



Schneider Conext MPPT60-150 &
MPPT80-600, KiloVault
Integration Guide

Introduction	3
Notes on the MPPT60-150 and MPPT80-600	3
1800 & 3600 HLX / CHLX	4
Basic Settings	4
Advanced Settings	4
HAB 7.5kWh	5
Basic Settings	5
Advanced Settings	5
2100 PLC	7
Basic Settings	7
Advanced Settings	7
Resources	8
MPPT60-150 Menu Map	8
Insight 2 MPPT60-150 Menus	8
MPPT80-600 Menu Map	10
Insight 2 MPPT80-600 Menus	10
Links	10

Introduction

This guide covers the recommended set-up and configuration of the Schneider Electric Conext MPPT60-150 and MPPT80-600 Solar Charge Controllers using the Conext System Control Panel and Insight 2. 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 MPPT60-150's Owners' guide here: <https://tinyurl.com/Mppt60-150>, document number 975-0400-01-01 Revision H.

You can download the MPPT80-600's Owners' guide here: <https://tinyurl.com/Mppt80-600>, document number 975-0540-01-01 Revision F.

In those guides, you can find an SCP menu map for both Basic and Advanced Settings. The menu maps are also reproduced on the last page of this document.

CAUTION: If you update the firmware on your Schneider Electric equipment, ALL of 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 MPPT60-150 and MPPT80-600

- The MPPT60-150 can operate with 12V, 24V, 36V and 48V battery banks and systems.
 - The MPPT60-150 can also operate with 60V battery banks and systems, but KiloVault batteries are not approved for this use and will void the warranty.
- The MPPT80-300 can operate with 24V and 48V battery banks and systems.

1800 & 3600 HLX / CHLX

Basic Settings

Setting Name	1800 HLX				3600 HLX			
	12V	24V	36V	48V	12V	24V	36V	48V
Batt Voltage	12V per HLX in Series							
Batt Type	Gel (will be overridden in Advanced Settings)							
Batt Capacity	150Ah per HLX in Parallel				300Ah per HLX in Parallel			
	MPPT60 Max Battery Capacity is 2000Ah MPPT80 Max Battery Capacity is 10000Ah							
Max Chg Rate	MPPT60 - Set to a percentage of <u>60A</u> so that when added to the inverter/charger amps the sum is 100A or less per HLX in parallel MPPT80 - Set to a percentage of <u>80A</u> so that when added to the inverter/charger amps the sum is 100A or less per HLX in parallel							
Charge Cycle	3 Stage							

Advanced Settings

Setting Name	1800 HLX				3600 HLX			
	12V	24V	36V	48V	12V	24V	36V	48V
Charger/Batt Type	Custom							
Charger/Batt Capacity	150Ah per HLX in Parallel				300Ah per HLX in Parallel			
	MPPT60 Max Battery Capacity is 2000Ah MPPT80 Max Battery Capacity is 10000Ah							
Charger/Max Chg Rate	MPPT60 - Set to a percentage of <u>60A</u> so that when added to the inverter/charger amps the sum is 100A or less per HLX in parallel MPPT80 - Set to a percentage of <u>80A</u> so that when added to the inverter/charger amps the sum is 100A or less per HLX in parallel							
Charger/Charge Cycle	3 Stage							
Charger/ReCharge Volts (80% DoD) - Set just above the recharge/rebulk voltage of the inverter/charger, so the solar charge controller starts charging before the inverter/charger - May need to be adjusted to get exactly right.	12.8V	25.6V	38.4V	51.2V	12.8V	25.6V	38.4V	51.2V
Charger/Absorb Time	2 minutes or less							
Charger/Default Batt Temp	Warm							
Charger/Batt Voltage	12V	24V	36V	48V	12V	24V	36V	48V
Charger/Custom/Eqlz	Disabled							

Support								
Charger/Custom/Eqz Voltage	N/A							
Charger/Custom/Bulk Voltage	14.1V	28.2V	42.3	56.4V	14.1V	28.2V	42.3V	56.4V
Charger/Custom/Absorb Voltage	14.1V	28.2V	42.3	56.4V	14.1V	28.2V	42.3V	56.4V
Charger/Custom/Float Voltage	13.6V	27.2V	40.8V	54.4V	13.6V	27.2V	40.8V	54.4V
Charger/Custom/Batt Temp Comp	1 mV/C							
Input/MPPT Auto Track	Auto							
Input/MPPT Ref Volts	N/A							

HAB 7.5kWh

Basic Settings

Setting Name	Setting Value
Batt Voltage	48V
Batt Type	Gel (Will be overridden by Advanced Settings)
Batt Capacity	150Ah per HAB
Max Chg Rate	MPPT60 - Set to a percentage of <u>60A</u> so that when added to the inverter/charger amps the sum is 120A or less per HAB MPPT80 - Set to a percentage of <u>80A</u> so that when added to the inverter/charger amps the sum is 120A or less per HAB
Charge Cycle	3-stage

Advanced Settings

Setting Name	Setting Value
Charger/Batt Type	Custom
Charger/Batt Capacity	150Ah per HAB
Charger/Max Chg Rate	MPPT60 - Set to a percentage of <u>60A</u> so that when added to the inverter/charger amps the sum is 120A or less per HAB MPPT80 - Set to a percentage of <u>80A</u> so that when added to the inverter/charger amps the sum is 120A or less per HAB
Charger/Charge Cycle	3-stage
Charger/ReCharge Volts (80% DoD) - Set just above the recharge/rebulk voltage of the inverter/charger, so the solar charge controller starts charging before the inverter/charger - May need to be adjusted to get exactly right.	51.2V
Charger/Absorb Time	2 minutes or less
Charger/Default Batt Temp	Warm
Charger/Batt Voltage	48V
Charger/Custom/EqLz Support	Disabled
Charger/Custom/EqLz Voltage	N/A
Charger/Custom/Bulk Voltage	56.4V
Charger/Custom/Absorb Voltage	56.4V
Charger/Custom/Float Voltage	54.4V
Charger/Custom/Batt Temp Comp	0 mV/C
Input/MPPT Auto Track	Auto
Input/MPPT Ref Volts	N/A

2100 PLC

Basic Settings

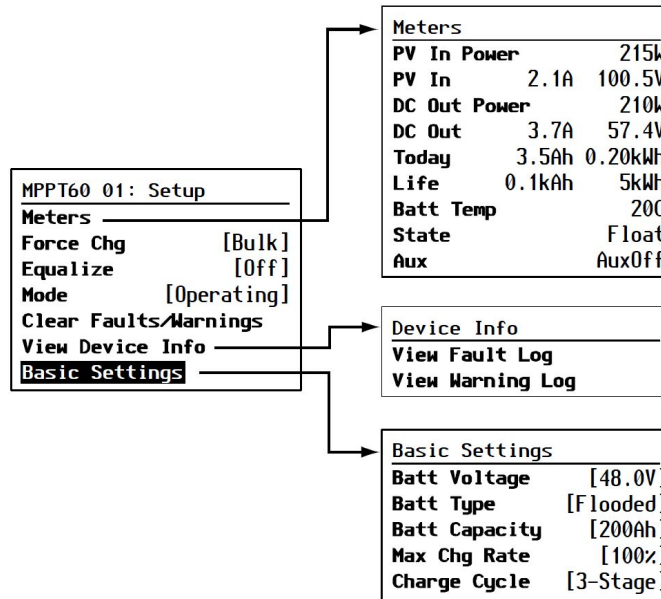
Setting Name	12V	24V	36V	48V
Batt Voltage	12V	24V	36V	48V
Batt Type	AGM (Will be overridden in Advanced Settings)			
Batt Capacity	180Ah per 2100 PLC in Parallel			
Max Chg Rate	MPPT60 - Set to a percentage of <u>60A</u> so that when added to the inverter/charger amps the sum is 100A or less per PLC in parallel MPPT80 - Set to a percentage of <u>80A</u> so that when added to the inverter/charger amps the sum is 100A or less per PLC in parallel			
Charge Cycle	3-Stage			

Advanced Settings

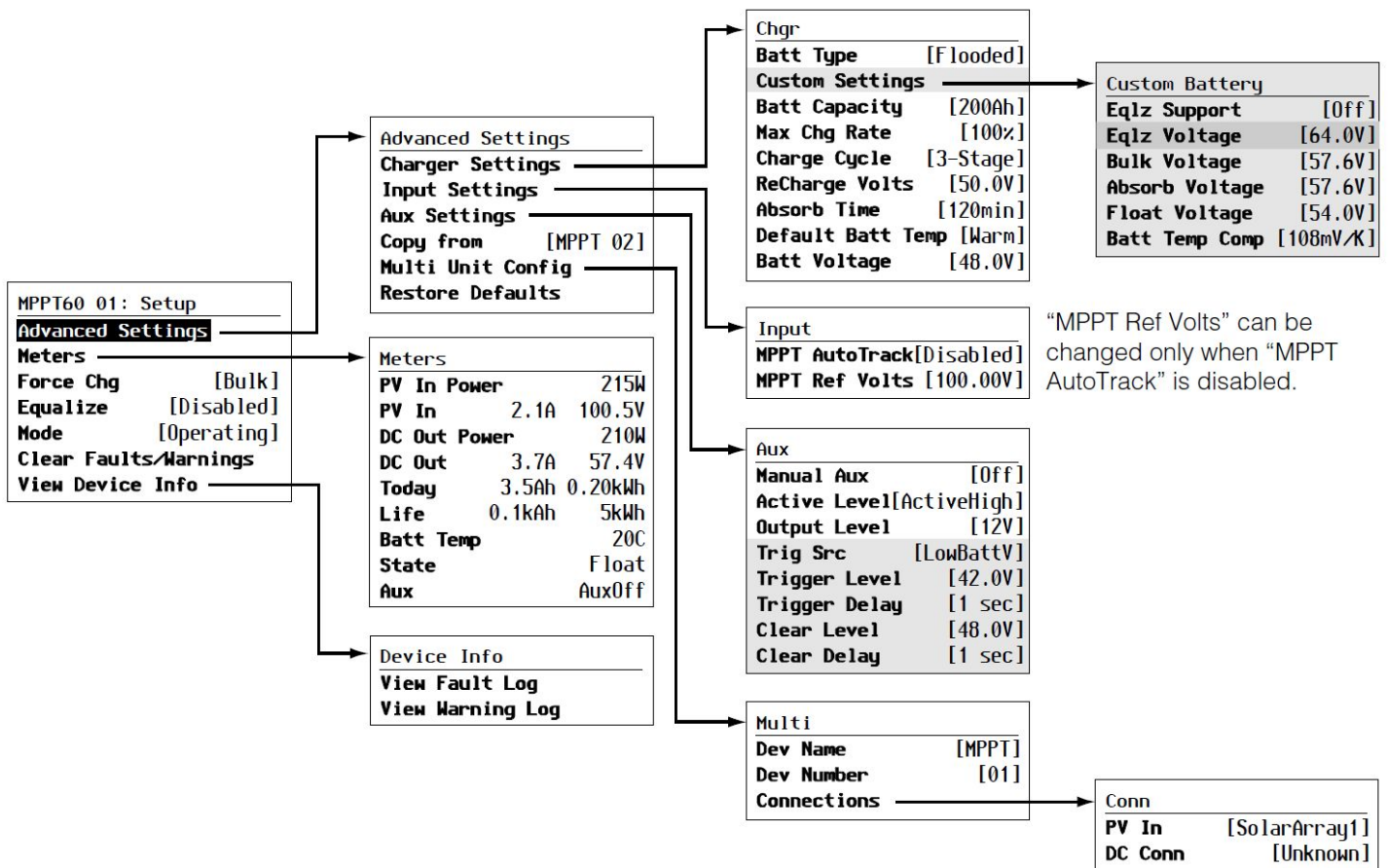
Setting Name	12V	24V	36V	48V
Charger/Batt Type	Custom			
Charger/Batt Capacity	180Ah per 2100 PLC in Parallel			
Charger/Max Chg Rate	MPPT60 - Set to a percentage of <u>60A</u> so that when added to the inverter/charger amps the sum is 100A or less per PLC in parallel MPPT80 - Set to a percentage of <u>80A</u> so that when added to the inverter/charger amps the sum is 100A or less per PLC in parallel			
Charger/Charge Cycle	3-Stage			
Charger/ReCharge Volts (50% DoD) - Set just above the recharge/rebulk voltage of the inverter/charger, so the solar charge controller starts charging before the inverter/charger - May need to be adjusted to get exactly right.	12.3v	24.6V	36.9V	49.2V
Charger/Absorb Time	8 Hours			
Charger/Default Batt Temp	Warm			
Charger/Batt Voltage	12V	24V	36V	48V
Charger/Custom/EqLz Support	Enabled			
Charger/Custom/EqLz Voltage	14.2V	28.4V	42.6V	56.4V
Charger/Custom/Bulk Voltage	14.2V	28.4V	42.6V	56.4V
Charger/Custom/Absorb Voltage	14.2V	28.4V	42.6V	56.4V
Charger/Custom/Float Voltage	13.6V	27.2V	40.8	54.4V
Charger/Custom/Batt Temp Comp	-3mV / degree C			
Input/MPPT Auto Track	Enabled			
Input/MPPT Ref Volts	N/A			

Resources

SCP MPPT60-150 Menu Map



Basic Settings



Advanced Settings

Insight 2 MPPT60-150 Menus

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-Combo-587AC6N1CSWCL1
- SERIAL NUMBER: SESA405035

This Schneider demo site simulates a SW installation with 2 Schneider Conext MPPT 60 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 1.

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

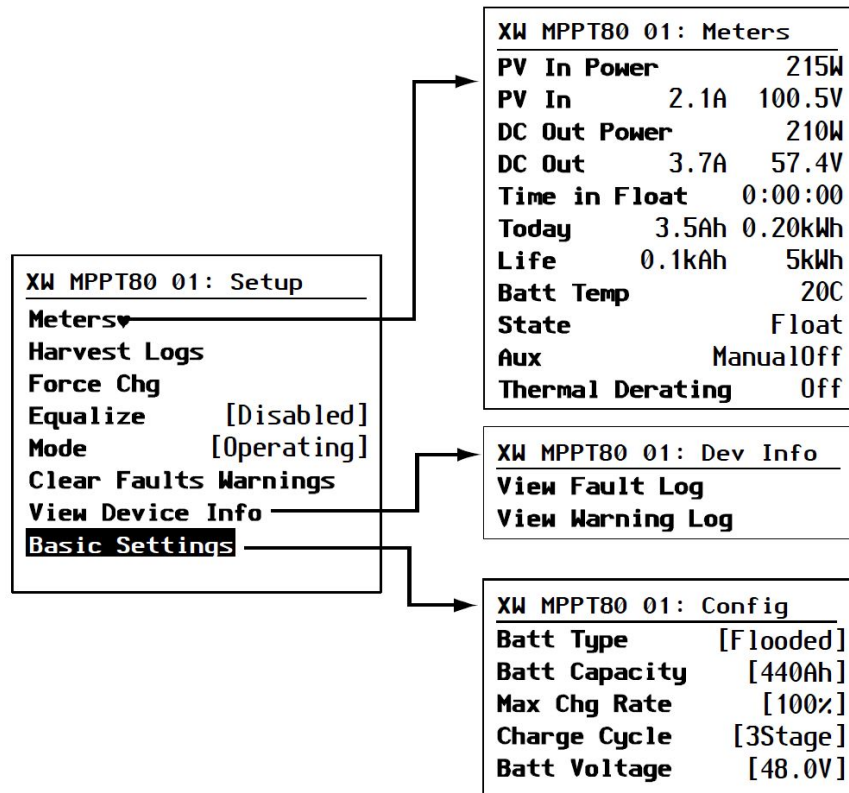
The screenshot shows the Conext Insight 2 dashboard. At the top, there are navigation tabs: HOME, MY DASHBOARD, PERFORMANCE, REPORTING, EVENTS, and CONFIGURATION. Below the navigation is a search bar and a 'New Site' button. The main content is a table with the following columns: SiteName, Connectivity, 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 1', is highlighted with a yellow circle. The 'Grid' status for this site is 'ON', while the others are 'OFF'.

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	2020-05-01 15:14:44	0	0	-	-	0 Alarm / 0 Warning	No Generator	OFF	406	☁
Schneider Insight 2 Demo Site 1	Online	2020-05-01 15:15:29	18.8	34.71	50	98	0 Alarm / 0 Warning	Not running	ON	300	☁⚙
Schneider Insight 2 Demo Site 2	Online	2020-05-01 15:17:10	18.8	95.21	50	98	0 Alarm / 0 Warning	Not running	ON	300	☁⚙
Schneider Insight 2 Demo Site 3	Online	2020-05-01 15:17:10	18.8	95.21	50	98	0 Alarm / 0 Warning	Not running	ON	300	☁⚙
Schneider Insight 2 Demo Site 4	Online	2020-05-01 15:09:39	139.83	324.97	50	98	0 Alarm / 0 Warning	Not running	ON	300	☁⚙

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

Note: The Insight 2 MPPT60 Demo Site is currently down. Examples will be added here as soon as it is available again

SCP MPPT80-600 Menu Map



Basic Settings - SCP

Advanced Settings - SCP, to be added later.

Insight 2 MPPT80-600 Menus

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-Combo-587AC6N2XWCL1
- SERIAL NUMBER: SESA405035

This Schneider demo site simulates an XW installation with 4 Schneider Conext MPPT80 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.

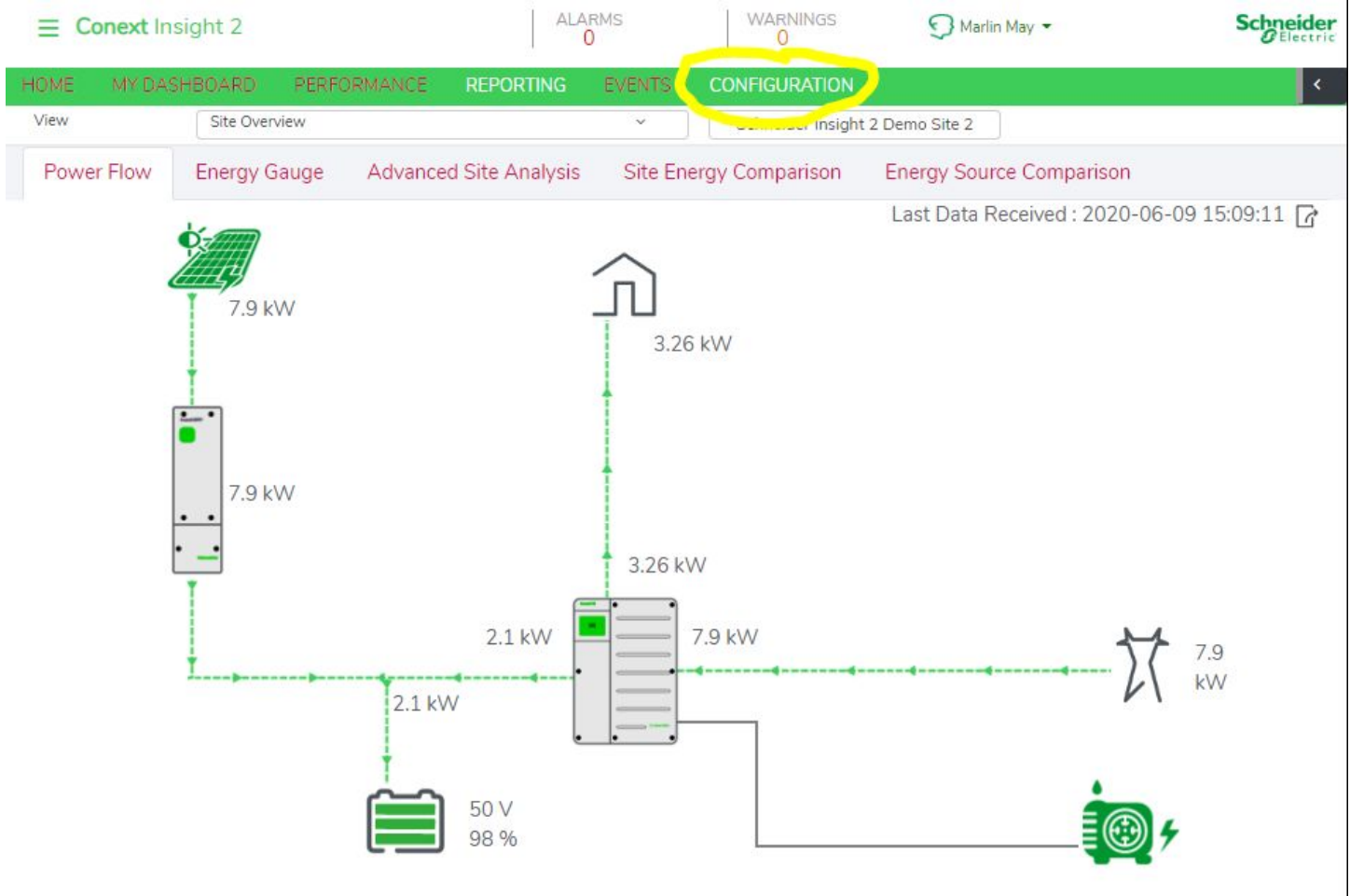
The screenshot displays the Schneider Conext Insight 2 web interface. At the top, there are navigation tabs: HOME, MY DASHBOARD, PERFORMANCE, REPORTING, EVENTS, and CONFIGURATION. The main content area features a table of sites with columns for SiteName, Connectivity, Last Data Refresh, Today Export to Grid (kWh), Today Solar Production (kWh), Batt. Voltage (V), Batt. SoC (%), Alarms / Warnings, Generator, Grid, Firmware Status, and Weather. The row for 'Schneider Insight 2 Demo Site 2' is highlighted with a yellow box. Below the table is a 'Power Gauge' section with four gauges: Solar Production (214.670 MWh), Grid Consumption (94.510 MWh), Load (120.920 MWh), and Generator Operation (12.680 MWh). The interface also shows 'ALARMS 0', 'WARNINGS 0', and a user profile 'Marlin May'.

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	2020-06-09 14:48:07	0	0	-	-	0 Alarm / 0 Warning	No Generator	OFF	406	☁
Schneider Insight 2 Demo Site 1	Online	2020-06-09 14:53:53	17	31.83	50	100	0 Alarm / 0 Warning	Not running	ON	300	☁
Schneider Insight 2 Demo Site 2	Online	2020-06-09 14:45:18	17	87.31	50	100	0 Alarm / 0 Warning	Not running	ON	300	☁
Schneider Insight 2 Demo Site 3	Online	2020-06-09 14:45:18	17	87.31	50	100	0 Alarm / 0 Warning	Not running	ON	300	☁
Schneider Insight 2 Demo Site 4	Online	2020-06-09 14:45:55	128.72	298	50	100	0 Alarm / 0 Warning	Not running	ON	300	☁

Power Gauge 5 Sites Connected

- Solar Production: 214.670 MWh
- Grid Consumption: 94.510 MWh
- Load: 120.920 MWh
- Generator Operation: 12.680 MWh

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



In the Device List, Click "Charge Controller" to reveal the MPPT80s. 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 Conext Insight 2 web interface. At the top, there are indicators for 'ALARMS 0' and 'WARNINGS 0', along with a user profile for 'Marlin May'. The navigation menu includes 'HOME', 'MY DASHBOARD', 'PERFORMANCE', 'REPORTING', 'EVENTS', and 'CONFIGURATION'. Under 'CONFIGURATION', there are sub-menus for 'Sites And Devices', 'User Rights', 'Email Notifications', 'Financial Settings', and 'Firmware'. The main content area is titled 'Schneider Insight 2 Demo Site 2' and features buttons for 'New site', 'Duplicate', and 'Delete'. On the left, a 'DEVICE LIST' shows various components, with 'Charge Controller' expanded to reveal a list of HVMPPPT units (201-204) and a 'Generator'. The 'HVMPPPT[201]' unit is highlighted. The right-hand side shows the 'Charge Controller - HVMPPPT[201] settings' panel, which includes a '+ Expand all' button and 'Refresh' and 'Apply Changes' buttons. The settings are organized into a list of categories: CONTROL, PV, CHG, DEV, BATT, ASSOC, AUX, and LPHD, each with a right-pointing arrow.

Links

MPPT60-150 Installation and Owner's Guide: <https://tinyurl.com/Mppt60-150>

MPPT80-600 Installation and Owner's Guide: <https://tinyurl.com/Mppt80-600>

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

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

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