

Quick Install Guide



Get a 5 Year Warranty! Register your CL-60

Warranty  
without registering

3 Years  
Product Warranty

Warranty  
Activated **AFTER** registering

+ 2 Years  
Additional Promotional Warranty

= 5 Year  
Warranty

To redeem the additional promotional warranty option, inverters have to be registered¹.

For more information or to download the **my Schneider app™**, go to  
<http://solar.schneider-electric.com/product-registration/>



¹ To validate your data, we may ask you to provide additional information.

### A Important Safety Information

This Guide is intended for any qualified personnel who need to install, operate, configure, and troubleshoot the Conext CL-60. Certain configuration tasks should only be performed by qualified personnel in consultation with your local utility and/or an authorized dealer. Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. Qualified personnel have training, knowledge, and experience in:

- Installing electrical equipment
- Applying applicable installation codes
- Analyzing and reducing the hazards involved in performing electrical work
- Installing and configuring batteries
- Selecting and using Personal Protective Equipment (PPE)
- Connecting communication devices into a network

No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

1. **Before using this product, read all instructions and cautionary markings on the unit and all appropriate sections of this manual.**
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. 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.
4. 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 equipment with damaged or substandard wiring.
5. Do not operate the equipment if it has been damaged in any way.
6. Do not disassemble the Conext CL-60 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.
7. To reduce the risk of electrical shock, disconnect the power supply from the equipment before attempting installation, and any maintenance (including cleaning or working on any components connected to the equipment). Internal capacitors remain charged for 5 minutes after all power is disconnected.
8. The equipment must be grounded. Use the protective grounding conductor provided with the AC input conductors.
9. This product is designed for outdoor use and is rated IP65.
10. To reduce the chance of short-circuits, always use insulated tools when installing or working with this equipment. Do not leave tools inside.
11. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with electrical equipment.
12. Do not open nor disassemble the top half of the unit. There are no user-serviceable parts inside.

**Read and Save These Instructions - Do NOT discard but Do NOT store inside the CL-60 cabinet.**

This guide contains important safety instructions for the Conext CL-60 that must be followed during installation procedures. Read and keep this Quick Install 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 or 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.

<b>⚠ DANGER</b>	<b>⚠ WARNING</b>
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, could result in death or serious injury.



Keep for your records.  
This contains the model  
and serial number of  
the inverter.

Schneider Electric Product Registration

One Easy Step / Multiple Methods

Register today in one easy step to receive additional warranty and valuable benefits!

Select your Method

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Visit

Call

QR Code on the equipment label

<http://solar.schneider-electric.com/product-registration>

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

Register with **my Schneider app**

Register your CL-60

Register within 6 months of purchase and redeem additional warranty

Receive a Response

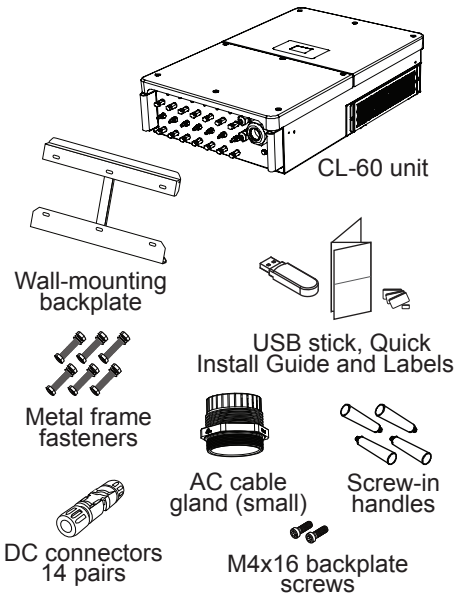
Receive your Warranty Certificate

**Contact Information**  
<http://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/>

B Introduction

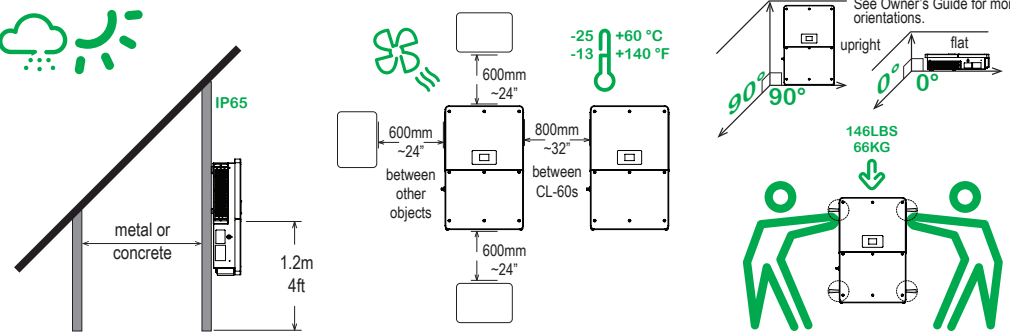
Conext CL-60E/CL-60JP (also referred to as CL-60 PV Inverter) is a transformerless three-phase photovoltaic (PV) string inverter that is designed to be an integral part of any utility grid-connected PV Power System. The Conext CL-60 is designed to convert DC power generated from the PV array into AC power that is compatible with utility grade AC power.

Features



- A LCD display with status LED and buttons
- B DC switch
- C DC surge protection device (SPD)
- D Configuration circuit board with RS-485 and Ethernet ports
- E AC output terminals
- F DC fuse board
- G MC4 DC input terminals
- H Communication cable glands
- I AC cable gland
- J Protective Earth (PE) ⚡ location
- K Waterproof air valve

C Mounting Considerations



Exclusion for Documentation

UNLESS SPECIFICALLY AGREED TO IN WRITING, SELLER (A) MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN ITS MANUALS OR OTHER DOCUMENTATION; (B) ASSUMES NO RESPONSIBILITY OR LIABILITY FOR LOSSES, DAMAGES, COSTS OR EXPENSES, WHETHER SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL, WHICH MIGHT ARISE OUT OF THE USE OF SUCH INFORMATION. THE USE OF ANY SUCH INFORMATION WILL BE ENTIRELY AT THE USER'S RISK; AND (C) REMINDS YOU THAT IF THIS MANUAL IS IN ANY LANGUAGE OTHER THAN ENGLISH, ALTHOUGH STEPS HAVE BEEN TAKEN TO MAINTAIN THE ACCURACY OF THE TRANSLATION, THE ACCURACY CANNOT BE GUARANTEED. APPROVED CONTENT IS CONTAINED WITH THE ENGLISH LANGUAGE VERSION WHICH IS POSTED AT [HTTP://SOLAR.SCHNEIDER-ELECTRIC.COM](http://solar.schneider-electric.com).

D Installation (Mounting)

NOTE:

- Obtain all necessary permits prior to starting the installation. Installations must meet all local codes and standards. Installation of this equipment should only be performed by skilled personnel such as qualified electricians and Certified Renewable Energy (RE) System installers.
- For full details on unit installation which includes metal frame installation, alternative lifting techniques, and multiple unit guidelines, see the full Owner's Guide available on the USB stick that came with the box.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Do not connect the PV Inverter to a live power source prior to cabling and wiring. The inverter can be energized from two sources namely, DC from the PV array and AC from the grid.
  - Do not connect any powered device to the PV Inverter during installation.
- Failure to follow these instructions will result in death or serious injury.

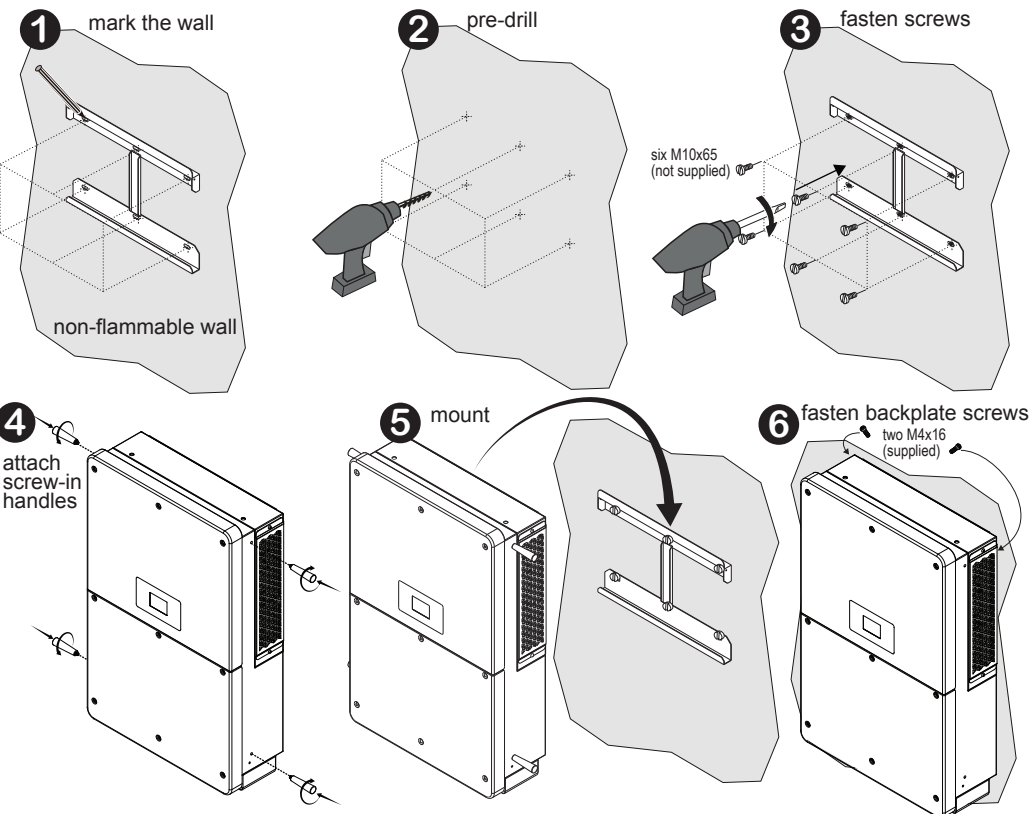
Check all the materials in the box (see Features) and make sure nothing is missing. The following materials and tools are not supplied but are required to complete the installation (mounting):

- Personal protective equipment (PPE)
- Screwdriver and drill set (powered and/or manual)
- Six (M10x65) screws (for fastening wall-mounting backplate to the wall)

⚠ DANGER

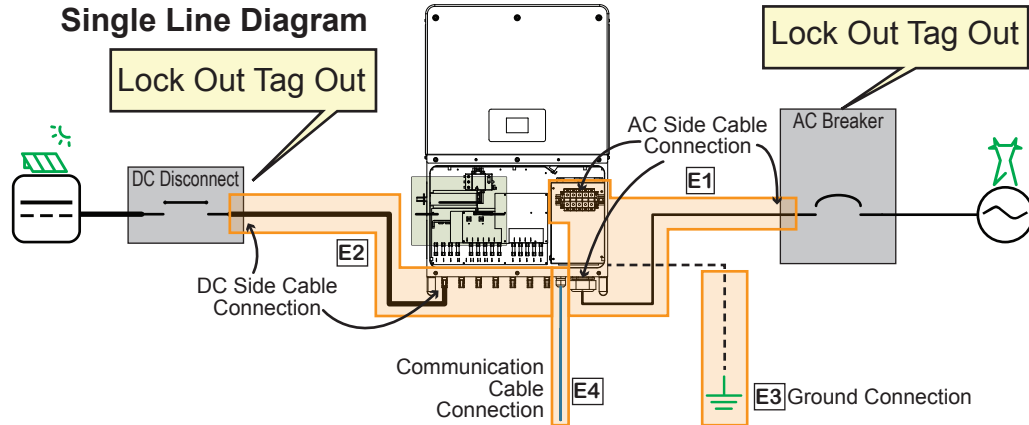
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
  - This equipment must only be installed and serviced by qualified electrical personnel.
  - Never energize the inverter with the covers removed.
  - Do not open fuse holders under load. The fuse must be de-energized from all sources before servicing.
  - The inverter is energized from multiple sources. Before removing covers identify all sources, de-energize, lock-out, and tag-out and wait 10 minutes.
  - Always use a properly rated voltage sensing device to confirm all circuits are de-energized.
  - Replace all devices and covers before turning on power to this equipment.
  - The DC conductors of this photovoltaic system are ungrounded and may be energized.
- Failure to follow these instructions will result in death or serious injury.



E Installation (Wiring)

Single Line Diagram

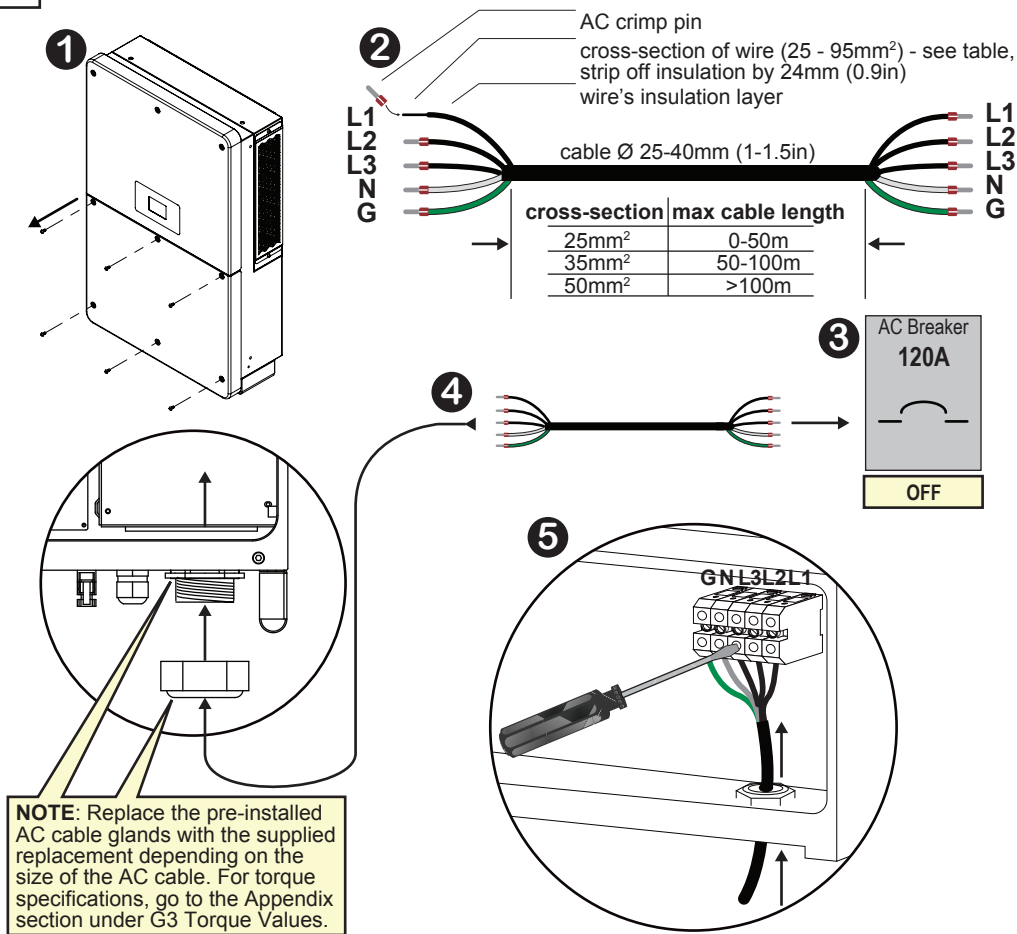


See **DANGER** and **NOTICE** messages in **D** before proceeding.

The following materials and tools are not supplied but are required to complete the installation (wiring):

- AC power cable (5-wire)
- DC power cables (red+, black-)
- RS-485 cable for Modbus/RS-485 device
- CAT6/5/e network cable for Modbus/RS-485 PV Inverter and Ethernet TCP/IP connections
- Wire stripper, standard mollex crimper, AC/DC crimp pins
- Screwdriver and drill set (powered and/or manual)
- Calibrated professional digital multimeter
- Crimping tool from Multi-Contact ( <http://www.multi-contact-usa.com/> )

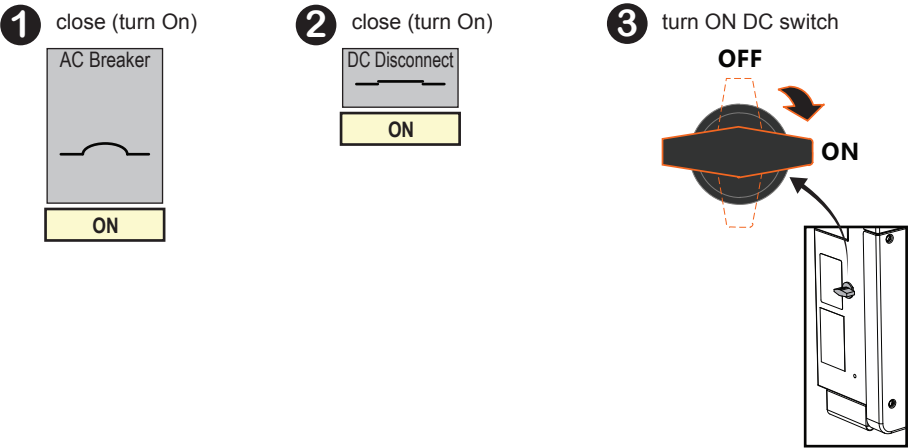
E1 AC Side Cable Connection - for more information see the Owner's Guide





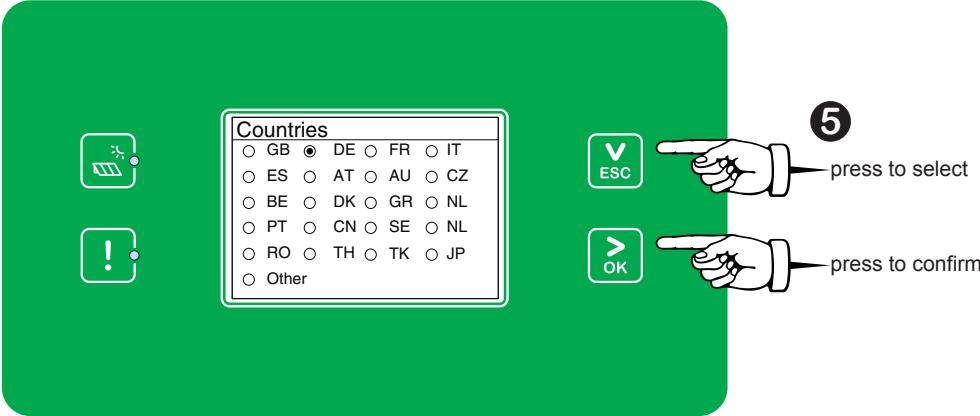


F Commissioning

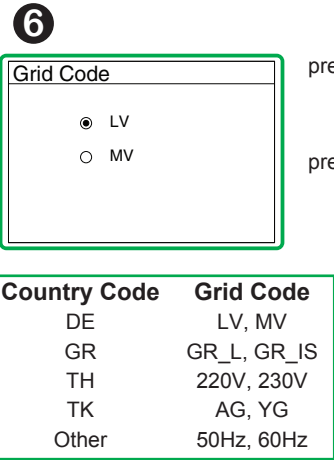


**NOTE:** If there is enough sunlight and the PV array initializes, then DC power should start energizing the CL-60. The LCD display activates soon after.

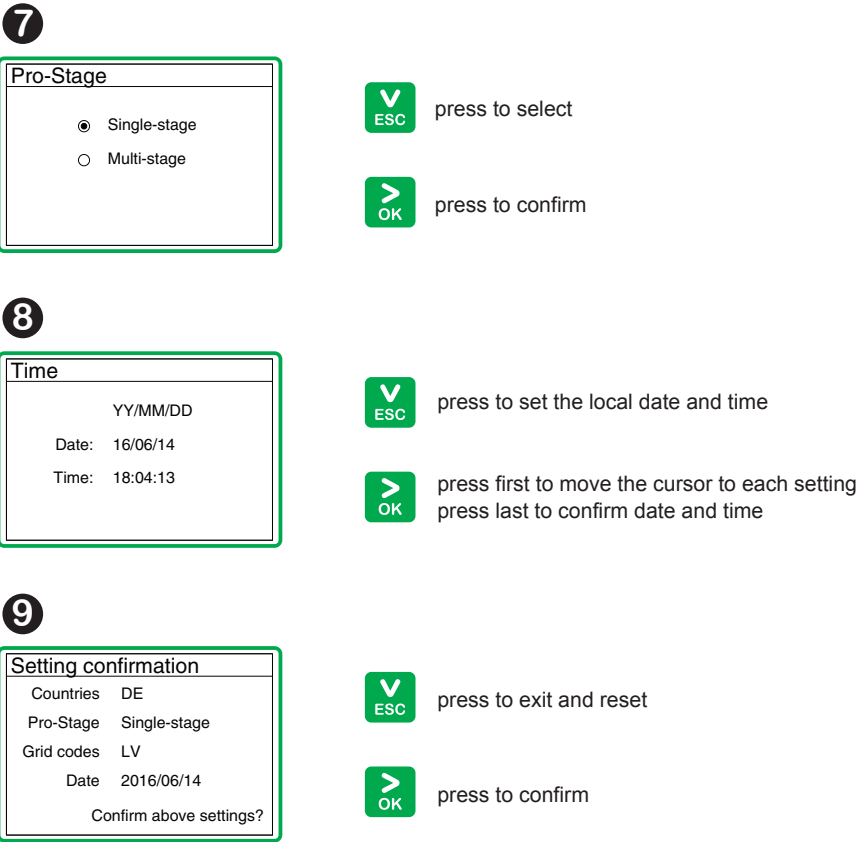
4 observe the LCD display for the splash screen, warning screen, and then the **Countries** screen (Country Code) appears



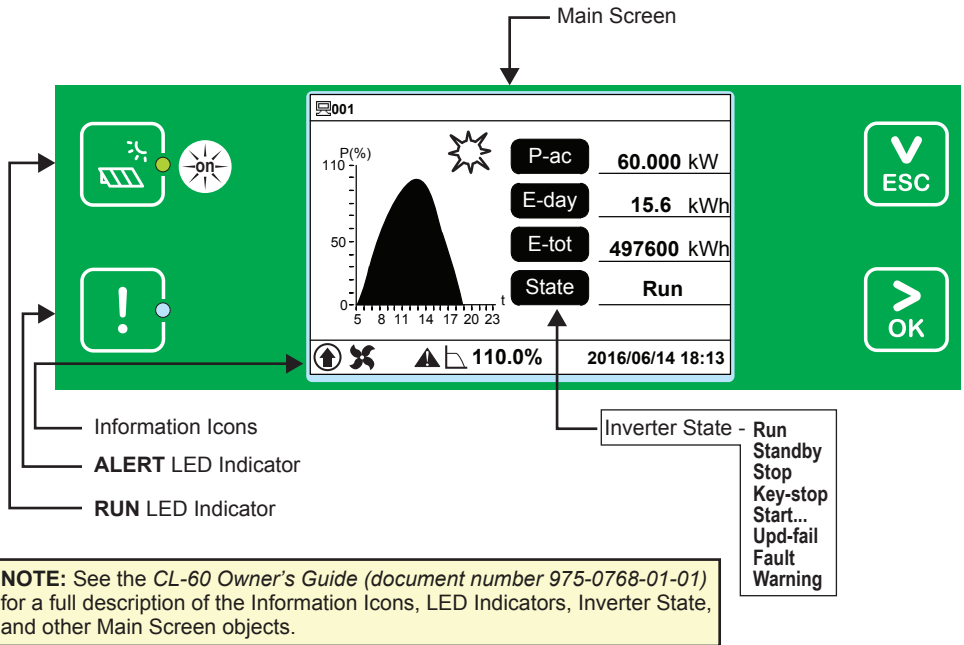
**NOTE:** Each country code is pre-programmed with its country's local protective parameters, in compliance with local utility grid requirements. If one of the highlighted country codes below is selected, an additional **Grid Code** screen appears. Otherwise, proceed to the next step.



Country Code	Country	Language
GB	Great Britain	English
DE	Germany	German
FR	France	French
IT	Italy	Italian
ES	Spain	English
AT	Austria	German
AU	Australia	English
CZ	Czech	English
BE	Belgium	French
DK	Denmark	English
GR	Greece	English
NL	Netherlands	English
PT	Portugal	English
CN	China	Chinese
SE	Sweden	English
RO	Romania	English
TH	Thailand	English
TK	Turkey	English
JP	Japan	Japanese
Other	Country not listed	English



**NOTE:** If the Commissioning procedure succeeds after confirming the settings above, the CL-60 will enter into the startup process and will start displaying some activity on the main screen. Observe the status of the **LED indicators** and the **Main Screen** on the LCD display shown below.



**NOTE:** See the *CL-60 Owner's Guide* (document number 975-0768-01-01) for a full description of the Information Icons, LED Indicators, Inverter State, and other Main Screen objects.

G Appendix

G1 Lock Out Tag Out (LOTO)

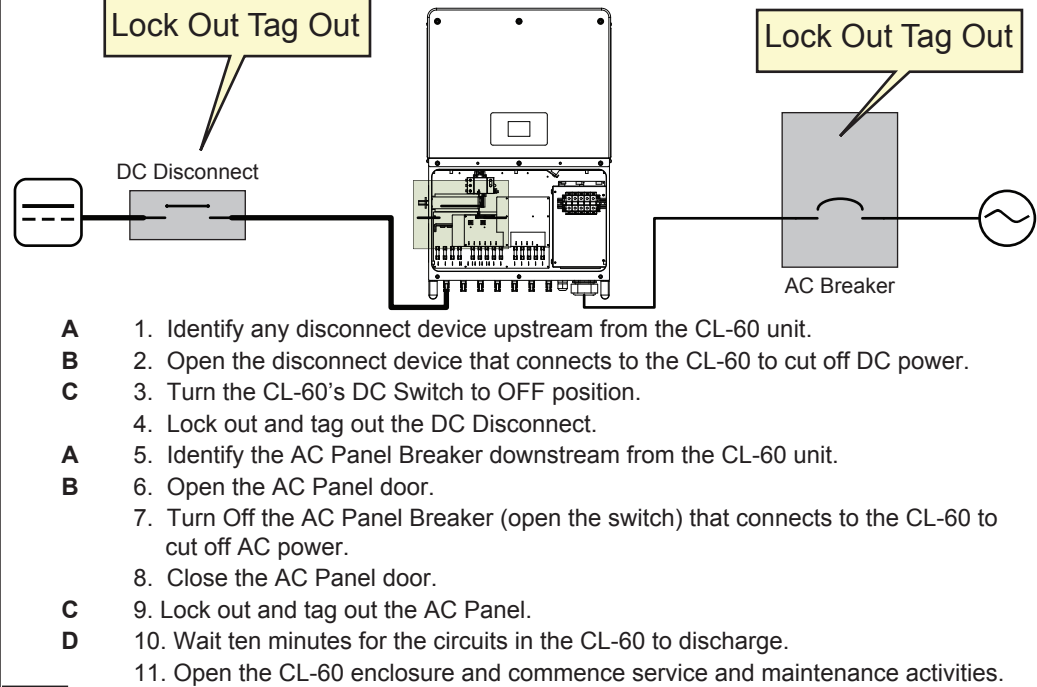
Lock-out refers to the practice of preventing de-energized circuits from being re-energized by putting locks on the disconnecting devices, holding them open. Tag-out refers to the practice of attaching a tag to the disconnect-device locks warning others not to operate the disconnect device and containing information relating to the lock-out, such as the person responsible, the reason, and the date and time. Combined these two practices are called the lock-out and tag-out (LOTO) procedure.

**⚠ DANGER**

**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Never energize the inverter with the covers removed.
- Always use a properly rated voltage sensing device to confirm all circuits are de-energized.
- Replace all devices and covers before turning on power to this equipment.
- The DC conductors of this photovoltaic system are ungrounded and may be energized.
- Before removing covers identify the power source (see A), de-energize (see B), lock-out and tag-out (see C), and wait ten minutes for circuits to discharge (see D).

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



G2 Firmware Upgrade Using CL EasyConfig Tool

**NOTE:** See the *Conext CL-60 EasyConfig Tool Owner's Guide* (document number 975-0773-01-01) for full instructions including illustrations.

G3 Torque Values

Torque (Nm)	Type	Description
3.75	cable gland	for communication cables such as RS-485 Ethernet cable
12-13	cable gland	for smaller AC cable
16-17	cable gland	for larger AC cable
0.2	connector screw	RS-485 wire connector
0.8 ±0.1	fastener	transparent protection panel
4.3 ±0.2	fastener	lower enclosure panel
2.7-4.8	fastener	to secure the CL-60 unit to the mounting backplate
35	fastener (metal)	metal frame-mounting backplate nut
35	fastener (wall)	wall-mounting backplate expansion
2.5-3	terminal gland	MC4 DC terminal
8-12	terminal screw	AC terminal block
4.3 ±0.2	terminal screw	PE (ground) terminal block