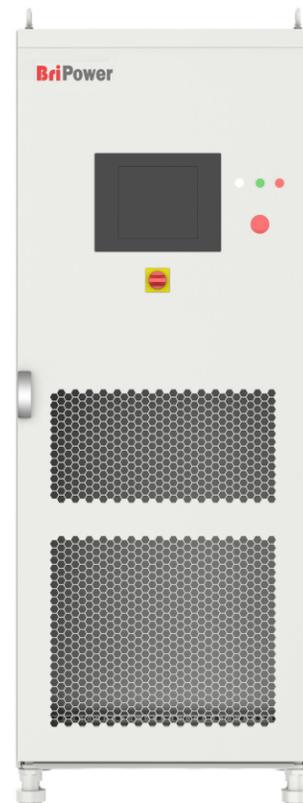


BriPower ESD-E Series Bi-Directional DC Power Supply

Features

- Output power: 100kW
- Output voltage: 500V/800V/1000V/1500V
- Applications: Battery simulation, Battery test
- Program accuracy up to 0.1%
- Seamless transition between source and sink modes
- Current rise time (10% -90%) < 3ms
- Soft start: effectively restrain the impulse current when power on
- CC/CV/CP/CR mode available
- Regenerative DC load function
- LAN/RS485 interfaces, CAN interface (-CAN option)
- Emergency stop button and indicators on front panel
- TFT-Touch panel operation
- Mod-bus/SCPI protocols
- Output contactor
- Remote sense
- CE conformity



Overview

The BriPower ESD-E series is IGBT PWM switching DC power supply, which output power 100kW for single system. ESD-E series uses bi-directional design, which makes it possible to be used as DC power source or regenerative DC load. CV/CC/CP/CR operation modes are available for both sourcing and sinking.

ESD-E series adopts dual DSP+FPGA design, with powerful calculation and control capabilities, and can display and save measured values at 10k/s sampling. The ESD series adopts optical fiber communication and performs multiple monitoring and protection of all main components, communication connections and systems. It is the most reliable power supply product in the industry.

With touch panel on the front panel, users can control the power source through GUI software. System status indicators and emergency stop button are installed on the front panel. RS485 and LAN standard interface, optional CAN interfaces are available for automated test applications.

Bi-Directional (Re-generative)

ESD-E can operate in source and sink mode. It has the capability to return the energy fully back to the grid.

Re-generative DC Load

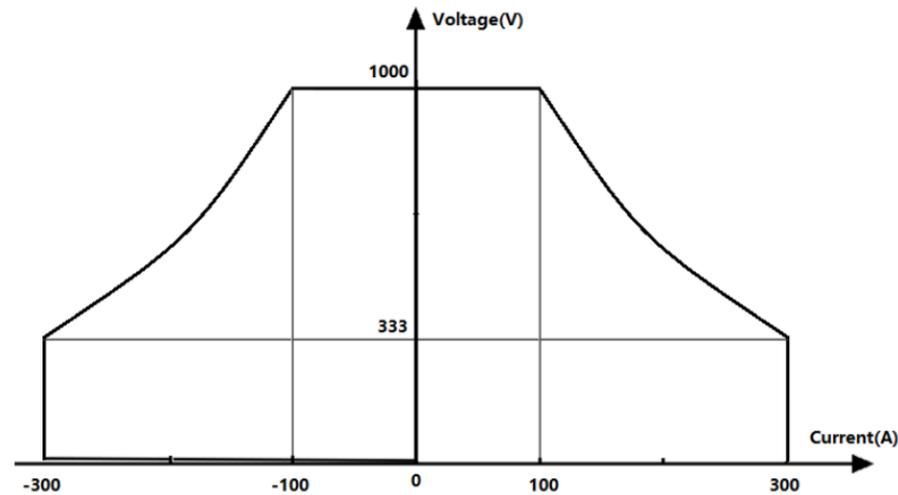
ESD-E can be used as regenerative DC electronic load. DC load simulation includes constant current, constant resistance, constant voltage, and constant power modes.

Fast current rising

ESD-E Series has excellent dynamic performance of current rising, which makes it ideal for battery test and battery simulation. Current Rise Time (10~90%) < 3ms

Automatic wide range output

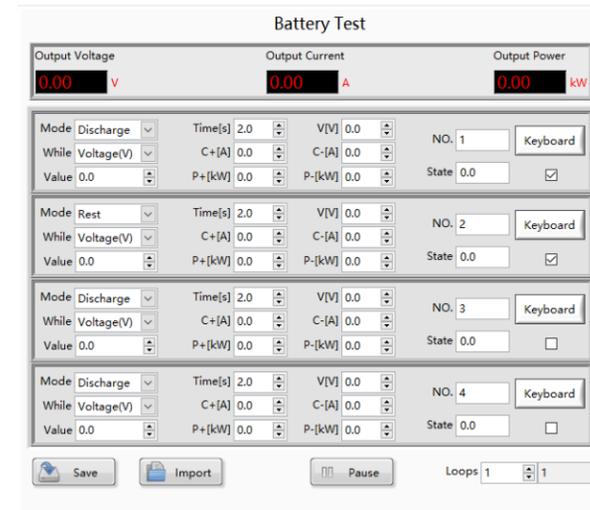
ESD-E series DC power supply has an automatic wide-range output function and provides x3 current. Under the condition of rated output power, the output range of voltage/current can be adjusted, such as: high-voltage small current or low-voltage large current (also applicable in sink power mode). The same type of power supply can cover a wider range of power applications.



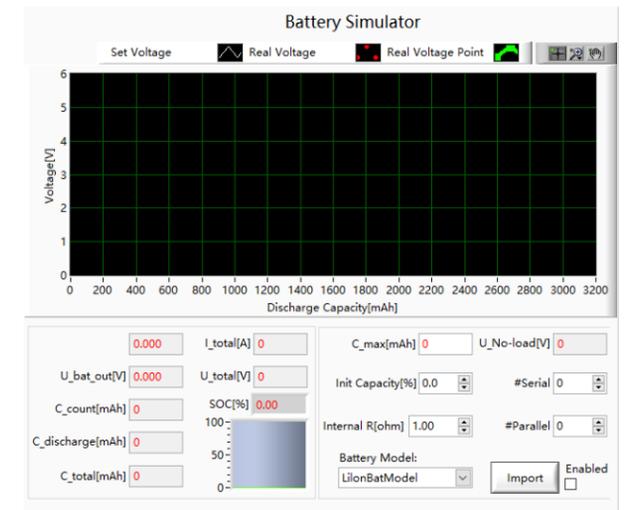
Example: 100kW, 1000V, $\pm 300A$

Battery Test

ESD-E series DC power supply can be used for characterization of power battery packs. It is used to test the charging and discharging performance, temperature rise characteristics, and cycle life of the power battery pack. Through the GUI software, different charging and discharging profiles can be programmed, and test results are displayed in real time.



Battery Test



Battery Simulation

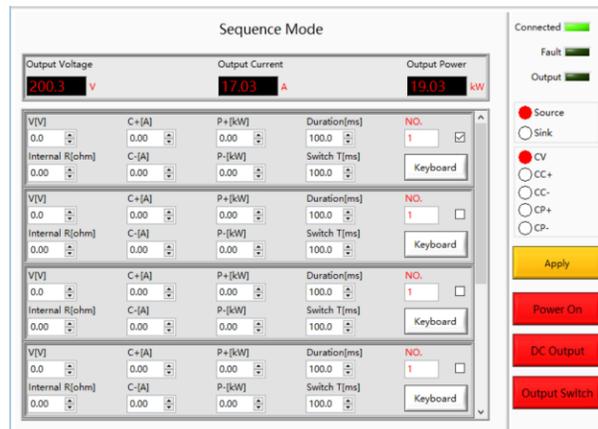
Battery Simulation

ESD-E Series DC power supplies can simulate the charging and discharging characteristics of the power battery pack/package and provide a convenient and efficient testing method for the development and testing of new energy vehicle motors etc.

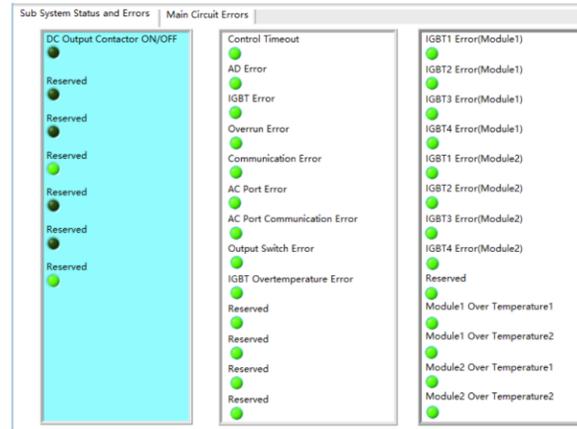
Graphical User Interface

GUI software is installed in front touch panel, which uses Windows OS. The software provides following functions:

- Output settings and limits
- Sequence output settings
- Display measurements: voltage, current, power, etc.
- Capture, display and save output voltage and current waveforms
- Display power source faults

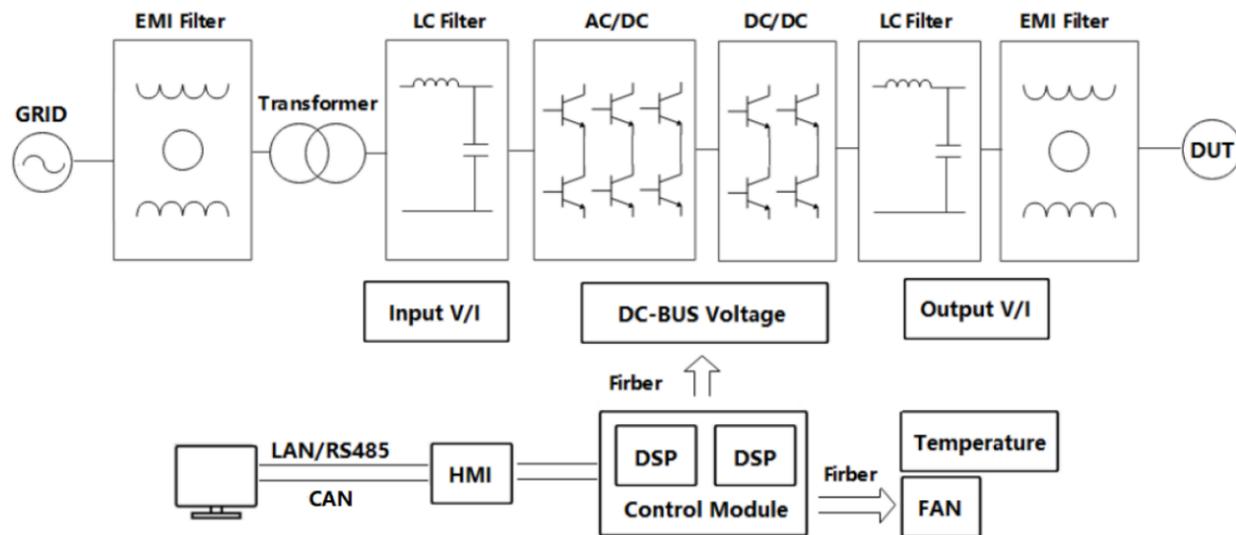


Sequence Programming



System Status

Block Diagram



General Specification

AC Input	
AC input Voltage	3P+N+PE, 380VLL±10%(std)
Frequency	47-63Hz
Efficiency	≥90%
Power Factor	0.95

Output	
Output Modes	CV, CC, CP and CR
Power Level	100kW in single controller.
Voltage Ranges	500V/800V/1000V/1500V
Current Ranges	Please refer to the Standard Models Specification
Load Regulation	0.1%FS
Line Regulation	0.1%FS
Voltage Ripple	0.1%FS
Stability	0.1%FS
Current Rise Time (10%~90%)	<3ms
Current Rise Time (-90%~90%)	<5ms
Regulation Time (0-100% Load change)	<3ms
Power Accuracy	0.3%FS
Voltage Accuracy	0.1%FS
Current Accuracy	0.3%FS
Power Resolution	0.02kW

Voltage Resolution	0.05V (500V/800V), 0.1V (1000V/1500V)
Current Resolution	0.05A
Over Current	120%, 60 seconds

Measurements	
Measurement accuracy Power	0.3%FS
Measurement accuracy Voltage	0.1%FS
Measurement accuracy Current	0.3%FS

Others	
Standard Interface	LAN/RS485
Optional Interface	CAN
Protection	OVP, OCP, OPP, OTP
CE Conformity	EN 61010, EN 61326
Cooling	Forced Air Cooling
Temperature	Operating: 0~40°C, Storage: -20~85°C
Operating Humidity	20-90%RH (None Condensing)

Standard Models Specification

Model	Power	Voltage	Current	Dimension (W*D*H mm)	Weight(kg)
ESD-E 100-500-600	100kW	500V	600A	2*900*900*1800	1280
ESD-E 100-800-375		800V	375A	2*900*900*1800	1250
ESD-E 100-1000-300		1000V	300A	2*900*900*1800	1200
ESD-E 100-1500-200		1500V	200A	900*900*2200	900

Note:

1. Other Power/Voltage Level can be offered. Please consult factory
2. Total weight < 1400KG, the cabinet bottom is wheel structure; otherwise, it is channel steel structure.

Options

-CAN CAN-bus program interface

AC Input Configuration

Please specify the input voltage (L-L)

/208, Input Voltage 208V±10%, 3-phase

/230, Input Voltage 230V±10%, 3-phase

/380, Input Voltage 380V±10%, 3-phase

/400, Input Voltage 400V±10%, 3-phase

/480, Input Voltage 480V±10%, 3-phase

About BriPower

Bridge Technology is a company focusing on business of **power supplies and test systems for new energy applications**. We are devoted to providing high quality products and solutions for customers.

Bridge Technology has **a top-class R&D team** in China, works on modularization and standardization power supplies and systems. We have sales, technical support, R&D and manufacture in Shanghai, Nanjing and Chengdu.

Nanjing Bridge New Energy Technology was founded on Jan 12th, 2016, focusing on R&D and manufacturing BriPower brand power systems, including bi-directional AC sources for grid simulation, bi-directional DC sources for battery simulation, and regenerative loads. The BriPower AC&DC power systems are widely used in new energy and related fields. **BriPower is valuable to customer especially High Power and High Voltage.**

Factory: Nanjing Bridge New Energy Technology Co., Ltd

Sales Company: Shanghai Bridge Electronic Technology Co., Ltd

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