

C3000PG SERIES

HIGH PERFORMANCE PROGRAMMABLE DC POWER SUPPLY

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1 Summary

C3000PG Series is a high performance programmable DC power supply with wide voltage range, ultra-high accuracy and fast dynamic response. It supports auto ranging output and supplies a flexible combination of voltage and current.

C3000PG Series has been widely applied in the fields of photovoltaic, electrical vehicle, battery, military, colleges and universities, as well as the testing of third-party labs.



C3000 High Voltage Series

2 Advantages

2.1 Ultra-high power density

Maximum power density of a single device is up to 3U/30kW, light weight and high space-efficient.

2.1 High voltage & current accuracy

Voltage accuracy up to 0.05% F.S., current accuracy up to 0.1% F.S.

2.2 High-speed dynamic response

Microsecond response for sudden loading/unloading, with minimum response time of 1ms.



50% ~ 100% for sudden loading

100% ~ 50% for sudden unloading

2.3 Built-in standard curves

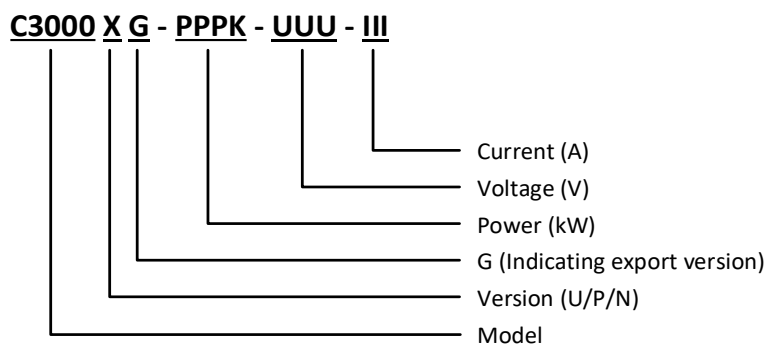
Built - in standard curves such as EN50530, can be called up by one click.

2.4 Flexible Parallel Connection

A single C3000PG series device can reach the maximum power of 30kW. Through flexible parallel connection, it can be expanded to higher power.

3 Product Specifications

3.1 Model Description



3.2 Product Portfolio

- Pro

Model	Power[kW]	Voltage[V]	Current[A]
C3000PG-7K5-0750-0060	7.5kW	750V	60A
C3000PG-15K-0750-0120	15kW	750V	120A
C3000PG-15K-1500-0060	15kW	1500V	60A
C3000PG-21K-2000-0060	21kW	2000V	60A
C3000PG-30K-0750-0180	30kW	750V	180A
C3000PG-30K-2000-0060	30kW	2000V	60A

3.3 Functions

Model	N	P
DC Power Supply	●	●
IV Simulation	-	●

Note:

- come with standard equipment
- not equipped

4 Technical Parameters

4.1 Technical Specifications

Model		C3000PG-7K5-0750-0060	C3000PG-15K-0750-0120	C3000PG-30K-0750-0180	C3000PG-15K-1500-0060	C3000PG-21K-2000-0060	C3000PG-30K-2000-0060
Rated	Voltage	750V	750V	750V	1500V	2000V	2000V
	Current	60A	120A	180A	60A	60A	60A
	Power	7.5kW	15kW	30kW	15kW	21kW	30kW
Read-back Resolution	Voltage	0.01V					
	Current	0.01A					
	Power	1W					
Accuracy	Voltage	≤0.05%F.S.					
	Current	≤0.1% F.S.					
Line Regulation	Voltage	≤0.02%F.S.					
	Current	≤0.02%F.S.					
Load Regulation	Voltage	≤0.05%F.S.					
	Current	≤0.05%F.S.					
Ripple	Voltage Vpp (20MHz)	< 1000mV	< 3000mV	< 3000mV	< 3000mV	< 3000mV	< 3000mV
	Voltage (rms)	< 200mV	< 300mV	< 300mV	< 400mV	< 400mV	< 400mV
	Current (rms)	< 60mA	< 100mA	< 100mA	< 60mA	< 60mA	< 60mA
Slew Rate /Slope	Voltage (no load)	0.001V/ms ~ 80V/ms	0.001V/ms ~ 200V/ms	0.001V/ms ~ 200V/ms	0.001V/ms ~ 200V/ms	0.001V/ms ~ 200V/ms	0.001V/ms ~ 200V/ms
	Voltage (full load)	0.001V/ms ~ 30V/ms			0.001V/ms ~ 90V/ms		
	Current	0.001 ~ 20A/ms	0.001 ~ 60A/ms	0.001 ~ 60A/ms	0.001 ~ 20A/ms	0.001 ~ 20A/ms	0.001 ~ 20A/ms
Dynamic Response Time		< 1ms					
Overshoot/Drop*1		10%	15%	15%	15%	10%	15%
AC Input	Voltage	342 ~ 528Vac					
	Frequency	47Hz ~ 63Hz					
	Max. current	13.5A	27A	53.8A	27A	37.8A	53.8A
	Max. apparent power	8kVA	16kVA	32kVA	16kVA	22.4kVA	32kVA
Withstand Voltage		1000Vdc	1500Vdc				
Efficiency		≈95%					
Power Factor		> 0.99					
Protection		OVP, OCP, OPP, OTP, island protection, Sense reverse polarity protection					
Communication		RS485/LAN/CAN/USB					
IP Rating		IP20					
Storage temperature		-20℃ ~ +70℃					
Ambient Temperature		0 ~ 40℃					
Humidity		0 ~ 90%RH, 25℃ non-condensing					
Altitude		2000m					
Dimensions (mm)		736(D)*445(W)*132.5(H)					
Weight (net weight)		34kg	39kg	46kg	39kg	46kg	46kg

*1: Rated voltage fluctuation value at sudden change of 0-50% resistive load (at maximum voltage slew rate).

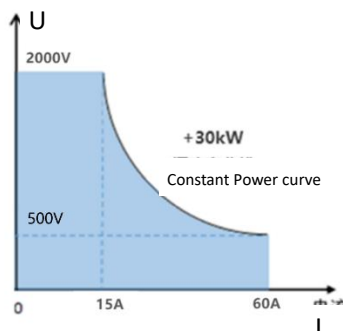
Note: The above specifications are subject to update without further notice.

5 Functions

5.1 DC Power Supply

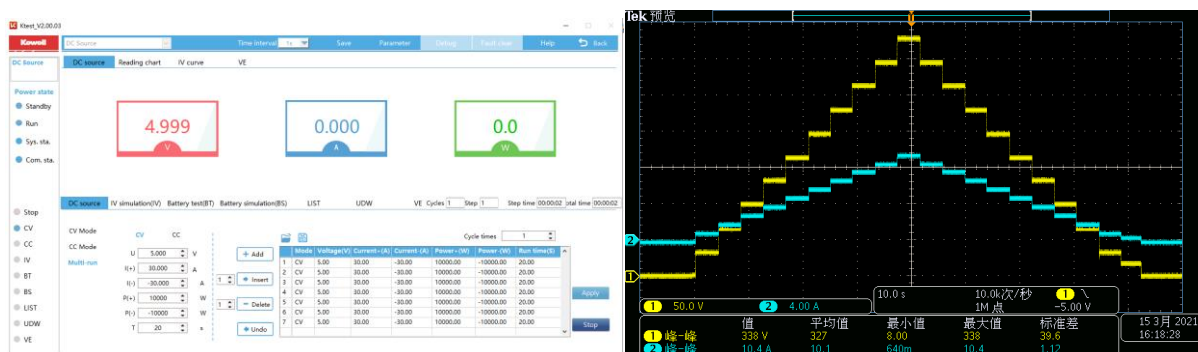
- DC Power Supply

Steady auto-ranging output, output voltage up to 2000V, and power output up to 30kW per device.



- Multi-step operation

Up to 999 work steps editable, work steps can be set in cycles.



5.2 IV Simulation

Photovoltaic array simulation.

Three modes: single-point, double-point and multi-point setting.



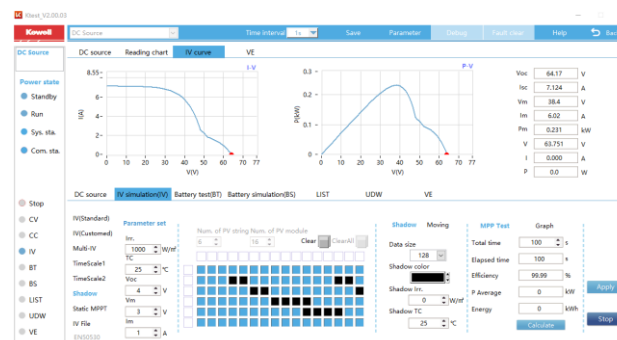
● Multi-step IV mode

Up to 100 IV curves can be set up, with the option to import IV curve files to run.



● Shadow condition (multimodal shadow curve) function

C3000 can simulate the IV curve (multimodal shadow curve) of shaded solar panel. The user can set the irradiance, temperature, array type and shadow movement direction.



● Time scaling

C3000 can simulate the typical output changes of solar panels in a given period to shorten the test time. The characteristic mode, array type, irradiance change and temperature parameters can be set.



● Static MPPT test

Single or multi-step configuration mode can be set to test static MPPT performance.



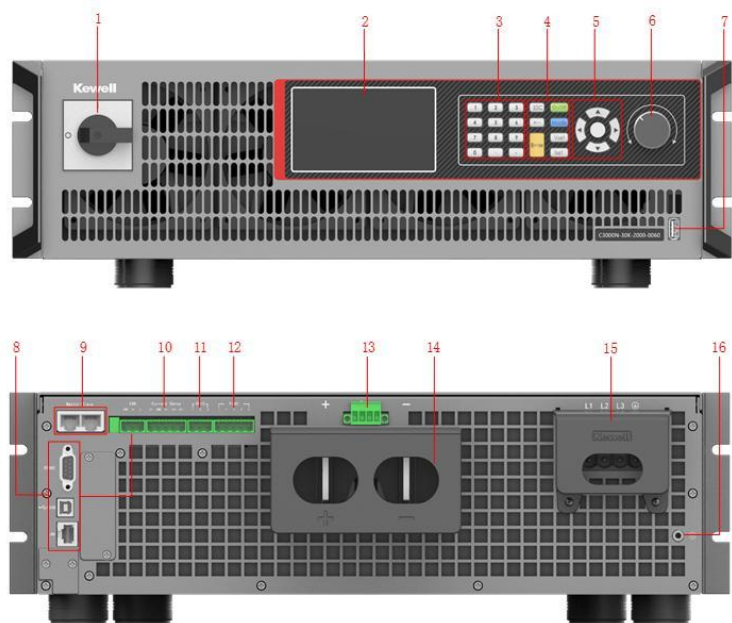
● Dynamic MPPT test

The built-in dynamic test environment according to EN 50530, with three power ranges "1%-10%", "10%-50%" and "30%-100%", enables detailed testing of the dynamic tracking performance of the PV inverter.



6 Appearance

6.1 Single Device



No.	Description
1	Power switch
2	TFT touch screen
3	Numeric keys
4	Function keys
5	Arrow keys
6	Push-button knob
7	USB port
8	Communication interface (RS485/LAN/CAN/USB)
9	Parallel port
10	Total current sampling
11	Sync signal port
12	External multi-function port
13	Remote sensing port
14	DC output
15	AC input
16	Grounding

6.2 Rack Solution



Model	Number	Dimensions (W*D*H)	Weight(Cabinet alone)
HK-15U	2~3 devices	610*1026*1006mm	130kg
HK-29U	4~6 devices	610*1026*1554mm	220kg
HK-42U	7~9 devices	610*1026*1999mm	280kg

(unit: mm)