
Conext™ XW Pro Inverter/Charger Addendum: Multi-Unit AC Output Voltage Configuration and Calibration Procedure

990-91314

General Safety Instructions

Before using the inverter/chargers, read all instructions and cautionary markings on the unit, the batteries, and all appropriate sections of this manual.

- Use of accessories not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.
- The inverter/chargers is designed to be permanently connected to your AC and DC electrical systems. The manufacturer recommends that all wiring be done by a certified technician or electrician to ensure adherence to the local and national electrical codes applicable in your jurisdiction.
- To avoid a risk of fire and electric shock, make sure that existing wiring is in good condition and that wire is not undersized. Do not operate the inverter/chargers with damaged or substandard wiring.
- Do not operate the inverter/chargers if it has been damaged in any way.
- Most of the parts in this unit are not user-serviceable parts.¹ Do not disassemble the inverter/chargers except where noted for connecting wiring and cabling. See your warranty for instructions on obtaining service. Attempting to service the unit yourself may result in a risk of electrical shock or fire. Internal capacitors remain charged after all power is disconnected.
- To reduce the risk of electrical shock, disconnect both AC and DC power from the inverter/chargers before attempting any maintenance or cleaning or working on any components connected to the inverter/chargers. Putting the unit in Standby mode will not reduce this risk.
- The inverter/chargers must be provided with an equipment-grounding conductor connected to the AC input ground.
- Do not expose this unit to rain, snow, or liquids of any type. This product is designed for indoor use only. Damp environments will significantly shorten the life of this product and corrosion caused by dampness will not be covered by the product warranty.
- To reduce the chance of short-circuits, always use insulated tools when installing or working with this equipment.

¹The inverter fan and Information Panel can be replaced by qualified personnel.

- Remove personal metal items such as rings, bracelets, necklaces, and watches when working with electrical equipment.

  **DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Never operate energized with covers removed
- Energized from multiple sources. Before removing covers identify all sources, de-energize, lock-out, and tag-out and wait 2 minutes for circuits to discharge
- Always use a properly rated voltage sensing device to confirm all circuits are de-energized.

Failure to follow these instructions will result in death or serious injury.

  **DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

- Disconnect negative and positive PV conductors before servicing. PV conductors are to be treated as Hazardous Live and must be disconnected.
- Normally GROUNDED conductors may be UNGROUNDED and ENERGIZED when a GROUND FAULT is indicated on the front panel. Must be serviced by qualified personnel.

Failure to follow these instructions will result in death or serious injury.

  **DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

This document is in addition to, and incorporates by reference, the relevant product manuals for Conext XW Pro inverter/chargers. Before reviewing this document, you must read the relevant product manuals. Unless specified, information on safety, specifications, installation and operation is as shown in the primary documentation received with the product. Ensure you are familiar with that information before proceeding.

Failure to follow these instructions will result in death or serious injury.

Precautions when Working with Batteries

NOTE: Battery work and maintenance must be done by qualified personnel knowledgeable about batteries to ensure compliance with battery handling and maintenance safety precautions.

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Remove watches, rings, or other metal objects.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Keep sparks and flames away from the batteries.
- Use tools with insulated handles.
- Wear protective glasses, gloves and boots.
- Do not lay tools or other metal parts on top of batteries.

Failure to follow these instructions will result in death or serious injury.

DANGER

STATEMENT OF HAZARD

- Battery Circuit Breakers must be installed according to the specifications and requirements defined by Schneider Electric.
- Servicing of batteries must only be performed by qualified personnel knowledgeable about batteries and the required precautions. Keep unqualified personnel away from batteries.
- Disconnect the charging source prior to connecting or disconnecting battery terminals.

Failure to follow these instructions will result in death or serious injury.

Limitations on Use

WARNING

HAZARD DUE TO UNINTENDED USE

The Conext XW Pro inverter is not intended for use in connection with life support systems or other medical equipment or devices. The Conext XW Pro inverter can only be used in grid-interconnected, off grid, and integrated PV systems. It is not suitable for any other application areas.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Explosive Gas Precautions

WARNING

EXPLOSION HAZARD

The Conext XW Pro is not ignition protected. To prevent fire or explosion, do not install this product in locations that require ignition-protected equipment. This includes any space containing gasoline-powered machinery, fuel tanks, as well as joints, fittings, or other connections between components of the fuel system.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Working in the vicinity of lead acid batteries is dangerous. Batteries generate explosive gases during normal operation. Therefore, you must read this Installation Guide and follow the instructions exactly before installing or using your inverter/chargers.

To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of the equipment in which the battery is installed.

Audience

This manual is intended for use by qualified personnel installing a system involving Schneider Electric Conext XW Pro inverter/chargers.

The qualified personnel have training, knowledge, and experience in:

- Installing electrical equipment and PV input systems (up to 1500 V).
- Applying all applicable installation codes.
- Analyzing and reducing the hazards involved in performing electrical work.
- Selecting and using Personal Protective Equipment (PPE).

Configuration, servicing, and maintenance must be performed by authorized service personnel only. Authorized service personnel meet the requirements for a qualified installer, plus they have received specific training from the manufacturer on servicing the Conext XW Pro.

This manual does not contain information regarding servicing or de-energization for servicing. Authorized service personnel must refer to the Conext XW Pro *Conext XW Pro Owner's Guide (document number 975-0801-01-xx)* and the Conext XW Pro *system schematics*.

Prerequisites

NOTE: This procedure applies only to Conext XW Pro 6848 inverters with firmware version 1.02 BN005.

- Applicable only to multi-unit setups including multi-clustered XW Pro power systems.
- USB-CAN adapter
- Conext Configuration Tool
- Professional calibrated voltmeter

Procedure

Important! This calibration procedure must be performed without loads and with battery power only. If the XW Pro units are grid connected, disengage from grid power.

1. Install the Conext Configuration Tool drivers and Configuration Tool AI software according to instructions included in the software package in a Windows-based PC (Win XP, Vista, Windows 7, Windows 10 operating systems).

NOTE: For Win XP, be sure it has been updated to SP2 or SP3.

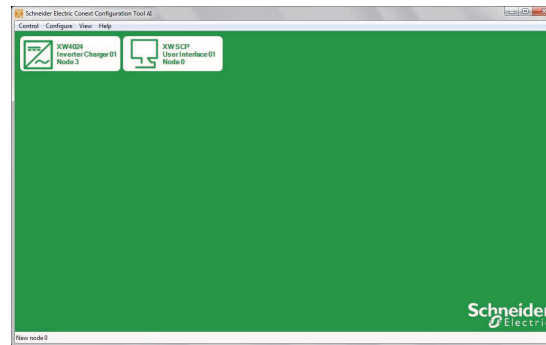
2. Disable the **Search** mode on all inverters.
3. Verify that all AC output breakers are opened (switched off).
4. Measure the **L1-to-L2** voltage (for 120/240 V systems) at the **AC LOAD** terminals of each inverter using a voltmeter. Observe that the measurements are likely off by more than ± 0.6 V between each unit. If the units are measuring exactly the same, double check that they are not accidentally still paralleled.
5. Turn Off all the XW Pro inverter/chargers to start the calibration process.
6. Turn On only the XW Pro inverter/charger that needs to be calibrated.

NOTE: If the XW Pro is a Master unit, then proceed to the next step. If it is a Slave unit, then configure it to Master first before proceeding to the next step. To change the Inverter Mode go to: **Advanced Settings > Multi-Unit Config > Inverter Mode.**

- Open the Configuration Tool AI by launching the application in your PC.

The Configuration Tool AI main screen appears.

Figure 1 Configuration Tool AI main screen

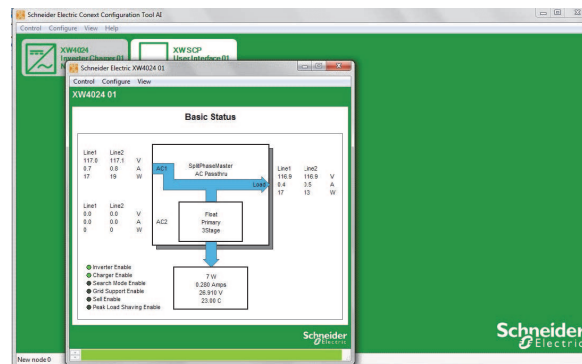


NOTE: Only the XW Pro unit to be calibrated (in step 6) should appear here. If other XW Pro units are appearing, then these units must be turned off. Repeat step 5 for these units. Other devices need not be turned off.

- From the Configuration Tool AI main screen, assign the unit to be calibrated as a **Master**. On 120/240 V units, Master is **SplitPhaseMaster**.
- Click the XW Pro Multi-Unit Power System device icon.

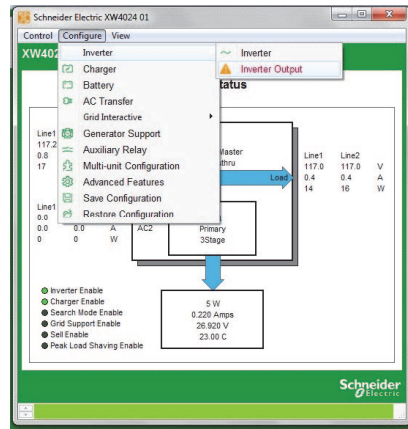
The XW Pro Device screen appears.

Figure 2 Device screen



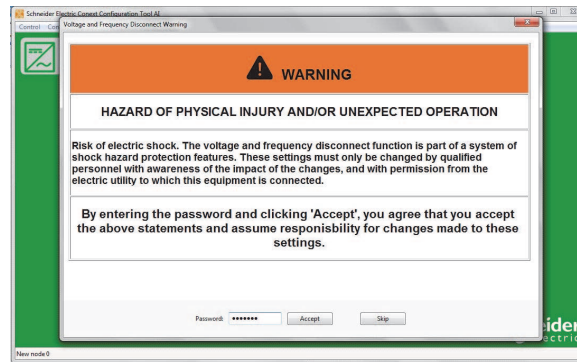
- Go to **Configure > Inverter > Inverter Output**.

Figure 3 Configure menu



A WARNING message appears.

Figure 4 Warning message

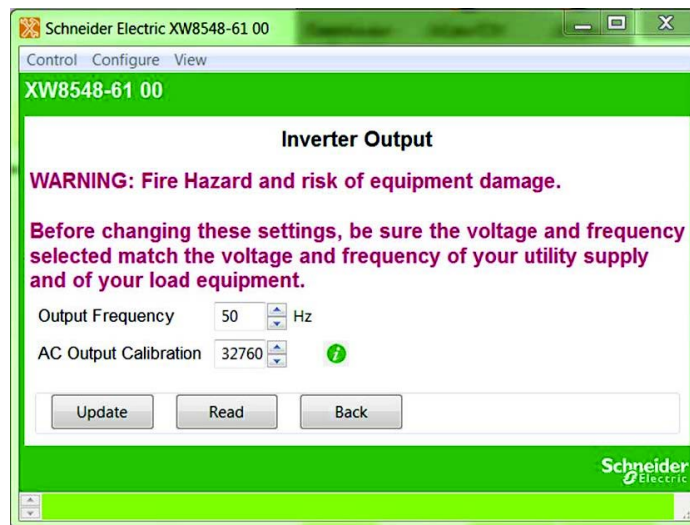


11. Enter the password and then click **Accept**.

NOTE: Hitting **Enter** does not work. You must click **Accept**.

The Inverter Output Settings screen appears.

Figure 5 Inverter output settings screen



12. Measure the voltage at the **AC LOAD** terminals of each inverter using a voltmeter, and then adjust the **AC Output Calibration** for each Master and Slave XW Pro unit:
 - a. For the XW Pro units designated to operate as Slave, adjust the **AC Output Calibration** number so that the output voltage is within +/-0.6 V of the desired value (for example 119.4 V - 120.6 V).
 - b. For the XW Pro units designated to operate as Master, adjust the **AC Output Calibration** number so that the output voltage is 0.4 V to 0.6 V lower than designated Slave units.

System	Starting calibration count	Increase count by	Approx. corresponding increase in voltage value
120/240 V	33000	75, 140	0.5 V, 1.0 V

13. Set the value by clicking the **Update** button.
14. Put the unit in Standby.

NOTE: If the XW Pro is a Master unit, then proceed to the next step. If it is a Slave unit that was changed to Master in Step 6, then reconfigure it back to Slave first before proceeding to the next step. To change the Inverter Mode go to: **Advanced Settings > Multi-Unit Config > Inverter Mode.**
15. Turn On the next XW Pro unit to be calibrated and follow steps 5 through 14 for that unit.
16. Once all units have been calibrated, close all the AC output voltage breakers.
The system is now calibrated.

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Contact Information

For country-specific details, please contact your local Schneider Electric Sales Representative or visit the Schneider Electric Solar Business website at: <https://solar.schneider-electric.com>

Information About Your System

As soon as you open your product, record the following information and be sure to keep your proof of purchase.

Serial Number	_____
Product Number	_____
Purchased From	_____
Purchase Date	_____