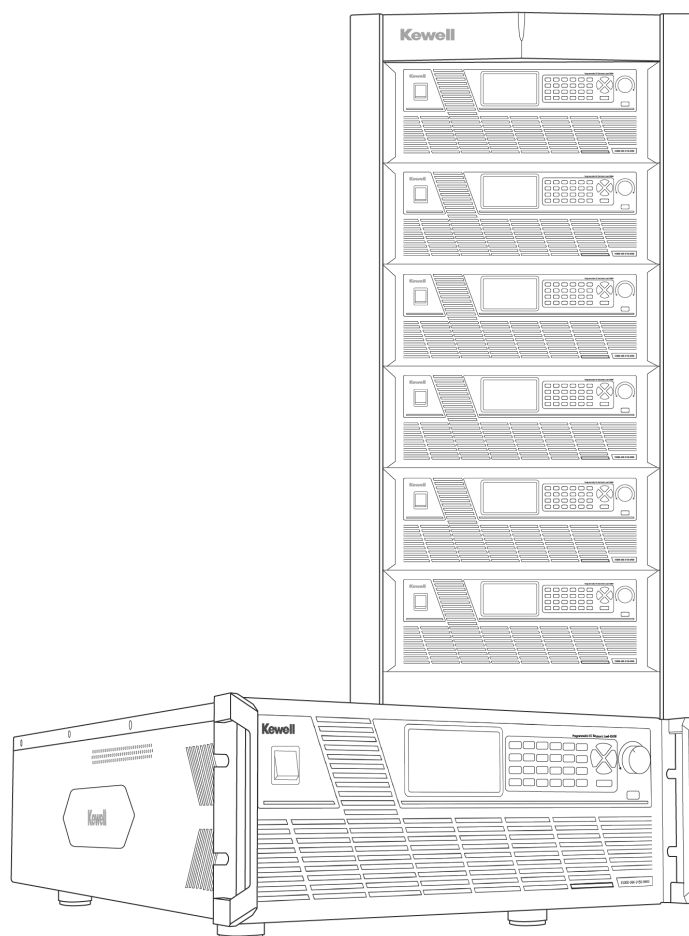




E5000NG&PG SERIES

PROGRAMMABLE DC ELECTRONIC LOAD

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1 Summary

The E5000 series programmable DC electronic load is a compact high power DC electronic load boasting wide operating range and high dynamic frequency. It simulates different load characteristics by energy dissipation through power transistors.

The E5000 series is widely used in load tests for traction battery, fuel cell, DC charging pile, OBC, switching power supply, UPS, PV modules, etc.



The E5000 series



2 Product Highlights

2.1 Ultra-high Power Density

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

2.2 High Current Slew Rate

Current slew rate of 6.6kW single device up to 6A/us, able to simulate resistive load.



2.3 Accurate Current Measurement

High accuracy with three current ranges.

2.4 High-speed Dynamic Loading

Dynamic current/resistance load of 25kHz, customizable voltage range.

2.5 High-speed Dynamic Frequency Sweep

Dynamic frequency of 50kHz, gradient change of 0.01Hz, auto-capture of VPK±.

Note: only for Pro version.

2.6 Sine Wave Mode

Sine wave of 20kHz, supporting analysis of fuel cell impedance.

Note: only for Pro version.

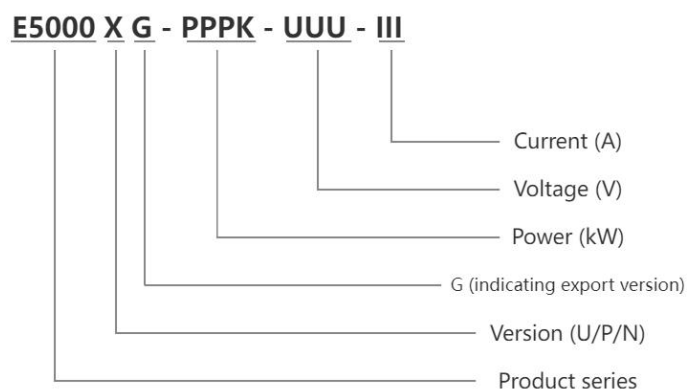
2.7 Flexible Parallel Connection

Through flexible parallel connection, it can be expanded to higher power, and the performance parameters of the parallel machines are consistent with a single device.



3 Product Specifications

3.1 Model Description



3.2 Product Portfolio

- Normal

Model	Voltage	Current	Power	Height
E5000NG-4K4-0150-0400	150V	400A	4.4kW	4U
E5000NG-6K6-0150-0600		600A	6.6kW	4U
E5000NG-13K2-0150-1200		1200A	13.2kW	7U
E5000NG-19K8-0150-1800		1800A	19.8kW	10U
E5000NG-6K6-0600-0420	600V	420A	6.6kW	4U
E5000NG-13K2-0600-0840		840A	13.2kW	7U
E5000NG-4K4-1200-0160	1200V	160A	4.4kW	4U
E5000NG-6K6-1200-0240		240A	6.6kW	4U

- Pro

Model	Voltage	Current	Power	Height
E5000PG-4K4-0150-0400	150V	400A	4.4kW	4U
E5000PG-6K6-0150-0600		600A	6.6kW	4U
E5000PG-13K2-0150-1200		1200A	13.2kW	7U
E5000PG-19K8-0150-1800		1800A	19.8kW	10U
E5000PG-6K6-0600-0420	600V	420A	6.6kW	4U
E5000PG-13K2-0600-0840		840A	13.2kW	7U
E5000PG-4K4-1200-0160	1200V	160A	4.4kW	4U
E5000PG-6K6-1200-0240		240A	6.6kW	4U



3.3 Functions

Model	Normal	Pro
Basic modes (CC/CV/CR/CP)	•	•
Dynamic current load (CCD)	•	•
Battery discharge	•	•
Short-circuit simulation	•	•
Von/Voff	•	•
Vpk+/-	•	•
LIST mode	•	•
Dynamic resistive load (CRD)	-	•
Composite mode (CVCC/CRCC/CVCR/AUTO)	-	•
Sine wave mode (SWD)	-	•
Dynamic load sweep mode (SWP)	-	•
Determination of OCP/OPP points	-	•



4 Technical Parameters

4.1 Technical Specifications

4.1.1 Normal

Main technical specifications of the 4.4kW E5000NG DC electronic load are as follows:

Model		E5000NG-4K4-0150-0400			E5000NG-4K4-1200-0160		
Rated values	Voltage	0 ~ 150V			0 ~ 1200V		
	Current	0 ~ 400A			0 ~ 160A		
	Power	4.4kW			4.4kW		
	Min. operating voltage	1.8V@400A			20V@160A		
CC mode	Range	0-40A	0-200A	0-400A	0-16A	0-80A	0-160A
	Current accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.		
	Resolution	0.4mA	2mA	4mA	0.2mA	1mA	2mA
CR mode	Resistance range	7.5mΩ ~ 75Ω (16V) 30mΩ ~ 300Ω (80V) 0.75Ω ~ 1.5kΩ (150V)			150mΩ ~ 1.5kΩ (150V) 0.6Ω ~ 6kΩ (600V) 15Ω ~ 30kΩ (1200V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%F.S.			Vin/Rset*(0.2%)+0.2%F.S.		
CV mode	Range	0-16V	0-80V	0-150V	0-150V	0-600V	0-1200V
	Voltage accuracy	0.05%+0.025%F.S.			0.05%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV	1mV	5mV	10mV
CP mode	Range	0-400W	0-2000W	0-4400W	0-400W	0-2000W	0-4400W
	Power accuracy	0.2%+0.3%F.S.			0.2%+0.3%F.S.		
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	0.4mA/μs- 0.4A/μs	2mA/μs- 2A/μs	4mA/μs- 4A/μs	0.2mA/μs- 0.16A/μs	1mA/μs- 0.8A/μs	2mA/μs- 1.6A/μs
	Accuracy	5%±10μs			5%±10μs		
	Min. rise time	10μs			20μs		
Readback resolution	Voltage	0.015%+0.015% F.S.			0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.			0.04%+0.06% F.S.		
	Power	0.1%+0.1% F.S.			0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac			100 ~ 240Vac		
	Frequency	47 ~ 63Hz			47 ~ 63Hz		
	Power	240VA max			240VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity					
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO					
Enclosure dimensions (mm)		665(D)*445(W)*178(H)					



Weight (net)	≤35kg
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Note: The above specifications are subject to update without further notice.

Main technical specifications of the 6.6kW E5000NG DC electronic load are as follows:

Model		E5000NG-6K6-0150-0600			E5000NG-6K6-0600-0420			E5000NG-6K6-1200-0240		
Rated values	Voltage	0 ~ 150V			0 ~ 600V			0 ~ 1200V		
	Current	0 ~ 600A			0 ~ 420A			0 ~ 240A		
	Power	6.6kW			6.6kW			6.6kW		
	Min. operating voltage	1.8V@600A			14V@420A			20V@240A		
CC mode	Range	0-60A	0-300A	0-600A	0-42A	0-210A	0-420A	0-24A	0-120A	0-240A
	Current accuracy	0.1%+0.1%F.S.			0.1%+0.1%F.S.			0.1%+0.1%F.S.		
	Resolution	0.5mA	2mA	5mA	0.4mA	2mA	4mA	0.2mA	1mA	2mA
CR mode	Resistance range	5mΩ ~ 50Ω (16V) 20mΩ ~ 200Ω (80V) 0.5Ω ~ 1kΩ (150V)			50mΩ ~ 500Ω (80V) 200mΩ ~ 2kΩ (150V) 2Ω ~ 4kΩ (600V)			0.1Ω ~ 1kΩ (150V) 0.4Ω ~ 4kΩ (600V) 10Ω ~ 20kΩ (1200V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%IF.S.			Vin/Rset*(0.2%)+0.2%IF.S.			Vin/Rset*(0.2%)+0.2%IF.S.		
CV mode	Range	0-16V	0-80V	0-150V	0-80V	0-150V	0-600V	0-150V	0-600V	0-1200V
	Voltage accuracy	0.05%+0.025%F.S.			0.05%+0.025%F.S.			0.05%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV	0.5mV	1mV	5mV	1mV	5mV	10mV
CP mode	Range	0-600W	0-3000W	0-6600W	0-600W	0-3000W	0-6600W	0-600W	0-3000W	0-6600W
	Power accuracy	0.2%+0.3%F.S.			0.2%+0.3%F.S.			0.2%+0.3%F.S.		
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW	10mW	50mW	100mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	0.5mA/μs- 0.6A/μs	2mA/μs- 3A/μs	5mA/μs-6 A/μs	0.4mA/μs- 0.42A/μs	2mA/μs- 2.1A/μs	4mA/μs- 4.2A/μs	0.2mA/μs- 0.24A/μs	1mA/μs-1 .2A/μs	2mA/μs-2 .4A/μs
	Accuracy	5%±10μs			5%±10μs			5%±10μs		
	Min. rise time	10μs			20μs			20μs		
Readback resolution	Voltage	0.015%+0.015% F.S.			0.015%+0.015% F.S.			0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.			0.04%+0.04% F.S.			0.04%+0.06% F.S.		
	Power	0.1%+0.1% F.S.			0.1%+0.1% F.S.			0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac			100 ~ 240Vac			100 ~ 240Vac		
	Frequency	47 ~ 63Hz			47 ~ 63Hz			47 ~ 63Hz		
	Power	250VA max			250VA max			250VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity								
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO								



Enclosure dimensions (mm)	665(D)*445(W)*178(H)
Weight (net)	≤40kg

Note: The above specifications are subject to update without further notice.

Main technical specifications of the 13.2kW E5000NG DC electronic load are as follows:

Model		E5000NG-13K2-0150-1200			E5000NG-13K2-0600-0840		
Rated values	Voltage	0 ~ 150V			0 ~ 600V		
	Current	0 ~ 1200A			0 ~ 840A		
	Power	13.2kW			13.2kW		
	Min. operating voltage	1.8V@1200A			14V@840A		
CC mode	Range	0-120A	0-600A	0-1200A	0-84A	0-420A	0-840A
	Current accuracy	0.1%+0.1%IF.S.			0.1%+0.1%IF.S.		
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
CR mode	Resistance range	2.5mΩ ~ 25Ω (16V) 10mΩ ~ 100Ω (80V) 0.25Ω ~ 500Ω (150V)			25mΩ ~ 250Ω (80V) 100mΩ ~ 1kΩ (150V) 1Ω ~ 2kΩ (600V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%IF.S.			Vin/Rset*(0.2%)+0.2%IF.S.		
CV mode	Range	0-16V	0-80V	0-150V	0-80V	0-150V	0-600V
	Voltage accuracy	0.05%+0.025%F.S.			0.05%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV	0.5mV	1mV	5mV
CP mode	Range	0-1200W	0-6000W	0-13200W	0-1200W	0-6000W	0-13200W
	Power accuracy	0.2%+0.3%F.S.			0.2%+0.3%F.S.		
	Resolution	20mW	100mW	200mW	20mW	100mW	200mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	1mA/μs-1.2A/μs	5mA/μs-6A/μs	10mA/μs-12A/μs	1mA/μs-0.84A/μs	5mA/μs-4.2A/μs	10mA/μs-8.4A/μs
	Accuracy	5%±10μs			5%±10μs		
	Min. rise time	10μs			20μs		
Readback resolution	Voltage	0.015%+0.015% F.S.			0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.			0.04%+0.04% F.S.		
	Power	0.1%+0.1% F.S.			0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac			100 ~ 240Vac		
	Frequency	47 ~ 63Hz			47 ~ 63Hz		
	Power	500VA max			500VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity					
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO					



Enclosure dimensions (mm)	727(D)*445(W)*311(H)
Weight (net)	≤80kg

Note: The above specifications are subject to update without further notice.

Main technical specifications of the 19.8kW E5000NG DC electronic load are as follows:

Model		E5000NG-19K8-0150-1800		
Rated values	Voltage	0 ~ 150V		
	Current	0 ~ 1800A		
	Power	19.8kW		
	Min. operating voltage	1.8V@1800A		
CC mode	Range	0-180A	0-900A	0-1800A
	Current accuracy	0.1%+0.1%I.F.S.		
	Resolution	2mA	10mA	20mA
CR mode	Resistance range	1.7mΩ ~ 16.67Ω (16V) 6.7mΩ ~ 66.67Ω (80V) 0.167Ω ~ 333.34Ω (150V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%I.F.S.		
CV mode	Range	0-16V	0-80V	0-150V
	Voltage accuracy	0.05%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV
CP mode	Range	0-1800W	0-9000W	0-19800W
	Power accuracy	0.2%+0.3%F.S.		
	Resolution	40mW	200mW	400mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	2mA/μs-1.8A/μs	10mA/μs-9A/μs	20mA/μs-18A/μs
	Accuracy	5%±10μs		
	Min. rise time	10μs		
Readback resolution	Voltage	0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.		
	Power	0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac		
	Frequency	47 ~ 63Hz		
	Power	750VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity		
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO		
Enclosure dimensions (mm)		727(D)*445(W)*445(H)		
Weight (net)		≤120kg		

Note: The above specifications are subject to update without further notice.



4.1.2 Pro

Main technical specifications of the 4.4kW E5000PG DC electronic load are as follows:

Model		E5000PG-4K4-0150-0400			E5000PG-4K4-1200-0160		
Rated values	Voltage	0 ~ 150V			0 ~ 1200V		
	Current	0 ~ 400A			0 ~ 160A		
	Power	4.4kW			4.4kW		
	Min. operating voltage	1.8V@400A			20V@160A		
CC mode	Range	0-40A	0-200A	0-400A	0-16A	0-80A	0-160A
	Current accuracy	0.05%+0.05%F.S			0.04%+0.06%F.S.		
	Resolution	0.4mA	2mA	4mA	0.2mA	1mA	2mA
CR mode	Resistance range	7.5mΩ ~ 75Ω (16V) 30mΩ ~ 300Ω (80V) 0.75Ω ~ 1.5kΩ (150V)			150mΩ ~ 1.5kΩ (150V) 0.6Ω ~ 6kΩ (600V) 15Ω ~ 30kΩ (1200V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%IF.S.			Vin/Rset*(0.2%)+0.2%IF.S.		
CV mode	Range	0-16V	0-80V	0-150V	0-150V	0-600V	0-1200V
	Voltage accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV	1mV	5mV	10mV
CP mode	Range	0-400W	0-2000W	0-4400W	0-400W	0-2000W	0-4400W
	Power accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	0.5mA/μs- 4A/μs	2mA/μs- 14A/μs	5mA/μs- 28A/μs	0.2mA/μs- 0.8A/μs	1mA/μs- 4A/μs	2mA/μs- 8A/μs
	Accuracy	5%±10μs			5%±10μs		
	Min. rise time	10μs			20μs		
Readback resolution	Voltage	0.015%+0.015% F.S.			0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.			0.04%+0.06% F.S.		
	Power	0.1%+0.1% F.S.			0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac			100 ~ 240Vac		
	Frequency	47 ~ 63Hz			47 ~ 63Hz		
	Power	240VA max			240VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity					
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO					
Enclosure dimensions (mm)		665(D)*445(W)*178(H)					
Weight (net)		≤35kg					

Note: The above specifications are subject to update without further notice.

Main technical specifications of the 6.6kW E5000PG DC electronic load are as follows:



Model		E5000PG-6K6-0150-0600			E5000PG-6K6-0600-0420			E5000PG-6K6-1200-0240		
Rated values	Voltage	0 ~ 150V			0 ~ 600V			0 ~ 1200V		
	Current	0 ~ 600A			0 ~ 420A			0 ~ 240A		
	Power	6.6kW			6.6kW			6.6kW		
	Min. operating voltage	1.8V@600A			14V@420A			20V@240A		
CC mode	Range	0-60A	0-300A	0-600A	0-42A	0-210A	0-420A	0-24A	0-120A	0-240A
	Current accuracy	0.05%+0.05%F.S			0.05%+0.05%F.S			0.04%+0.06%F.S.		
	Resolution	0.5mA	2mA	5mA	0.4mA	2mA	4mA	0.2mA	1mA	2mA
CR mode	Resistance range	5mΩ ~ 50Ω (16V) 20mΩ ~ 200Ω (80V) 0.5Ω ~ 1kΩ (150V)			50mΩ ~ 500Ω (80V) 200mΩ ~ 2kΩ (150V) 2Ω ~ 4kΩ (600V)			0.1Ω ~ 1kΩ (150V) 0.4Ω ~ 4kΩ (600V) 10Ω ~ 20kΩ (1200V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%IF.S.			Vin/Rset*(0.2%)+0.2%IF.S.			Vin/Rset*(0.2%)+0.2%IF.S.		
CV mode	Range	0-16V	0-80V	0-150V	0-80V	0-150V	0-600V	0-150V	0-600V	0-1200V
	Voltage accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.			0.025%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV	0.5mV	1mV	5mV	1mV	5mV	10mV
CP mode	Range	0-600W	0-3000W	0-6600W	0-600W	0-3000W	0-6600W	0-600W	0-3000W	0-6600W
	Power accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.			0.2%+0.2%F.S.		
	Resolution	10mW	50mW	100mW	10mW	50mW	100mW	10mW	50mW	100mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	0.5mA/μs ~ 6A/μs	2mA/μs ~ 21A/μs	5mA/μs ~ 42A/μs	0.4mA/μs ~ 1.8A/μs	2mA/μs ~ 9A/μs	4mA/μs ~ 18A/μs	0.2mA/μs ~ 1.2A/μs	1mA/μs ~ 6A/μs	2mA/μs ~ 12A/μs
	Accuracy	5%±10μs			5%±10μs			5%±10μs		
	Min. rise time	10μs			20μs			20μs		
Readback resolution	Voltage	0.015%+0.015% F.S.			0.015%+0.015% F.S.			0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.			0.04%+0.04% F.S.			0.04%+0.06% F.S.		
	Power	0.1%+0.1% F.S.			0.1%+0.1% F.S.			0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac			100 ~ 240Vac			100 ~ 240Vac		
	Frequency	47 ~ 63Hz			47 ~ 63Hz			47 ~ 63Hz		
	Power	250VA max			250VA max			250VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity								
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO								
Enclosure dimensions (mm)		665(D)*445(W)*178(H)								
Weight (net)		≤40kg								

Note: The above specifications are subject to update without further notice.



Main technical specifications of the 13.2kW E5000PG DC electronic load are as follows:

Model		E5000PG-13K2-0150-1200			E5000PG-13K2-0600-0840		
Rated values	Voltage	0 ~ 150V			0 ~ 600V		
	Current	0 ~ 1200A			0 ~ 840A		
	Power	13.2kW			13.2kW		
	Min. operating voltage	1.8V@1200A			14V@840A		
CC mode	Range	0-120A	0-600A	0-1200A	0-84A	0-420A	0-840A
	Current accuracy	0.05%+0.05%F.S			0.05%+0.05%F.S		
	Resolution	1mA	5mA	10mA	1mA	5mA	10mA
CR mode	Resistance range	2.5mΩ ~ 25Ω (16V) 10mΩ ~ 100Ω (80V) 0.25Ω ~ 500Ω (150V)			25mΩ ~ 250Ω (80V) 100mΩ ~ 1kΩ (150V) 1Ω ~ 2kΩ (600V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%IF.S.			Vin/Rset*(0.2%)+0.2%IF.S.		
CV mode	Range	0-16V	0-80V	0-150V	0-80V	0-150V	0-600V
	Voltage accuracy	0.025%+0.025%F.S.			0.025%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV	0.5mV	1mV	5mV
CP mode	Range	0-1200W	0-6000W	0-13200W	0-1200W	0-6000W	0-13200W
	Power accuracy	0.2%+0.2%F.S.			0.2%+0.2%F.S.		
	Resolution	20mW	100mW	200mW	20mW	100mW	200mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms			20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	1mA/μs-1 2A/μs	5mA/μs- 30A/μs	10mA/μs -60A/μs	1mA/μs- 2.4A/μs	5mA/μs- 12A/μs	10mA/μs -24A/μs
	Accuracy	5%±10μs			5%±10μs		
	Min. rise time	10μs			20μs		
Readback resolution	Voltage	0.015%+0.015% F.S.			0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.			0.04%+0.04% F.S.		
	Power	0.1%+0.1% F.S.			0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac			100 ~ 240Vac		
	Frequency	47 ~ 63Hz			47 ~ 63Hz		
	Power	500VA max			500VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity					
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO					
Enclosure dimensions (mm)		727(D)*445(W)*311(H)					
Weight (net)		≤80kg					

Note: The above specifications are subject to update without further notice.



Main technical specifications of the 19.8kW E5000PG DC electronic load are as follows:

Model		E5000PG-19K8-0150-1800		
Rated values	Voltage	0 ~ 150V		
	Current	0 ~ 1800A		
	Power	19.8kW		
	Min. operating voltage	1.8V@1800A		
CC mode	Range	0-180A	0-900A	0-1800A
	Current accuracy	0.05%+0.05%F.S		
	Resolution	2mA	10mA	20mA
CR mode	Resistance range	1.7mΩ ~ 16.67Ω (16V) 6.7mΩ ~ 66.67Ω (80V) 0.167Ω ~ 333.34Ω (150V)		
	Resistance accuracy	Vin/Rset*(0.2%)+0.2%I.F.S.		
CV mode	Range	0-16V	0-80V	0-150V
	Voltage accuracy	0.025%+0.025%F.S.		
	Resolution	0.1mV	0.5mV	1mV
CP mode	Range	0-1800W	0-9000W	0-19800W
	Power accuracy	0.2%+0.2%F.S.		
	Resolution	40mW	200mW	400mW
Dynamic mode	T1&T2	20μs ~ 99.999ms/ 100ms ~ 99999ms		
	Current slew rate	2mA/μs-18A/μs	10mA/μs-36A/μs	20mA/μs-72A/μs
	Accuracy	5%±10μs		
	Min. rise time	10μs		
Readback resolution	Voltage	0.015%+0.015% F.S.		
	Current	0.04%+0.04% F.S.		
	Power	0.1%+0.1% F.S.		
AC input	Voltage	100 ~ 240Vac		
	Frequency	47 ~ 63Hz		
	Power	750VA max		
Protection functions		OVP, OCP, OPP, OTP, alarm of reversed polarity		
Communication interfaces		RS232/CAN/LAN/USB/Digital IO/Analog IO		
Enclosure dimensions (mm)		727(D)*445(W)*445(H)		
Weight (net)		≤120kg		

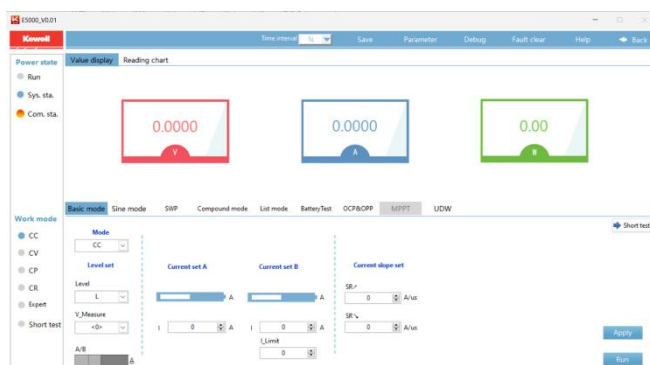
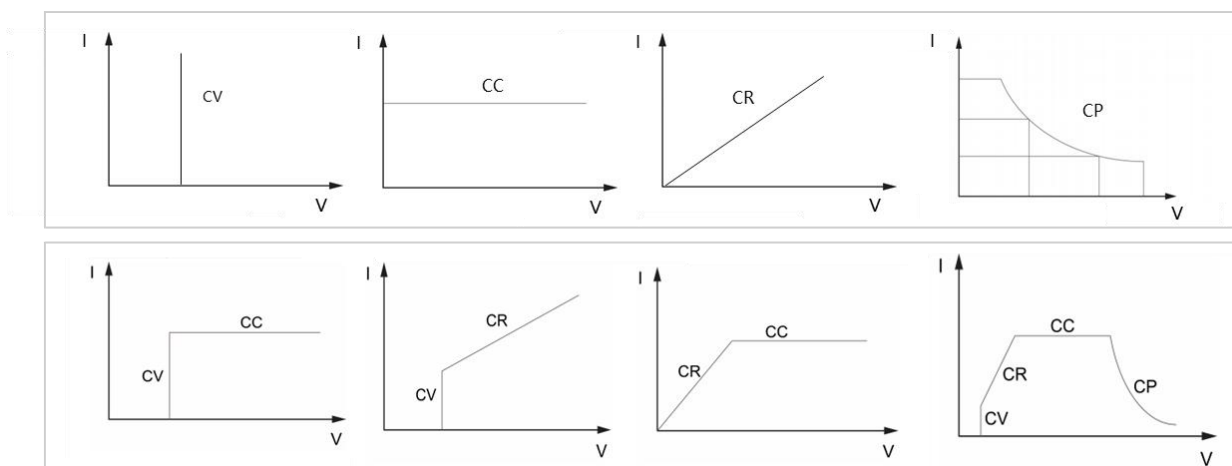
Note: The above specifications are subject to update without further notice.



5 Product Features

5.1 DC Electronic Load

The E5000 series supports a variety of working modes applicable to a wide range of test requirements under various operating conditions. 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).



Upper computer screenshot of basic mode interface

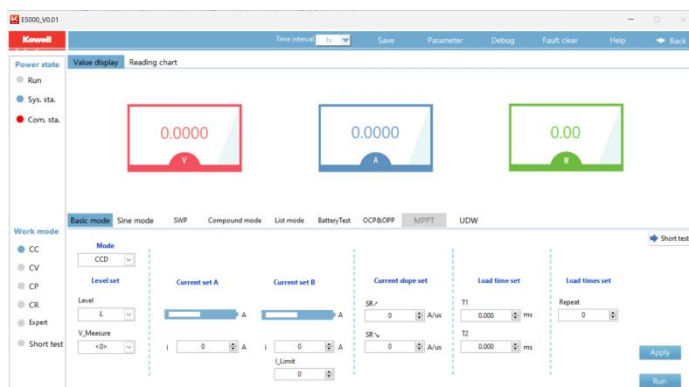


CC mode, A/B switching

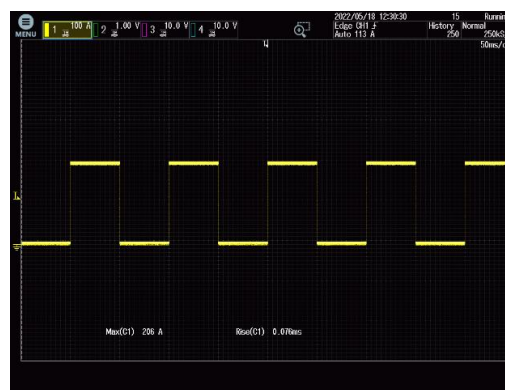


5.2 Dynamic Load

The E5000 series supports high-speed, programmable dynamic load (dynamic current load CCD and dynamic resistance load CRD), frequency sweep mode, etc. It also supports setting high/low level of current, T1/T2, upward/downward slew rate and number of executions. With the E5000 series, 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 of 150V is 15 μ s, with dynamic change up to 25kHz.



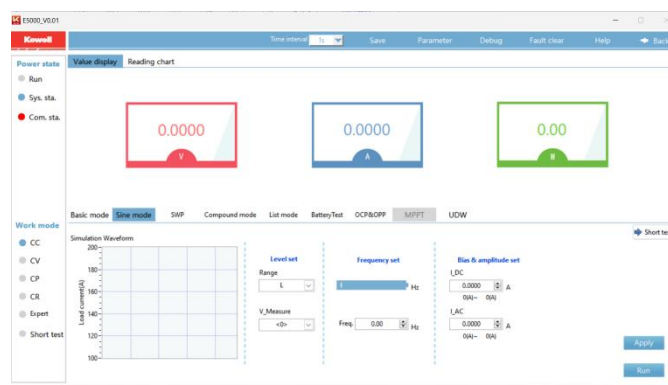
Upper computer screenshot of CCD mode interface



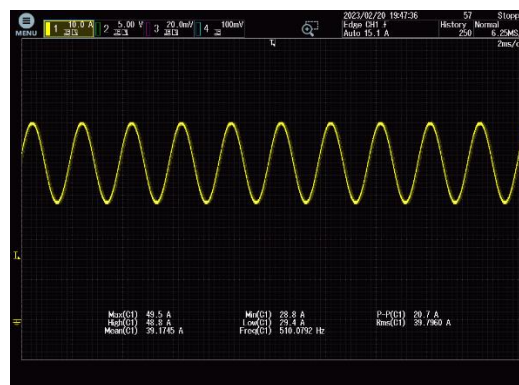
Current A @5A, current B @20A, transition in 1ms

5.3 Sinusoidal Dynamic Current Loading

The E5000 series is equipped with SWD function, where output current bias (I@DC), sinusoidal wave (I@AC) and sinusoidal frequency can be set. The lowest point of this sinusoidal wave cannot be smaller than 0A, and sinusoidal frequency can be set up to 20kHz.



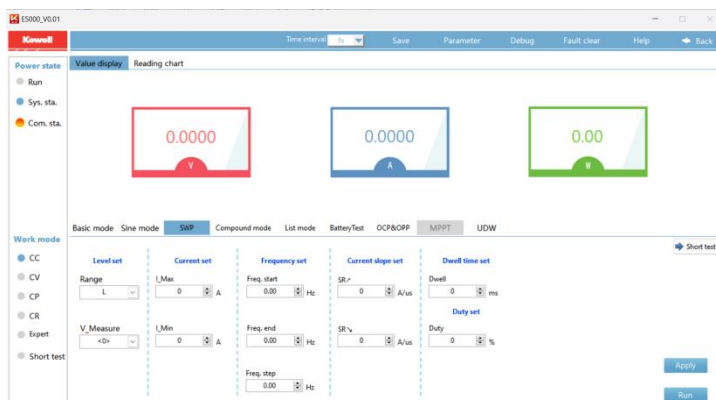
Upper computer screenshot of sine wave mode interface



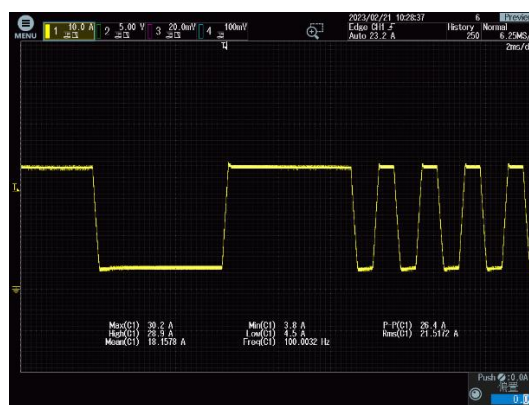
Sinusoidal waveform (20A@AC+40A@DC)

5.4 Dynamic Load Sweep Mode

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 500 kHz. Dynamic load sweep mode can simulate a variety of load conditions, which meets the needs of most customers.



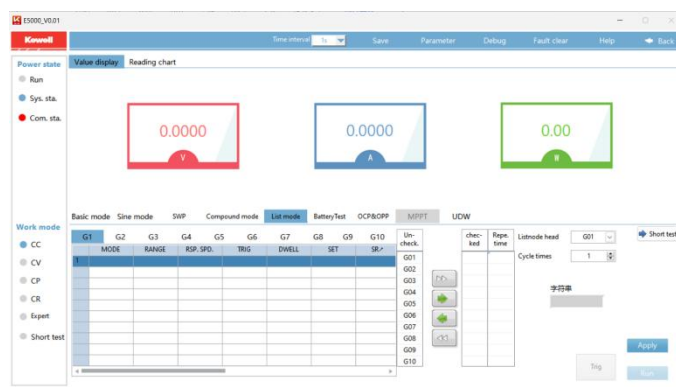
Upper computer screenshot of sweep mode interface



Sweep waveform (start@100Hz, end@1600Hz)

5.5 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 supports nested loops, and 1 to 65535 cycles of work steps can be configured.



Upper computer screenshot of List mode interface

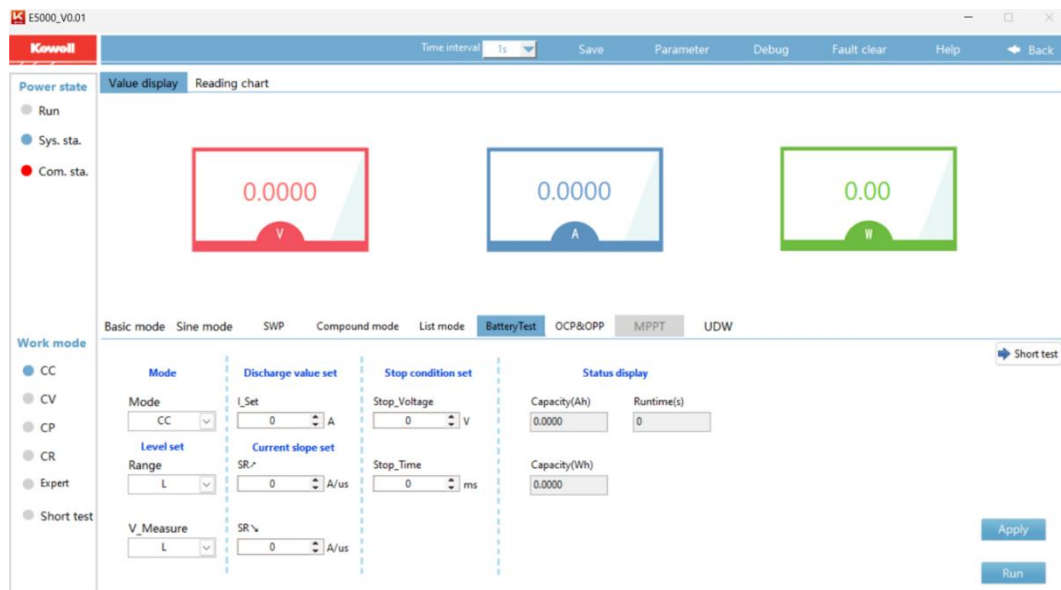


List waveform

5.6 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 of themselves including cut-off voltage and discharge time, and the discharge will stop when either one is satisfied. Battery voltage, time and discharged capacity can be observed during the test.

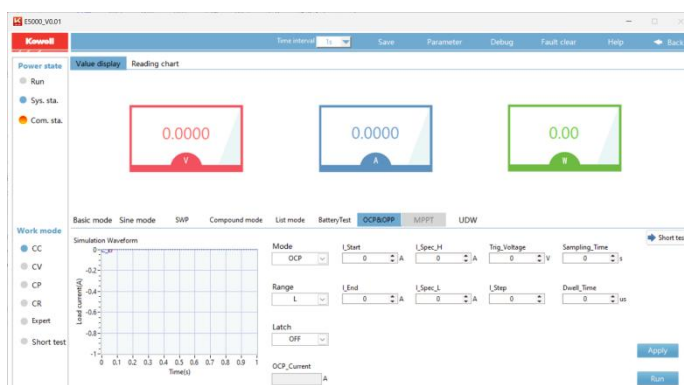




Upper computer screenshot of battery test mode

5.7 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 points as needed for different DUTs.



OCP on upper computer



Step current waveform



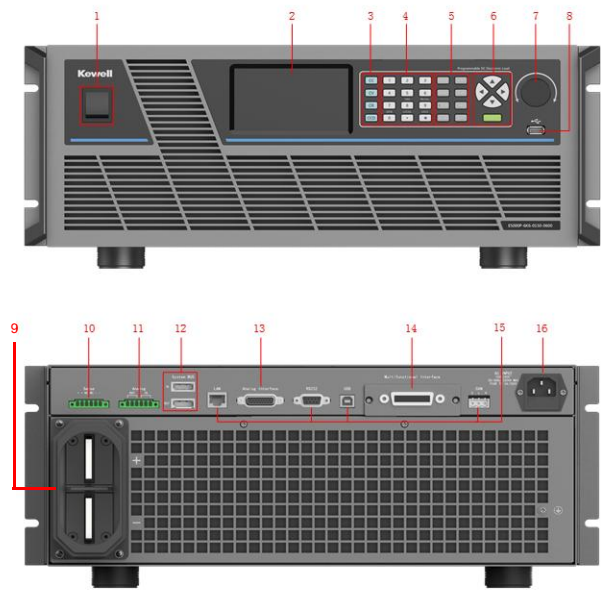
OPP on upper computer



Step current waveform

6 Appearance

6.1 Single Device



No.	Name
1	Power switch
2	TFT touch screen
3	Load mode shortcut keys
4	Numeric keys
5	Function keys
6	Arrow keys
7	Push-button knob
8	USB port for system upgrading
9	DC+ and DC- on-load
10	Remote sensing interface
11	Analog interface
12	Digital parallel port
13	DIGITAL I/O
14	GPIB
15	Communication interfaces (RS232/LAN/CAN/USB)
16	AC power input

6.2 Wheeled Stacks



Model	Numbers
4U	1
7U	2
10U	3
15U	4
29U	5-8

(unit: mm)

6.3 Parallel Connection



(unit: mm)

Specification	Applicable to	Weight (cabinet alone)
HK-15U cabinet	2-3 devices in parallel	130kg
HK-29U cabinet	4-5 devices in parallel	220kg
HK-42U cabinet	6-7 devices in parallel	280kg

