

PROGRAMMABLE DC ELECTRONIC LOAD

E5000 SERIES



E5000 Series is a compact, high-power DC electronic load featuring wide operating range and high dynamic frequency. In 4U size, it powers up to 6.6kW and outputs voltage up to 1200V. It supports at most 10 E5000 devices in parallel operation.

Features

- | High power density: 6.6kW in 4U

| Power output range: 6.6kW

| Voltage output range: 0 ~ 150V, 0 ~ 600V, 0 ~ 1200V

| A variety of modes: CC, CV, CR, CP, CCD, and CRD

| Three voltage levels + three current ranges

| Automatic GO/NG detection

| Remote voltage compensation
- | Dynamic current/resistance load of 25kHz

| Analysis of fuel cell impedance

| RS485/LAN/USB communication

| Optional GPIB

| Protections: OVP, OCP, OTP, OPP, etc.

| Dynamic frequency of 50kHz

| Up to 255 groups of programmable sequences

Model Selection

Model	Voltage	Current	Power	Resolution	Voltage Accuracy	Current Accuracy	Size
Normal							
E5000NG-2K2-0150-0200	150V	200A	2.2kW	0.001V/0.002A/0.05W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-4K4-0150-0400	150V	400A	4.4kW	0.001V/0.004A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-6K6-0150-0600	150V	600A	6.6kW	0.001V/0.005A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-13K2-0150-1200	150V	1200A	13.2kW	0.001V/0.01A/0.2W	0.05%+0.025%F.S.	0.1%+0.1%F.S	7U
E5000NG-19K8-0150-1800	150V	1800A	19.8kW	0.001V/0.02A/0.4W	0.05%+0.025%F.S.	0.1%+0.1%F.S	10U
E5000NG-2K2-0600-0140	600V	140A	2.2kW	0.005V/0.002A/0.05W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-4K4-0600-0280	600V	280A	4.4kW	0.005V/0.004A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-6K6-0600-0420	600V	420A	6.6kW	0.005V/0.004A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-13K2-0600-0840	600V	840A	13.2kW	0.005V/0.01A/0.2W	0.05%+0.025%F.S.	0.1%+0.1%F.S	7U
E5000NG-19K8-0600-1260	600V	1260A	19.8kW	0.005V/0.01A/0.4W	0.05%+0.025%F.S.	0.1%+0.1%F.S	10U
E5000NG-2K2-1200-0080	1200V	80A	2.2kW	0.01V/0.001A/0.05W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-4K4-1200-0160	1200V	160A	4.4kW	0.01V/0.002A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-6K6-1200-0240	1200V	240A	6.6kW	0.01V/0.002A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000NG-13K2-1200-0480	1200V	480A	13.2kW	0.01V/0.004A/0.2W	0.05%+0.025%F.S.	0.1%+0.1%F.S	7U
E5000NG-19K8-1200-0720	1200V	720A	19.8kW	0.01V/0.005A/0.4W	0.05%+0.025%F.S.	0.1%+0.1%F.S	10U
Pro							
E5000PG-2K2-0150-0200	150V	200A	2.2kW	0.001V/0.002A/0.05W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000PG-4K4-0150-0400	150V	400A	4.4kW	0.001V/0.004A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000PG-6K6-0150-0600	150V	600A	6.6kW	0.001V/0.005A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000PG-13K2-0150-1200	150V	1200A	13.2kW	0.001V/0.01A/0.2W	0.05%+0.025%F.S.	0.1%+0.1%F.S	7U
E5000PG-19K8-0150-1800	150V	1800A	19.8kW	0.001V/0.02A/0.4W	0.05%+0.025%F.S.	0.1%+0.1%F.S	10U
E5000PG-2K2-0600-0140	600V	140A	2.2kW	0.005V/0.002A/0.05W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000PG-4K4-0600-0280	600V	280A	4.4kW	0.005V/0.004A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
E5000PG-6K6-0600-0420	600V	420A	6.6kW	0.005V/0.004A/0.1W	0.05%+0.025%F.S.	0.1%+0.1%F.S	4U
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E5000PG-13K2-1200-0480	1200V	480A	13.2kW	0.01V/0.004A/0.2W	0.05%+0.025%F.S.	0.1%+0.1%F.S	7U
E5000PG-19K8-1200-0720	1200V	720A	19.8kW	0.01V/0.005A/0.4W	0.05%+0.025%F.S.	0.1%+0.1%F.S	10U

Note: E5000 series will launch 29U for 26.4kW, 33kW, 39.6kW; and 42U for 46.2kW, 52.8kW, 59.4kW gradually.

E5000 SERIES PROGRAMMABLE DC ELECTRONIC LOAD

Normal

Fundamental, Cost-effective

Pro

Fully-featured, Multi-scenario

Features \ Version	Normal	Pro
Basic mode(CC/CV/CR/CP/CCD)	★	★
Battery discharge	★	★
Short-circuit simulation	★	★
LIST mode	★	★
Dynamic resistance load (CRD)	-	★
Composite modes(CVCC/CRCCICVCRIAUTO)	-	★
Sine wave mode(SWD)	-	★
Dynamic load sweep(SWP)	-	★
OCP/OPP threshold setting	-	★

Note: "★" means Yes; "-" means not available.

Product Applications

- Battery discharge test

Fuel cell test

Testing DC charging modules

Testing on-board chargers

Testing DC charging piles
- Testing DCDC converters

Power semiconductor devices

Military industry, avionics

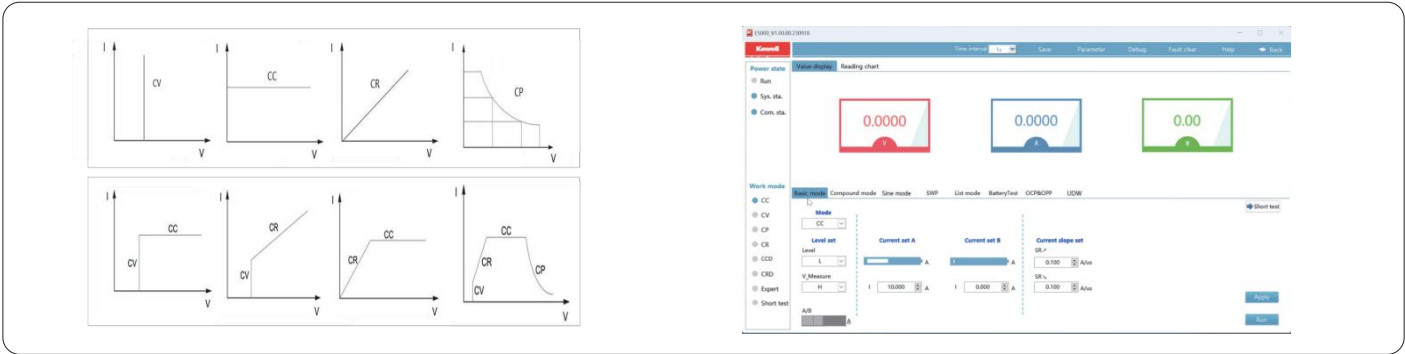
High voltage contactors

Testing UPS, SMPS systems

Product Functions

DC Electronic Load

The E5000 series supports a variety of operation modes meeting a wide range of test requirements. These include basic operation modes: CC, CV, CP and CR and combined modes: CV+CC, CV+CR, CC+CR, and CV+CC+CP+CR (AUTO).



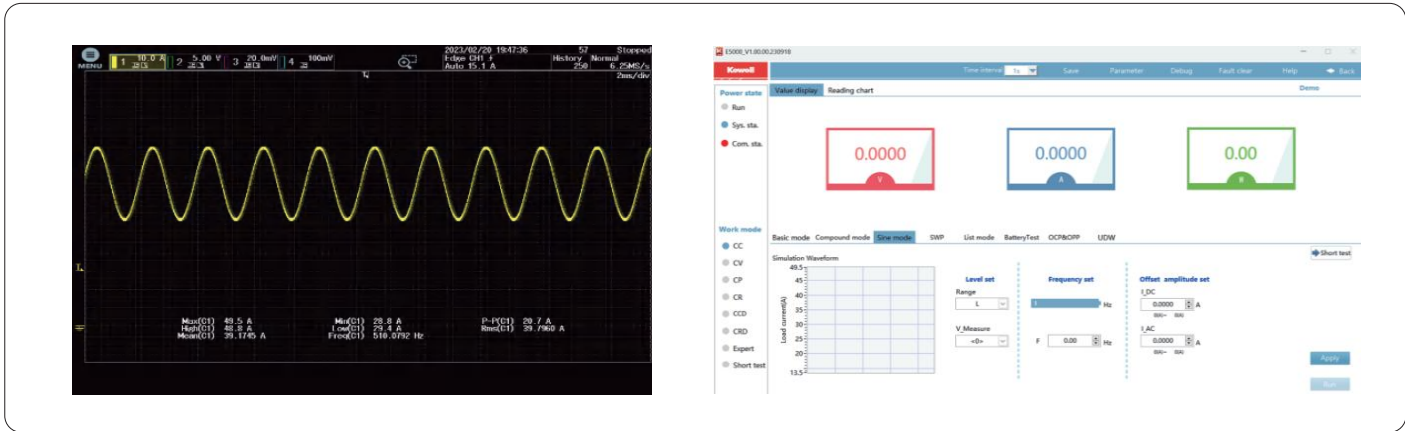
Dynamic Load

The E5000 series supports high-speed, programmable dynamic load mode (dynamic current load CCD and dynamic resistance load CRD), frequency sweep mode, etc. Users can also set high/low level of current, T1/T2, rise/fall slew rate and number of executions. In cases of continuous changes in load current, the internal monitoring mechanism and circuits are able to minimize current waveform distortion; the minimum current rise time of the load at 150V is 15μs, with dynamic change up to 25kHz.



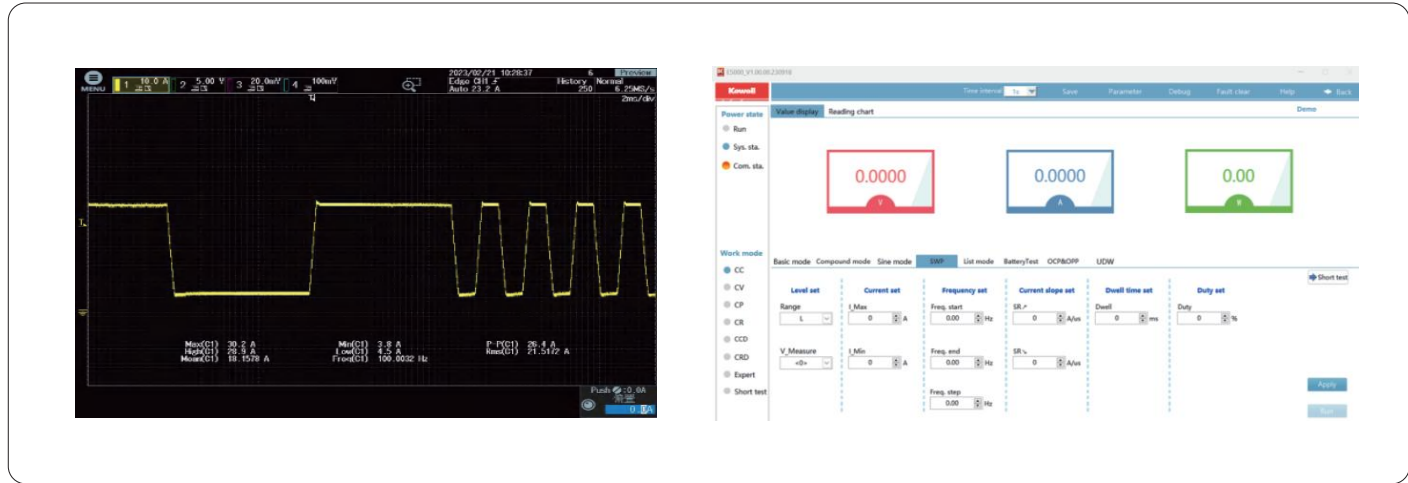
Sine Wave Dynamic

The E5000 series is equipped with SWD function, where output current bias (I@DC), sine wave (I@AC) and sinusoidal frequency can be set. The sinusoidal frequency can be set up to 20kHz.



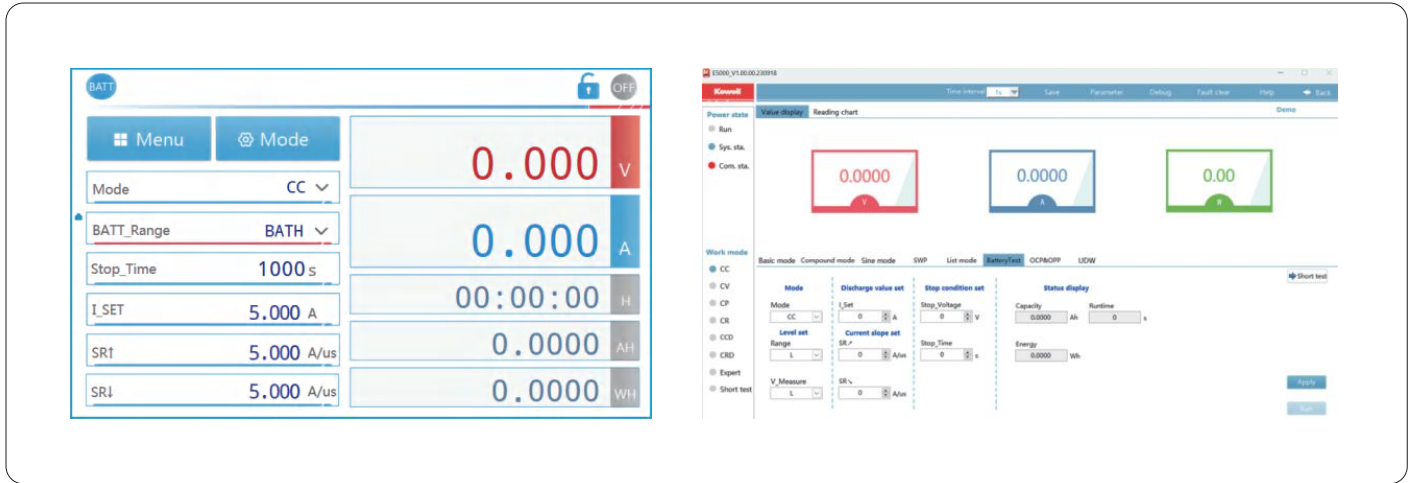
Dynamic Load Sweep

It supports linearly varying the frequency of the load current to as high as 50kHz. This mode tests the maximum/minimum voltage peak of the DUT under worst-case conditions. This dynamic frequency sweep function has a sampling rate of 500kHz. Dynamic load sweep mode can simulate a variety of load conditions, which meets the needs of most customers.



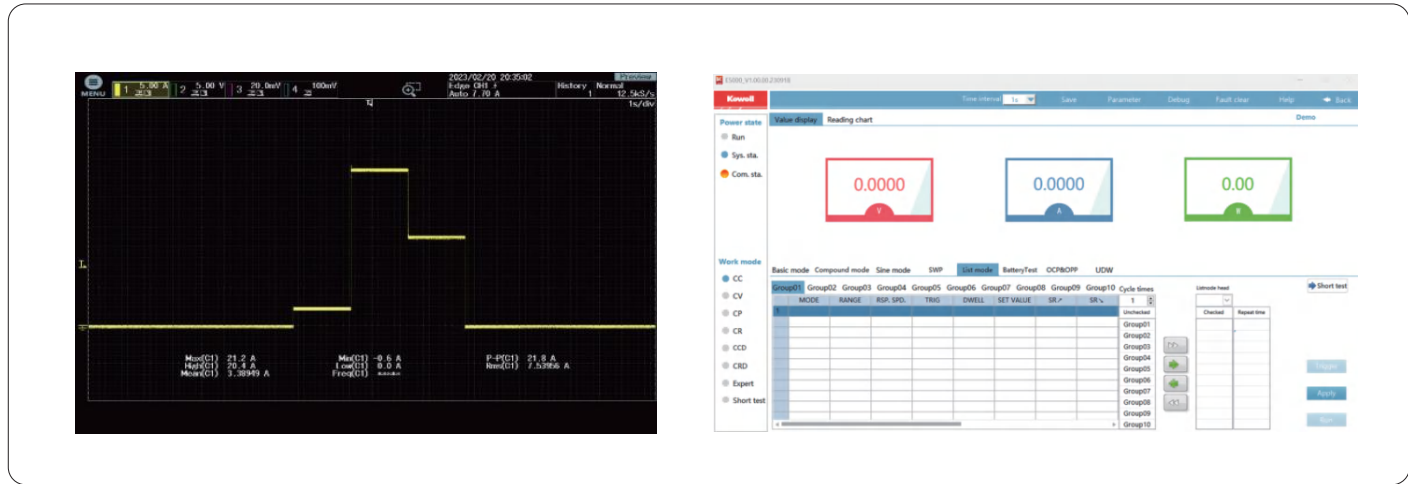
Battery Test Mode

This mode features battery discharge function and supports discharge test under constant current/ constant resistance/ constant power conditions. Users may set discharge cut-off conditions including cut-off voltage and discharge time, and the discharge will stop when either one is reached. Battery voltage, time and discharge capacity can be observed during the test.



LIST Function

The E5000 series also has an output mode that supports multi-step programming, with up to 10 test files to be edited, each containing 200 sequences. The time of a single step ranges 0.1ms~30s. In this mode, the temporal changes of load under CC/CV/CP/CR conditions are simulated. It also supports nested loops, and step cycle up to 65535 times.



Determination of OCP/OPP Points

The E5000 electronic load provides customer-defined overcurrent/overpower protection function to avoid damage to the DUT caused by mis-operation. Users may define current protection threshold as needed for different DUTs.



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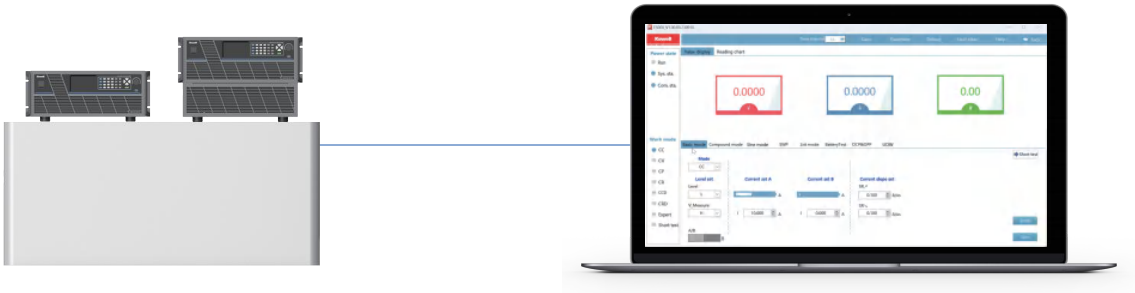
Product Highlights

Ultra-High Power Density



Up to 4U/6.6kW per device, compact, lightweight, and space-efficient

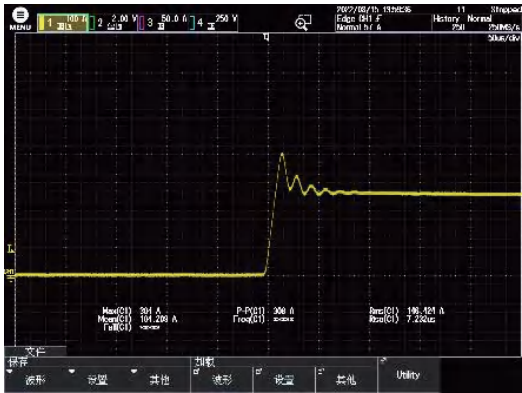
Flexible Paralleling



E5000 can output 6.6kw in 4U size. An integrated cabinet of 42U can output 59.4kw at max. It supports flexible parallel connection of at most 9 devices.

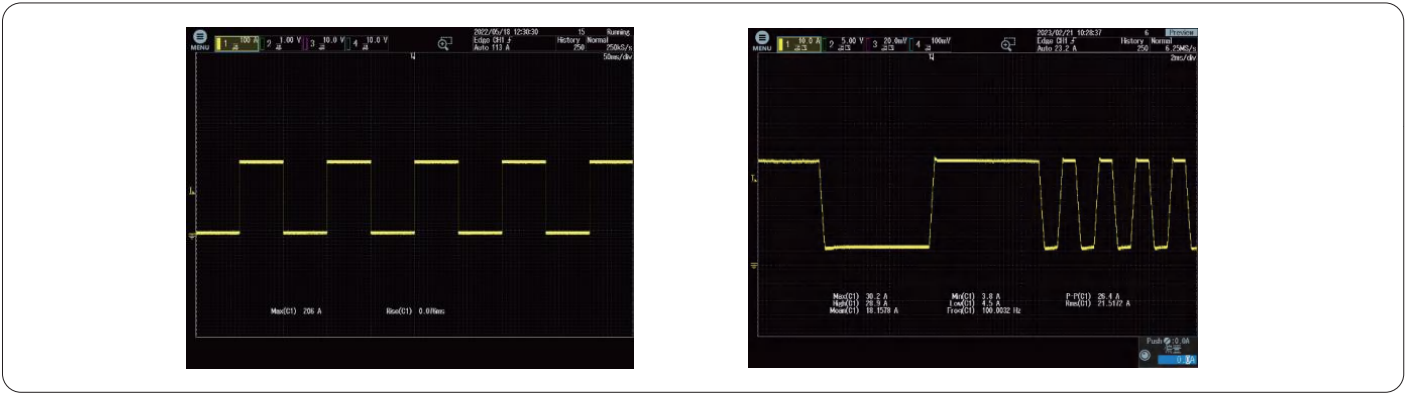
Super Dynamic Performance

- **Current slope up to 6V/μs**
- The minimum current rise time of load at 150V is 15μs, with dynamic change up to 25kHz



- **Rapid dynamic response**

E5000 supports linearly varying the frequency of the load current to as high as 50kHz.



Model Appearance

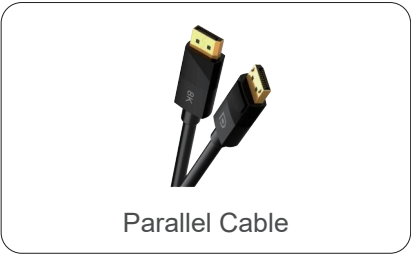


Model	Power	Dimensions (W*D*H)
4U	2.2kW/4.4kW/6.6kW	610*1026*1006mm
7U	13.2kW	610*1026*1554mm
10U	19.8kW	610*1026*1999mm

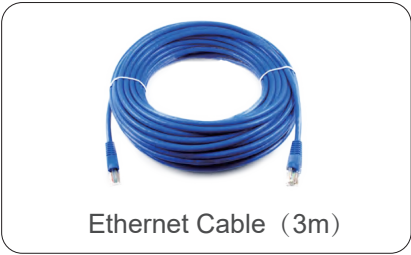
Standard Accessories



Handles



Parallel Cable



Ethernet Cable (3m)



DC Protective Cover



Power Supply Cable^①



USB Stick(32G)^②

Note:
① The pictures are for reference only. The actual plug will conform to the local plug type and will be provided by the local service provider.
② The USB stick contains the software package (license will be provided by Kewell free of charge).