



Schneider XW Pro, KiloVault Integration Guide

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Introduction

This guide covers the recommended set-up and configuration of the Schneider Electric Conext XW Pro Solar Hybrid Inverter/Charger 120/240V using the Conext System Control Panel. We'll only be covering battery related settings. In case you are using the Schneider Conext Gateway, these same settings are available there as well.

You can download the XW Owners' guide here: <https://tinyurl.com/XWProOpGuide>

In that guide, document number 975-0801-01-02, you can find an SCP menu map for both Basic and Advanced Settings, Figure 22. The menu map is also reproduced on the last page of this document.

CAUTION: If you update the firmware in your Schneider Electric equipment, ALL the settings must be reverified. The programmed settings shown in the following tables must be applied based on desired Warranty/Cycle life. We recommend an 80% depth of discharge for our Lithium Iron Phosphate (LiFePO4 or LFP) batteries and a 50% depth of discharge for our PLC battery.

Notes on the XW

- As of this writing, the XW Pro's High Battery Cut Out (a.k.a. high voltage disconnect) cannot be set lower than 58V. This has been suggested to Schneider as a firmware update. No release date yet for the update.
- As of this writing, the Schneider Conext Gateway and Insight 2 provide easier and greater control and monitoring of the XW Pro than is available through the Conext System Control Panel (SCP). There are no updates planned for the SCP.
- When using the SCP, the XW Pro Advanced Settings are accessed by...
 - Selecting the XW Pro on the Select Device menu
 - Press and release the **Enter** and **Up Arrow** and **Down Arrow** simultaneously. It may take a few tries to do this.
 - After performing this keypress, **Advanced Settings** appears at the top of the XW Pro Setup menu.
 - If you press and release **Enter & Up Arrow & Down Arrow** simultaneously again then **Basic Settings** will appear at the *bottom* of the Setup Menu.
- Put the XW Plus into Standby Mode before changing any basic or advanced settings.
- Put the XW Plus into Operating Mode after changing the settings to save the changes.

1800 & 3600 HLX & CHLX

Basic Settings

Setting Name	1800 Setting	3600 Setting
Batt Type	Gel (This will be overridden in Advanced Settings)	
Batt Capacity	150Ah per HLX in Parallel	300Ah per HLX in Parallel
Max Chg Rate	Set to a percentage of 140A (the XW Pro's Max) so that when added to the solar charge controller amperage, the sum is 100A (per HLX in parallel)	
Charge Cycle	2 Stage No Float	
Recharge Volts (for 80% DoD)	51.0V	
Low Batt Cut Out	49.0V	

Advanced Settings

Setting Name	1800 Setting	3600 Setting
Inverter / Low Batt Cut Out	49.0V	
Inverter / LBCO Delay	5 seconds	
Inverter / LBCO Hysteresis	0.5V	
Inverter / High Batt Cut Out	57.6V	
Charger / Batt Capacity	150Ah per battery in parallel	300Ah per battery in parallel
Charger / Max Chg Rate	Set to a percentage of 140A so that when added to the solar charge controller amperage, the sum is 100A (per HLX in parallel)	
Charger / Charge Cycle	2-Stage	
Charger / Default Batt Temp	Warm (the default)	
Charger / Recharge Volts (for 80% DoD)	51.0V	
Charger / Absorb Time	2 minutes or less	
Charger / Batt Type	Custom	
Charger / Custom / EqLz Support	Disabled	
Charger / Custom / EqLz Voltage	N/A	
Charger / Custom / Bulk Voltage	56.4V	
Charger / Custom / Bulk Termination Voltage	55.6V (required to be at least .8V below Bulk)	
Charger / Custom / Absorb Voltage	56.4V	
Charger / Custom / Float Voltage	N/A	
Charger / Custom / Batt Temp Comp	0 mV / °C	

Notes

HAB 7.5kWh

Basic Settings

Setting Name	Setting Value
Batt Type	Gel (Will be overridden by Advanced Settings)
Batt Capacity	150Ah per HAB in parallel
Max Chg Rate	Set to a percentage of 140A so that when added to the solar charge controller amperage, the sum is 120A (per HAB in parallel)
Charge Cycle	2 Stage
Recharge Volts for 80% DoD	51.4V
Low Batt Cut Out	48.2V

Advanced Settings

Setting Name	Setting Value
Inverter / Low Batt Cut Out	48.2V
Inverter / LBCO Delay	3 seconds
Inverter / LBCO Hysteresis	2V
Inverter / High Batt Cut Out	57V
Charger / Battery Type	Custom
Charger / Batt Capacity	150Ah per HAB in parallel
Charger / Max Charge Rate	Set to a percentage of 140A so that when added to the solar charge controller amperage, the sum is 120A (per HAB in parallel)
Charger / Charge Cycle	2 Stage
Charger / Default Batt Temp	Warm
Charger / Recharge Volts for 80% DoD	51.4V
Charger / Absorb Time	2 minutes or less
Charger / Custom / Eqz Support	Disabled
Charger / Custom / Eqz Voltage	N/A
Charger / Custom / Bulk Voltage	56.2V
Charger / Custom / Bulk Termination Voltage	55.4V (required to be at least .8V below Bulk)
Charger / Custom / Absorb Voltage	56.2V
Charger / Custom / Float Voltage	N/A
Charger / Custom / Batt Temp Comp	0 mV / °C

Notes

2100 PLC

Basic Settings

Setting Name	Setting Value
Battery Type	AGM (overridden by custom settings)
Battery Capacity	180Ah per 2100 PLC in parallel
Max Charge Rate	Set to a percentage of 140A so that when added to the solar charge controller amperage, the sum is 100A (per PLC in parallel)
Charge Cycle	3 stage without a solar charge controller 2 stage with a solar charge controller
Recharge Volts for 50% DoD	48.4V
Low Battery Cutout	48V

Advanced Settings

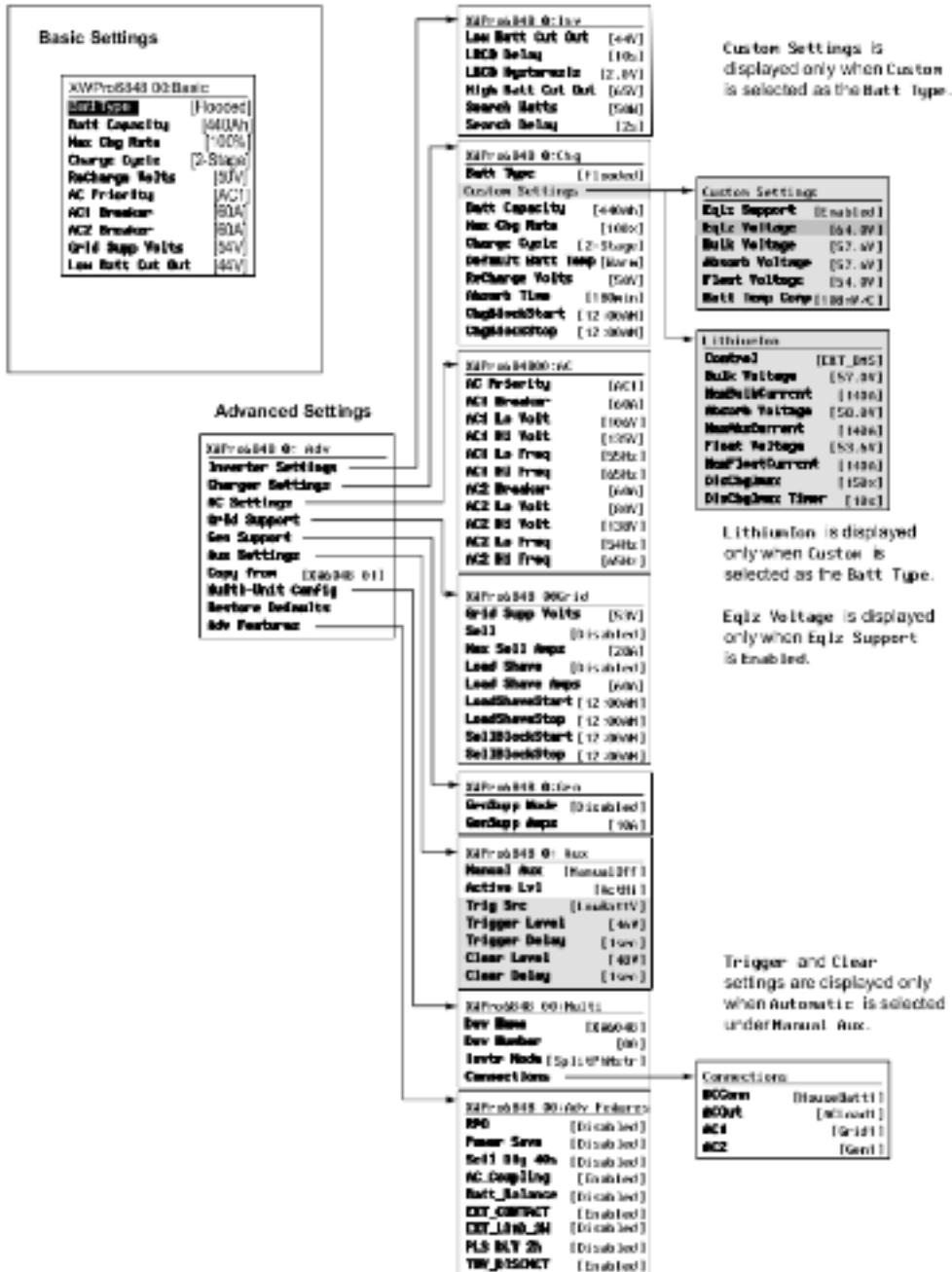
Setting Name	Setting Value
Inverter / Low Battery Cut Out	48V
Inverter / Low Battery Cut Out Delay	10 seconds
Inverter / Low Battery Cut Out Hysteresis	2V
Inverter / High Battery Cut Out	60V
Charger / Batt Type	Custom
Charger / Batt Capacity	180 Ah
Charger / Max Chg Rate	Set to a percentage of 140A so that when added to the solar charge controller amperage, the sum is 100A (per PLC in parallel)
Charger / Charge Cycle	3 Stage without a solar charge controller 2 stage with a solar charge controller
Charger / Default Batt Temp	Warm (the default)
Charger / Recharge Volts	48.4V
Charger / Absorb Time	8 Hours
Charger / Custom / Eqlz Support	Enabled
Charger / Custom / Eqlz Voltage	56.4V (14.1V * 4)
Charger / Custom / Bulk Voltage	56.4V (14.1V * 4)
Charger / Custom / Bulk Termination Voltage	55.6V (required to be at least .8V below Bulk)
Charger / Custom / Absorb Voltage	56.4V (14.1V * 4)
Charger / Custom / Float Voltage	54.4V (13.6V * 4)
Charger / Custom / Batt Temp Comp	-3mV/ °C

Notes

Resources

System Control Panel (SCP) XW Pro Menu Map

Figure 27 Basic and Advanced Settings



Insight 2 XW Pro Menu

These screenshots are from demonstration sites using random data on Insight 2 - <https://conextinsight2.schneider-electric.com/>

To see this data for yourself and to practice using Insight 2, point your web browser to <https://conextinsight2.schneider-electric.com/> , create an account, and create a new site using;

- URN: urn:dev:opm:000054-Combox-587AC6N2XWCL1
- SERIAL NUMBER: SESA405035

This Schneider demo site simulates a dual XW single phase system with 4 Schneider Conext MPPT 80 charge controllers, a Conext Battery Monitor and a Conext Automatic Generator Start. Input any site name you wish, any date you want for the commissioning date and estimate the site, battery bank and inverter sizes using your preferred method. For this example, it was named Schneider Insight 2 Demo Site 2.

From the Insight 2 home page click the demo site you set up above.

The screenshot shows the Conext Insight 2 dashboard. At the top, there are navigation tabs: HOME, MY DASHBOARD, PERFORMANCE, REPORTING, EVENTS, and CONFIGURATION. Below the navigation is a search bar and a 'New Site' button. The main content is a table with the following columns: SiteName, Connectivity, Last Data Refresh, Today Export to Grid (kWh), Today Solar Production (kWh), Batt. Voltage (V), Batt. SoC (%), Alarms / Warnings, Generator, Grid, Firmware Status, and Weather. The table contains five rows of data. The second row, 'Schneider Insight 2 Demo Site 2', is highlighted with a yellow circle. The bottom right corner of the table has a pagination control showing '« 1 »'.

SiteName	Connectivity	Last Data Refresh	Today Export to Grid (kWh)	Today Solar Production (kWh)	Batt. Voltage (V)	Batt. SoC (%)	Alarms / Warnings	Generator	Grid	Firmware Status	Weather
altE Store Lab	Online	2020-04-27 19:53:01	0	0	-	-	0 Alarm / 0 Warning	No Generator	OFF	406	
Schneider Insight 2 Demo Site 1	Online	2020-04-27 19:52:20	27.3	37.13	50	98	0 Alarm / 0 Warning	Not running	ON	300	
Schneider Insight 2 Demo Site 2	Online	2020-04-27 19:48:10	27.3	101.83	50	98	0 Alarm / 0 Warning	Not running	ON	300	
Schneider Insight 2 Demo Site 3	Online	2020-04-27 19:48:10	27.3	101.83	50	98	0 Alarm / 0 Warning	Not running	ON	300	
Schneider Insight 2 Demo Site 4	Online	2020-04-27 19:43:49	147.05	347.58	50	98	0 Alarm / 0 Warning	Not running	OFF	300	

On the Site Overview page, click "Configuration" to select the demo site you set up earlier.

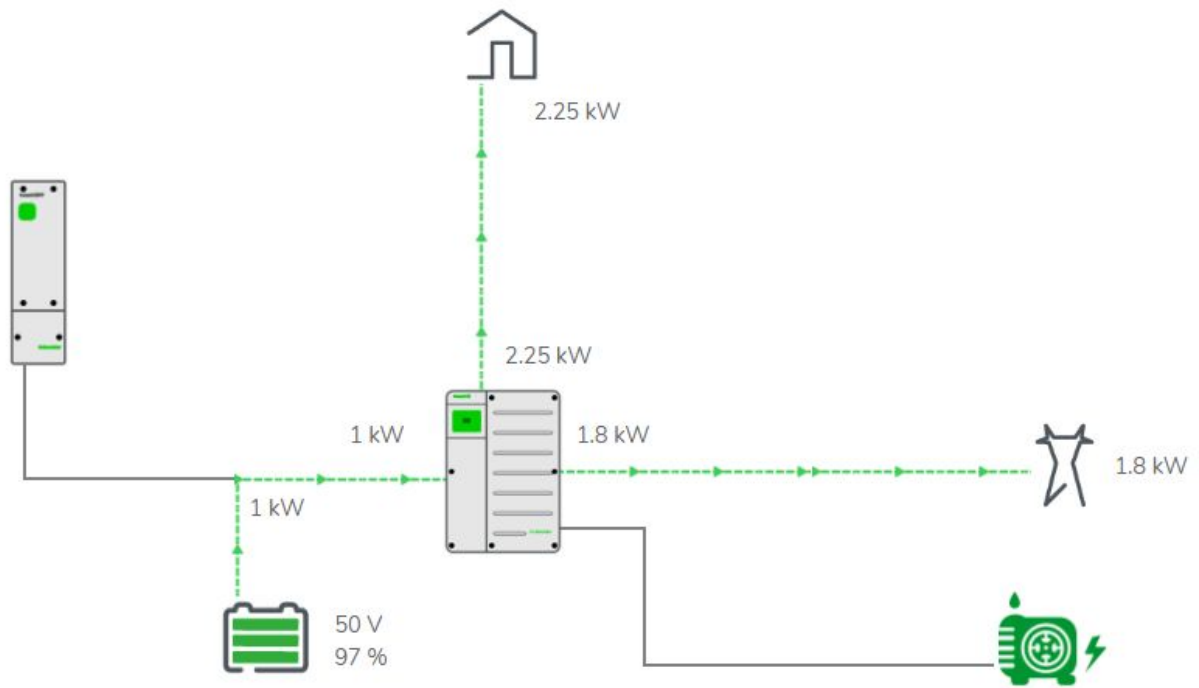
Conext Insight 2 | ALARMS 0 | WARNINGS 0 | Marlin May | Schneider Electric

HOME MY DASHBOARD PERFORMANCE REPORTING EVENTS **CONFIGURATION**

View Site Overview | Schneider insight 2 Demo Site 2

Power Flow Energy Gauge Advanced Site Analysis Site Energy Comparison Energy Source Comparison

Last Data Received : 2020-04-27 20:02:21



In the Device List, Click "Inverter Charger" to reveal the XW inverters. Click on one of them to load the settings control panel. To see all of the settings categories, click the "- Collapse all" button. The settings mentioned above are all available here.

The screenshot displays the Schneider Electric Insight 2 web interface. At the top, there is a navigation bar with a hamburger menu icon on the left, two status indicators (0) in the center, and a user profile for Marlin May on the right. The Schneider Electric logo is positioned in the top right corner. Below the navigation bar, a green header contains the main menu items: HOME, MY DASHBOARD, PERFORMANCE, REPORTING, EVENTS, and CONFIGURATION. Underneath, a secondary navigation bar lists sub-sections: Sites And Devices (highlighted), User Rights, Email Notifications, Financial Settings, and Firmware. The main content area shows the configuration for "Schneider Insight 2 Demo Site 2", with buttons for "New site", "Duplicate", and "Delete". On the left, a "DEVICE LIST" sidebar includes categories like Site, Inverter Charger (circled in yellow), Battery, User Interface, Charge Controller, and Generator. The "Inverter Charger" category is expanded to show two units: XW[101] and XW[102]. The main panel displays the "Inverter Charger - XW[101] settings" with a list of 14 expandable categories: CONTROL, INVERTER, CHARGER, AC, APC, GRIDSUPPORT, GRIDVSUPPORT, GENSUPPORT, AUXRELAY, MULTIUNIT, ASSOC, ADVANCED, DEV, and BMS. Each category has a right-pointing chevron icon. At the bottom of the settings panel, there are buttons for "+ Expand all", "Refresh", and "Apply Changes".

Gateway XW Pro Menus

Inverter

Controls ➤

Inverter Settings ☑

Low Battery Cut Out	V	<input type="range"/>	43.28	Low Battery Cut Out Hysteresis	V	<input type="range"/>	8.24
Low Battery Cut Out Delay	s	<input type="range"/>	10	High SOC Cut Out	%	<input type="range"/>	20
High Battery Cut Out	V	<input type="range"/>	58.4	High SOC Cut Out Delay	s	<input type="range"/>	60
Search Mode		<input type="checkbox"/>	Disabled	Low Battery Cut Out SOC	%	<input type="range"/>	10
Maximum Search Watts	W	<input type="range"/>	50	Low Battery Cut Out SOC Delay	s	<input type="range"/>	60
Search Delay	s	<input type="range"/>	2	Action on Communication Loss		<input type="text" value="Heartbeat Disable"/>	▼

Charger

Charger Settings ☑

Battery Type		<input type="text" value="Custom"/>	▼	Equalize Voltage Set Point	V	<input type="range"/>	56
Battery Bank Capacity	Ah	<input type="range"/>	130	Bulk/Boost Voltage Set Point	V	<input type="range"/>	56.7
Maximum Charge Rate	%	<input type="range"/>	30	Absorption Voltage Set Point	V	<input type="range"/>	55.5
Maximum Bulk Charge Current	A	<input type="range"/>	130	Float Voltage Set Point	V	<input type="range"/>	53.6
Maximum Absorption Charge Current	A	<input type="range"/>	130	Battery Temperature Coefficient	mV/°C	<input type="range"/>	0
Maximum Float Charge Current	A	<input type="range"/>	140	Maximum Discharge Current	A	<input type="range"/>	184
Charge Cycle		<input type="text" value="2 Stage"/>	▼	Maximum Discharge Time Interval	s	<input type="range"/>	5
Default Battery Temperature		<input type="text" value="Warm"/>	▼	Bulk		<input type="range"/>	50

Charge Cycle	<input type="text" value="2 Stage"/>	Current	
Default Battery Temperature	<input type="text" value="Warm"/>	Maximum Discharge Time Interval	<input type="text" value="5"/> s
Recharge Voltage	<input type="text" value="47"/> V	Bulk Termination Voltage	<input type="text" value="50"/> V
Absorption Time	<input type="text" value="10800"/> s	Bulk Termination Time	<input type="text" value="1"/> s
Charge Block Start	<input type="text" value="12"/> : <input type="text" value="00"/> <input type="text" value="AM"/>	Absorption Period Timeout	<input type="text" value="480"/> min
Charge Block Stop	<input type="text" value="12"/> : <input type="text" value="00"/> <input type="text" value="AM"/>	Recharge SOC	<input type="text" value="10"/> %
Equalize Support	<input type="checkbox"/> No Equalization	Recharge SOC Delay	<input type="text" value="60"/> s
Equalize Now	<input type="checkbox"/> Disabled	EPC Maximum Charge Power	<input type="text" value="6800"/> W
		<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

Links

XWPro Installation Guide: <https://tinyurl.com/XWProInstGuide>

XWPro Owner's Guide: <https://tinyurl.com/XWProOpGuide>

KiloVault HLX / CHLX Manual: <https://tinyurl.com/KlvHlxChlx>

KiloVault HAB Manual: <https://tinyurl.com/KiloVaultHab>

KiloVault PLC Manual: <https://tinyurl.com/KiloVaultPlc>