

## **GE&EL 7.5-30 AC&DC ePLUS – Quick Install**

### **1. WARNINGS**



For security reasons, only authorized personal can install and manipulate this equipment.



It must never be forgotten that the Cinergia converter is a power supply, so users must take all necessary precautions against direct or indirect contact.



In devices without isolation transformer, precautions must be taken as they are not isolated from the alternating input line, and there might be dangerous voltage between the output phases and the ground.



The ground cable (PE) of the main grid must be connected to ground transformer terminal (yellow-green) and ground converter terminal (X5) in all cases.



Before operating the equipment, check that the Protective Earth is properly connected.



Check out the electrical installation in both sides (input and output) of the cabinet. All wires shall be connected and secured before proceeding to the power supply start-up.



Before operating the equipment, read the manual and follow all indication to start-up the power supply.




Before operating the equipment, be sure that the output cables are connected according to OPERATION mode (INDEPENDENT or PARALLEL mode).



In case of discrepancies, between labelling and this manual, the label information will always prevail.

## 2. Earth protection (X5 and X10)

As a device with class I protection against electric shocks, it is essential to install a protective earth wire (connect earth ) to the terminal (X5) before connecting the grid to the converter input.

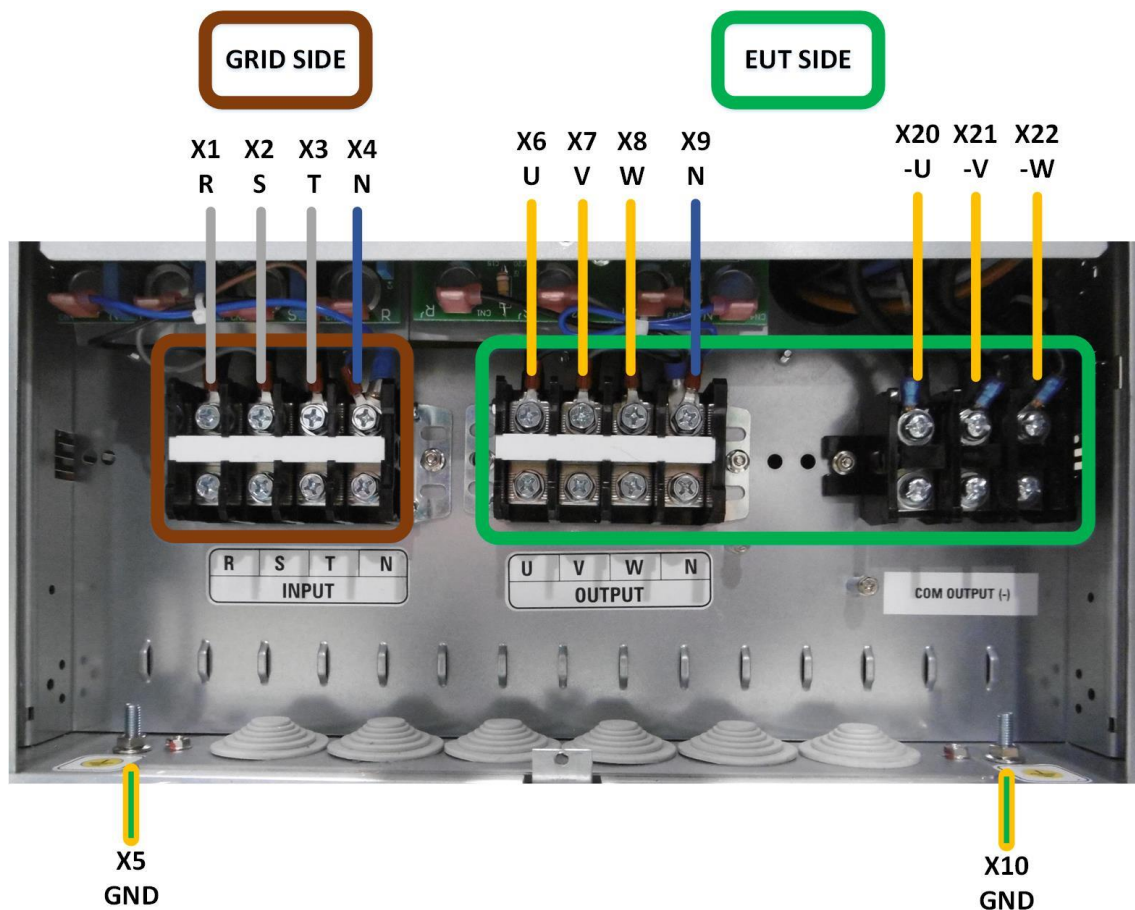
**On the other hand, connect the protection earth wire to the terminal (X10) before connecting the EUT (Equipment under test) to the Cinergia converter output.**

All the electrical connections, including those for control (interface, remote control...etc.), shall be done with all the switches in OFF position and with the mains supply disconnected (thermal-magnetic circuit breaker in OFF position too).

Warning labels should be placed on all primary power switches installed in places far from the device to alert the electrical maintenance personnel of the presence of a voltage in the circuit up to 10 minutes after stopping the device.



**In devices without isolation transformer, precautions must be taken as they are not isolated from the alternating input line, and there might be dangerous voltage between the output phases and the ground.**



### 3. INPUT connection terminals (X1 to X4).

Connect the grid cables **R**, **S**, **T** and **N** to the terminals **(X1)**, **(X2)**, **(X3)** and **(X4)** respectively. This connection must always be done according to the label placed under the input screw terminals.

### 4. OUTPUT connection terminals AC MODE (X6 to X9).

Connect the output cables **U**, **V**, **W** and **N** to the terminals **(X6)**, **(X7)**, **(X8)** and **(X9)** respectively. This connection must always be done according to the label placed under the output screw terminals.

### 5. OUTPUT connection terminals DC MODE (X6 to X9 and X20 to X22).

#### 5.1 Unipolar mode

Connect the output cables **U**, **V**, **W** and common points (negatives) to the terminals **X6**, **X7**, **X8** and **X20**, **X21**, **X22** respectively. It is important not to use **X9** terminal. This connection must always be done according to the label placed under the output screw terminals.

#### 5.2 Bipolar mode

Connect the output positive cable to the terminal **X6** and the output negative cable to the terminal **X8**. The zero of both, positive and negative, will be terminal **X7**. It is important not to use terminals **X9**, **X20**, **X21** and **X22**. This connection must always be done according to the label placed under the output screw terminals.



The ground cable (PE) of the main grid must be connected to ground transformer terminal (yellow-green) and ground converter terminal (X5) in all cases.



To connect the unit to a computer, please follow the instructions in document *Connecting CINERGIA units to a PC* in the USB stick.



Please review the limits of the equipment before turning it on.



If the user needs the converter to work as a load, the setpoint must be with a negative sign. On the other hand, the converter will work as a source with a positive sign.

## 6. General equipment view

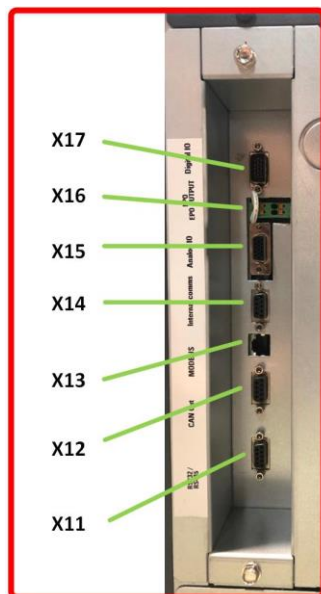
General view:



Local front panel:



Detailed view of the signal connectors:



Internal front panel:



- **(X11)** DB9 female RS232 – RS485 connector for communications (optional).
- **(X12)** DB9 female CAN OUT.
- **(X13)** RJ45 connector for MODBUS interface.
- **(X14)** Internal comms (not used).
- **(X15)** SUBD\_15HD\_FA\_CI/SOP connector for analogic inputs and outputs.
- **(X16)** Terminals for external Emergency Power Off (EPO) button.
- **(X17)** SUBD\_15HD\_MA\_CI/SOP connector for digital inputs and outputs.

## 7. Mechanical installation

The equipment may be installed in any place as long as the safety and ventilation requirements are fulfilled.

The power supply includes 2 levelling elements located near the front castors, which serve to immobilize the unit once it is in place.



To adjust the level, open the front door of the cabinet and proceed as follows:

- By hand, loosen the levelling elements by turning them anticlockwise until they touch the floor, and then, using a spanner, continue loosening until the castors are raised off the floor by a maximum 0.5 cm.
- Close the door once more.



**Before operating the equipment, check that the Protective Earth is properly connected.**



**Check out the electrical installation in both sides (input and output) of the cabinet. All wires shall be connected and secured before proceeding to the power supply start-up.**



**Before operating the equipment, read the manuals and all the information provided by Cinergia. Follow all indication to start-up the power supply. You can find all this information on the USB sent with the unit.**



**Before operating the equipment, be sure that the output cables are connected according to OPERATION mode (AC or DC mode) (INDEPENDENT or PARALLEL mode).**



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