

B2C ePlus

CINERGIA's Regenerative and Bidirectional DC Converter for

Battery Pack Testing & Cycling

Battery Emulation

Driving Profile Simulation



Regenerative DC Converter

CINERGIA's DC Programmable Power Supplies are designed to generate a controlled DC source or load. This renewable equipment has the capability to save up to 92% of energy during its testing operations by returning it to the main grid. DCPS includes two outputs to choose among: bidirectional and unidirectional modes. Furthermore, the grid-tied IGBT Active Rectifier allows a sinusoidal current consumption with low distortion and high power factor.

Our DC Programmable Power Supplies are frequently used in multiple applications such as Renewable Energy Sources, Energy Storage Systems, Battery Testing and Characterization, Electrical Vehicles, EV Charging Infrastructure, Traction Converters and Avionics.



Local Interface

Analogue and Digital IO ports

The isolated digital and analogue inputs/outputs permit the connection of the unit to External Controllers and Power Hardware in the Loop systems (option).

4.3" Touchscreen

Allows the local parameterization and command of the device, configuration of the communications link, plots the main signals and enables the local datalogging.

Safety First

The units integrate a local Emergency Stop pushbutton and two signals (input + output) to be connected to the laboratory interlock system. Additionally, the digital outputs can be interfaced to safety tower lights.



Bidirectional and Regenerative

Clean grid current

THDI < 3% and PF > 0.98

2 Quadrants & 4 Quadrants Configuration

13 Models

from 7.5kW to 160kW

Parallelization of units to increase the power Voltage Range

up to 750/800V

CV, CC, CO, CR Modes



Battery Testing (option)

(charge/discharge/cycling)

Battery Emulation (option)

PV Panel Emulation (option)

Automated Test profiles (csv file)

Power Amplifier Mode for PHIL applications

Intuitive User Interface

Modbus/Ethernet Open protocol, Labview drivers

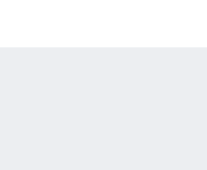
REGENERATIVE TECHNOLOGY

Thanks to our bi-directional topology, the B2C are regenerative, resulting in a reduction of both the consumed energy during the tests and the power required from the electrical installation.

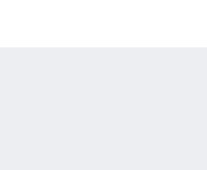
This technology allows us to work in both directions, as power generators or offering a consumption for the realization of all types of tests.



Efficiency and Flexibility



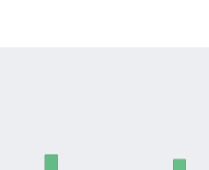
Save Energy, Power and Time



DC Only



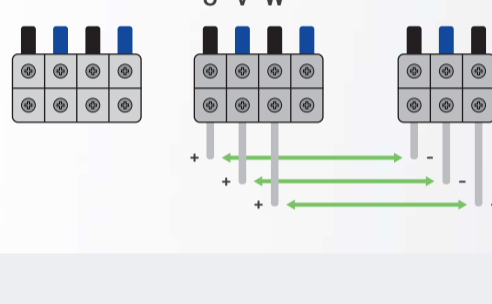
Multichannel



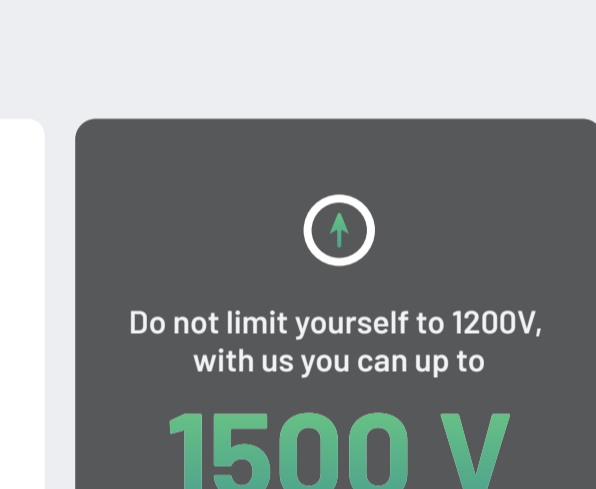
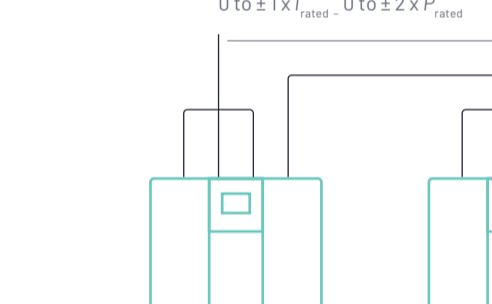
High-Resolution and Dynamics

The most versatile product

1 Channel with 3 Times Power

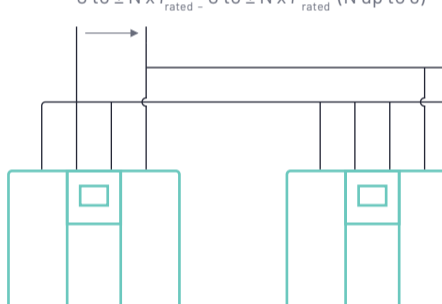


3 Channels Independent



Three different Master/Slave connection possibilities

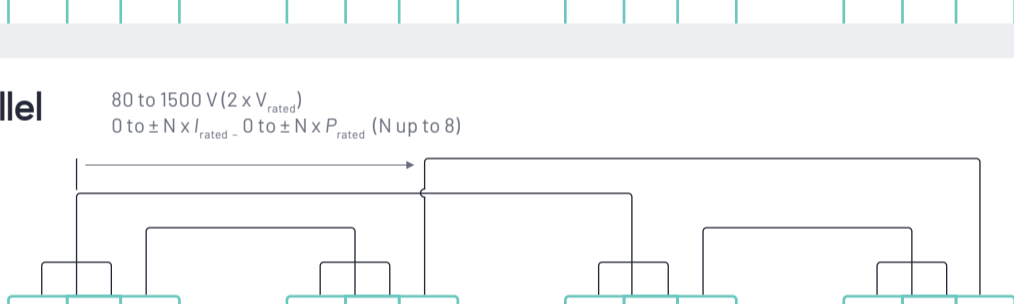
Serial



Do not limit yourself to 1200V, with us you can up to **1500 V**

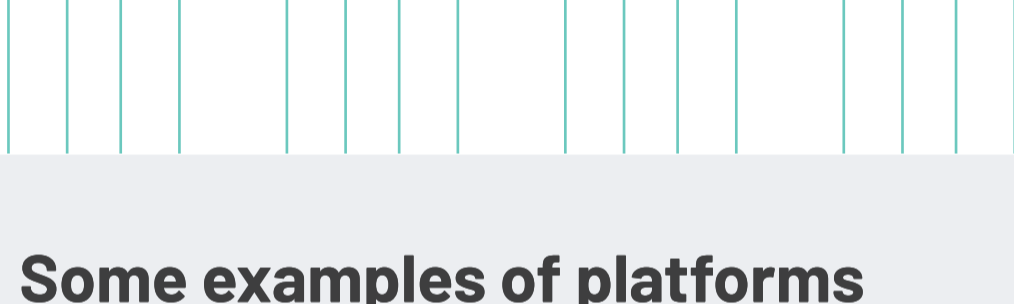
Parallel

Up to 8 units

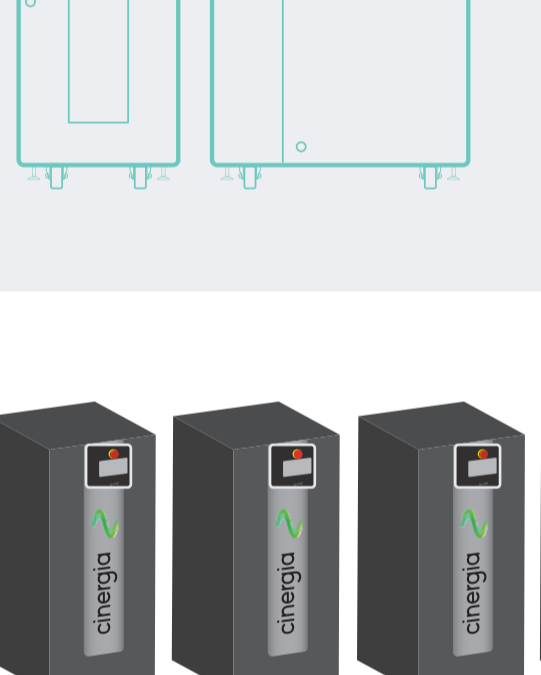


Serial/Parallel

Up to 8 units



Some examples of platforms

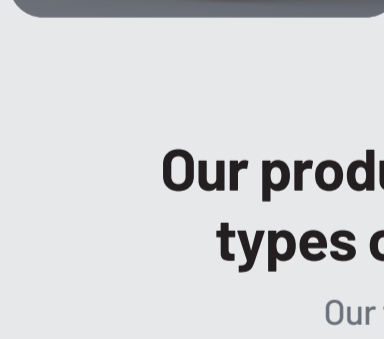
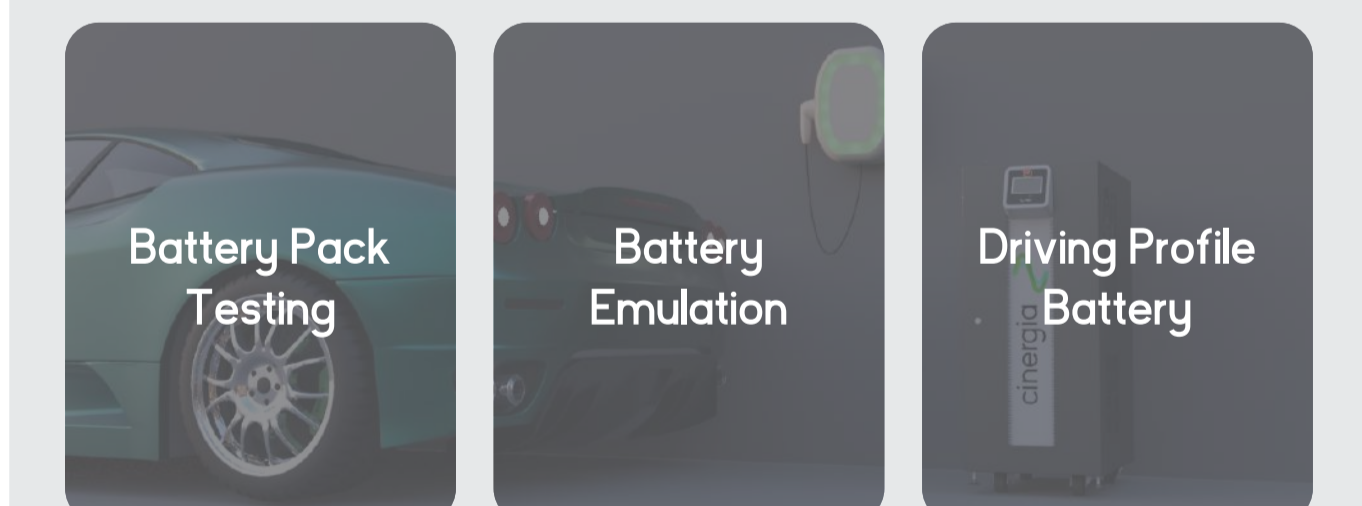


Model	Unit Power	Num. units	Total Power
2x B2C+ 80	80 kW	2	160
2x B2C+ 120	108 kW	2	216
2x B2C+ 160	145 kW	2	290
2x B2C+ 200	160 kW	2	320
3x B2C+ 160	145 kW	3	435
4x B2C+ 200	160 kW	4	640
6x B2C+ 200	160 kW	6	960
8x B2C+ 200	160 kW	8	1280

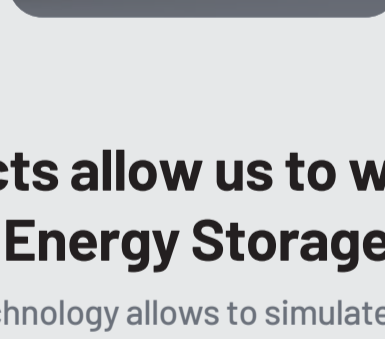


More than **3 MW**

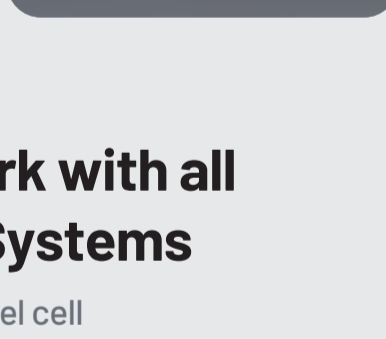
of power supplied in B2C Regenerative Converter since 2014



Battery Pack Testing



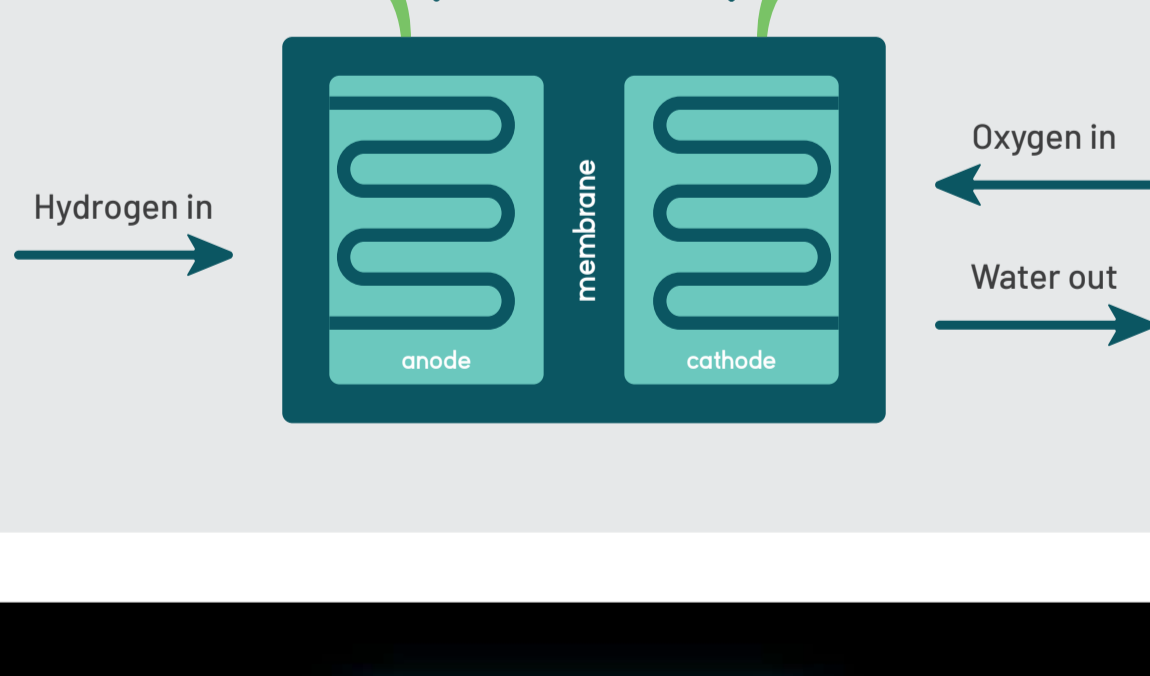
Battery Emulation



Driving Profile Battery

Our products allow us to work with all types of Energy Storage Systems

Our technology allows to simulate fuel cell



Better than ever, the enhanced Plus family

Master/slave connection

for up to 8 units using a fiber optic link to increase power capabilities

Improved control

30kHz closed control loop frequency with 300kHz oversampling technique

RMS or instantaneous RLC model for anti-islanding test

Selectable slew rate for DC for the fastest transients and highest stability

Friendly Interface

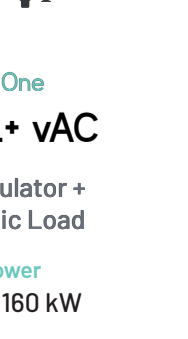
SOFTWARE

The user interface used by CINERGIA devices has been developed by our R&D team, to offer total control of the device, with a comfortable and intuitive design. This allows us to take full advantage of the capabilities of the device, as well as the programming and execution of standardized or self-created tests.

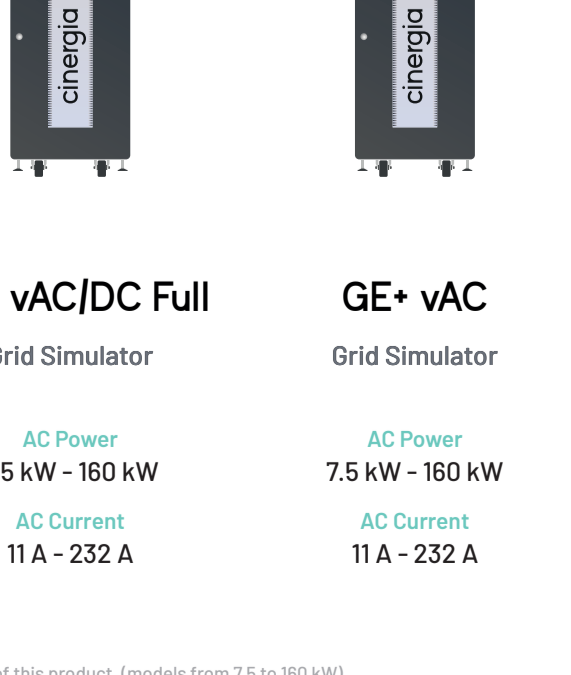
Remote Control port
- LAN Ethernet with Modbus/TCP protocol.
- Labview Drivers
- RS485 (optional)

Digital IO port
- 4 digital inputs
- 3 relay outputs
- 1 emergency stop

Optional Analogue port
- 6 analogue input 0-10V
- 6 analogue output 0-10V



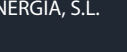
Windows 7/10 user interface for remote operation and data acquisition.



FEATURES AND CAPABILITIES

- DC Operation
- Sequence
- Multichannel
- Battery Pack Testing
- Battery Emulation
- PV Panel Emulation

Related Products



All Terrain

GE&EL+ vAC/DC

Grid Simulator + Electronic Load

AC Power 7.5 kW - 160 kW

AC Current 11 A - 232 A



All in One

GE&EL+ vAC

Grid Simulator + Electronic Load

AC Power 7.5 kW - 160 kW

AC Current 11 A - 232 A



GE+ vAC/DC Full

Grid Simulator

AC Power 7.5 kW - 160 kW

AC Current 11 A - 232 A



GE+ vAC

Grid Simulator

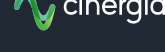
AC Power 7.5 kW - 160 kW

AC Current 11 A - 232 A

for more information about available models consult the datasheet of this product. (models from 7.5 to 160 kW)

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