Starting Guide

A Important Safety Information

Read and Save These Instructions - Do Not Discard

This guide contains important safety instructions for the Conext CL Inverter that must be followed during installation procedures. Read and keep this Quick Start Guide for future reference.

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin and on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING indicates a hazardous situation which, if not avoided, can result in death or serious injury.

CAUTION indicates a hazardous situation which, if not avoided, can result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

This Guide is intended for anyone who needs to operate, configure, and troubleshoot the Conext CL Inverter. Certain tasks are included in this guide that require certified technicians. This guide is not intended to replace the installed Conext CL Inverter with an appropriate voltage input and output. This information is only valid for the Conext CL Inverter, which must be used in compliance with all applicable local, state, and national codes and regulations. Failure to follow these instructions can result in death or serious injury.

Tools Required

- A2 Phillips screwdrivers or power screwdriver for mounting the bracket
- Slot-head screwdriver
- Wire stripper and crimping tool for both AC and DC wiring
- Bubble level or Spirit level to ensure the straight installation of the mounting bracket
- Circuit breaker switch (male)
- Tors head screw driver T25

Wiring box Configuration - Optimum plus

<table>
<thead>
<tr>
<th>Connection</th>
<th>Description</th>
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<tbody>
<tr>
<td>I</td>
<td>Wiring box</td>
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<tr>
<td>J</td>
<td>Wiring box mounting bracket</td>
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<tr>
<td>K</td>
<td>Inverter</td>
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<tr>
<td>L</td>
<td>Inverter mounting bracket</td>
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</table>

D Torque Table

<table>
<thead>
<tr>
<th>Fastener type</th>
<th>Description</th>
<th>Torque Min/Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI</td>
<td>Wiring box front cover screw (Fig: (a))</td>
<td>2.75/24.3</td>
</tr>
<tr>
<td>MB</td>
<td>Wiring box wall mount screw (Fig: (b))</td>
<td>6/53.1</td>
</tr>
<tr>
<td>MM</td>
<td>Inverter and Wiring box bracket screws (Fig: (a), (b))</td>
<td>6/53.1</td>
</tr>
<tr>
<td>Guide Bushing</td>
<td>Inverter and Wiring box guide bushing locking screw (Fig: (i))</td>
<td>10.8/85</td>
</tr>
<tr>
<td>Thumb screw</td>
<td>Inverter and Wiring box power connector thumb screw (Fig: (j))</td>
<td>5.4/45</td>
</tr>
<tr>
<td>MN Nut</td>
<td>Second protective earth connection</td>
<td>4/45</td>
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<td>Philips head (K)</td>
<td>Fuse holder screws</td>
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</tbody>
</table>

Exclusion for Documentation

1. Conext™ CL Inverter 18000NA/ 25000NA - Quick Start Guide
2. Use of accessories not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.
3. Do not operate the inverter if it is damaged in any way.
4. The inverter does not have any user-serviceable parts. Do not disassemble the inverter except when 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 electric shock or fire. Internal capacitors remain charged after all power is disconnected.
5. To reduce the risk of electric shock, isolate both the AC and DC power from the inverter before attempting any maintenance or cleaning or working on any components connected to the inverter. Putting the unit in the standby mode will not reduce this risk.
6. The inverter must be provided with an equipment-grounding conductor connected to the AC input ground.
7. The Conext CL Inverter is energized from two sources: PV array while exposed to sunlight and AC grid. Before opening the cover for servicing, check the system diagram to identify all the sources, de-energize, lock-out and tag-out, and wait for at least five minutes for the internal capacitors to discharge to safe voltages.
8. The Conext CL Inverter employs field-adjustable voltage and frequency set points and time delays that are factory set in compliance with local utility and safety requirements. This can be changed only by qualified personnel with approval by both the local utility and equipment owner.
9. There is no reason to disconnect the unit from the circuit when in standby mode.
10. The unit will not reduce this risk.
11. The inverter 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.
12. Do not operate the inverter if it is damaged in any way.
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Contact Information

solar.schneider-electric.com

Please contact your local Schneider Electric Sales Representative or visit the Schneider Electric website at:

http://solar.schneider-electric.com/tech-support/

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G Correct Installation Distances, Mounting Positions, Dimensions

- Minimum distance from the inverter to the components:
  - 4.1 in (104.1 mm)
  - 3.9 in (100.0 mm)
  - 3.2 in (81.2 mm)

- Maximum distance from the inverter to the components:
  - 7.8 in (200 mm)
  - 15.7 in (414 mm)
  - 16.3 in (420 mm)

H Mounting Sequence

1. Mounting the wiring box bracket
2. Mounting the Inverter bracket
3. Mounting the wiring box on the bracket
4. Installing the side conduit entry
5. Installing the front cover of the wiring box
6. Anchoring the connector cover
7. Locking the inverter to the wiring box
8. Fastening the wiring box to the bracket
9. Mounting the wiring box bracket
10. Mounting the Inverter bracket
11. Mounting the wiring box on the bracket
12. Installing the side conduit entry

I Communication Module

- Connector details:
  - RJ-45 pin details:
    - Pin: 1
      - Connector: Ethernet
    - Pin: 2
      - Connector: Modbus
    - Pin: 3
      - Connector: USB
    - Pin: 4
      - Connector: MODBUS ETHERNET
    - Pin: 5
      - Connector: RJ45 terminal
    - Pin: 6
      - Connector: RJ45 terminal
    - Pin: 7
      - Connector: RJ45 terminal
    - Pin: 8
      - Connector: RJ45 terminal

- Data format for RS485 connection:
  - Parameter: Baud rate
    - Value: 9600, 38400, 115200
  - Parameter: Data bits
    - Value: 7
  - Parameter: Stop bits
    - Value: 1
  - Parameter: Parity
    - Value: None, Odd, Even

J Wiring

- Minimum cable requirement:
  - AC: 480 V, 25 A (18kVA) and 33 A (25kVA)
  - DC: 1000 VDC, 36 A/MPPT
  - Earthing: 9 to 8 AWG (6 to 8 mm²), Cu, 900°C

K Commissioning

Start up procedure:
1. Ensure that the DC and AC breaker are turned OFF.
2. Complete the wiring as per the instructions in the Installation and Operation Manual.
3. Check the polarity of the DC wires and ensure that the maximum DC voltage is not more than 1000 V.
4. Ensure to place the string protection fuses. If less than 2x strings are used per MPPT, fusing may not be needed.
5. Ensure proper insertion of communication interface cables only to socket 1 of the RS485 connector, refer section 1.
6. Ensure the dry contact and RPO connections are wired correctly.
7. Ensure all the cable glands are sealed properly after completing the terminations.
8. Turn ON the AC or DC breaker (external) and ensure that the grid is connected to the inverter.
9. Check the http://solar.schneider-electric.com/product/conext-cl for the latest firmware version. If the version on the inverter and website matches, follow step 10 or else step 11 and 12.
10. Replace the wiring box cover.
11. If available, connect the USB drive with the latest firmware version to the USB device socket inverter and website matches, follow step 10 or else step 11 and 12.
12. Turn ON the AC or DC breaker (external). The inverter now starts upgrading the new firmware available in the USB drive, boots up and complete the Power on Self test.
13. Follow the first-time power-up settings.
14. After the first-time power-up, turn ON the DC disconnect switch.

L First Time Power Up Screen

- For more information about the Conext CL Inverter, see the Installation and Operation Manual.

Note: It is recommended to install the inverter away from direct exposure to sunlight.

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