter Guide

### Self-Consumption (Zero Grid Export)

**Controls**

<b>Controls</b>	
Operating Mode <span style="float: right;">Operating</span>	Force Charger State <span style="float: right;">[ ]</span>
<input type="button" value="Apply"/>	<input type="button" value="Apply"/>
Reset <span style="float: right;">Reboot</span>	Charger <span style="float: right;">Enabled</span>
<input type="button" value="Apply"/>	<input type="button" value="Apply"/>
Clear <span style="float: right;">[ ]</span>	Auxiliary Output Control <span style="float: right;">[ ]</span>
<input type="button" value="Apply"/>	<input type="button" value="Apply"/>
Backup Mode <span style="float: right;">Enabled</span>	
<input type="button" value="Apply"/>	

---

**Configurations**

Sell Enable/Disable <span style="float: right;">Enabled</span>	
<input type="button" value="Apply"/>	<input type="button" value="Reset"/>

**Charger Settings**

Recharge Voltage <span style="float: right;">51.3 V</span>	Charge Block Start <span style="float: right;">12 : 00 AM</span>
Recharge SOC <span style="float: right;">20 %</span>	
Recharge SOC Delay <span style="float: right;">60 s</span>	Charge Block Stop <span style="float: right;">12 : 00 AM</span>
	<input type="button" value="Apply"/> <input type="button" value="Reset"/>

Grid Support <span style="float: right;">Enabled</span>	
Grid Support Voltage <span style="float: right;">51.7 V</span>	
Grid Support SOC <span style="float: right;">25 %</span>	
Grid Support SOC Exit Delay <span style="float: right;">60 s</span>	
Maximum Export (Sell) Sell Amps <span style="float: right;">0 A</span>	
Sell Delay 40 Sec <span style="float: right;">Disabled</span>	

## Fortress Power – Schneider XW Pro Inverter Guide

### Off-Grid

**Controls** ▼

**Controls**

<p>Operating Mode <span style="float: right;">▼</span>  <input type="text" value="Operating"/>  <input type="button" value="Apply"/></p>	<p>Force Charger State <span style="float: right;">▼</span>  <input type="text" value="-- Select an option --"/>  <input type="button" value="Apply"/></p>
<p>Reset <span style="font-size: small;">?</span> <span style="float: right;">▼</span>  <input type="text" value="Reboot"/>  <input type="button" value="Apply"/></p>	<p>Charger <span style="float: right;">Enabled</span>  <input checked="" type="checkbox"/>  <input type="button" value="Apply"/></p>
<p>Clear <span style="float: right;">▼</span>  <input type="text" value="-- Select an option --"/>  <input type="button" value="Apply"/></p>	<p>Auxiliary Output Control <span style="float: right;">▼</span>  <input type="text" value="-- Select an option --"/>  <input type="button" value="Apply"/></p>
<p>Backup Mode <span style="float: right;">Enabled</span>  <input checked="" type="checkbox"/>  <input type="button" value="Apply"/></p>	

**Configurations**

<p>Sell Enable/Disable <span style="float: right;">Disabled</span>  <input type="checkbox"/>  <input type="button" value="Apply"/> <input type="button" value="Reset"/></p>
---

**Charger Settings** ▼

<p>Recharge Voltage <span style="font-size: small;">?</span> <span style="float: right;">53 V</span>  <input type="text" value="53"/></p>	<p>Charge Block Start <span style="font-size: small;">?</span>  <input type="text" value="12"/> : <input type="text" value="00"/> AM</p>
<p>Recharge SOC <span style="font-size: small;">?</span> <span style="float: right;">85 %</span>  <input type="text" value="85"/></p>	<p>Charge Block Stop <span style="font-size: small;">?</span>  <input type="text" value="12"/> : <input type="text" value="00"/> AM</p>
<p>Recharge SOC Delay <span style="float: right;">60 s</span>  <input type="text" value="60"/></p>	<input type="button" value="Apply"/> <input type="button" value="Reset"/>

**\*\*\*Note: Disable Grid Support, Export Block, Grid Peak load shave.**

## Fortress Power – Schneider XW Pro Inverter Guide

### 2. Open Loop Settings

**\*\*\*All Open Loop Settings are programmable with a SCP, Insight Local or/and Insight Cloud. Disregard the communication cable that would go from battery to inverter. Use these settings for XW + Inverter**

Settings for Fortress Batteries with Schneider Inverters

<b>Charger Setting &gt; Custom Setting</b>	
	80% DoD, 6000 cycles
Battery Type	Custom
Charge Cycle	2StgNoFloat
Bulk Voltage	54.4 V
Max Bulk Current	eFlex:55A per battery eVault:100A per battery eVault MAX 150 per battery LFP-10: 70A per battery
Max Discharge Current	eFlex: 60A per battery eVault: 160A per battery eVault MAX: LFP-10: 100A per battery
Battery Capacity	eFlex: 105AH per battery eVault: 360AH per battery eVault MAX: 360AH per battery LFP-10: 200AH per battery
Max Charge Rate Percentage (%)	eFlex:55A per battery eVault:100A per battery eVault MAX 150 per battery LFP-10: 70A per battery  Divided by Total Inverter DC Amperage
Default Battery Temperature	Warm
Recharge Volts	51.3
Grid Support Volts**	53
Absorb Volts	54.4
Absorb Time	1 Hour
Charge Block Start	Default
Charge Block Stop	Default
<b>Advanced Settings &gt; Inverter Settings</b>	
Low Battery Cut Out Voltage	48V (50V if allowed)
LBCO Hysteresis	2.0V
LBCO Delay	5 Sec
High Battery Cut Out Voltage	61V (58V if allowed)
Search Watts	Default
Search Delay	Default

## Fortress Power – Schneider XW Pro Inverter Guide

### Settings with Schneider Charge Controllers

#### \*\*\*Parameter Setting for Fortress Batteries with Schneider XW+ & XW Pro MPPT 60/80

Advanced Setting > Charger Setting	
Battery Type	Custom
Custom Setting	
	80% DoD, 6000 cycles
Charge Mode	3 Stage
Eqlz Support	Disabled
Bulk Voltage	54.4 V
Absorb Voltage	54.4 V
Absorb Time	60 minutes
Float Voltage	54.4 V
Battery Temperature Compensation	0mV/C
Battery Capacity	eFlex: 105AH per battery eVault: 360AH per battery eVault MAX: 360AH per battery LFP-10: 200AH per battery
Max Charge Rate Percentage*	eFlex:55A per battery eVault:100A per battery eVault MAX: 150A per battery LFP-10: 70A per battery  Divide by total CC amp output
Charge Cycle	Warm
Recharge Volts	53 V
Absorb Time	1 Hour
Default Battery Temperature	Warm
Battery Voltage (Auto-detected)	48V

*Note: The charge controllers can be set to a 3-stage charging cycle, but the inverter should be kept in a 2 stage charging cycle. Doing so, as well as setting the charge controller recharge voltage to be greater than that of the inverter recharge voltage, will prioritize charge controller charging over the inverter charging. Inverter charging is a grid/generator charge which has a lower priority than solar charge controller charging.*

### 3. Additional Options

#### Generator Settings (Applicable to all Mode Settings)

20% state of charge is approximately 51.0V.

95% charge is approximately 53.7V. A 100% charge 54.4V.

NOTE: Voltages are open circuit resting measurement. The settings that would discharge the battery down to 49V, is too low for Fortress batteries. Fortress batteries should only be intentionally discharged down to 20% SoC or 51.4V and then be recharged by available charging sources.