A Great Leap for DC Power Supply

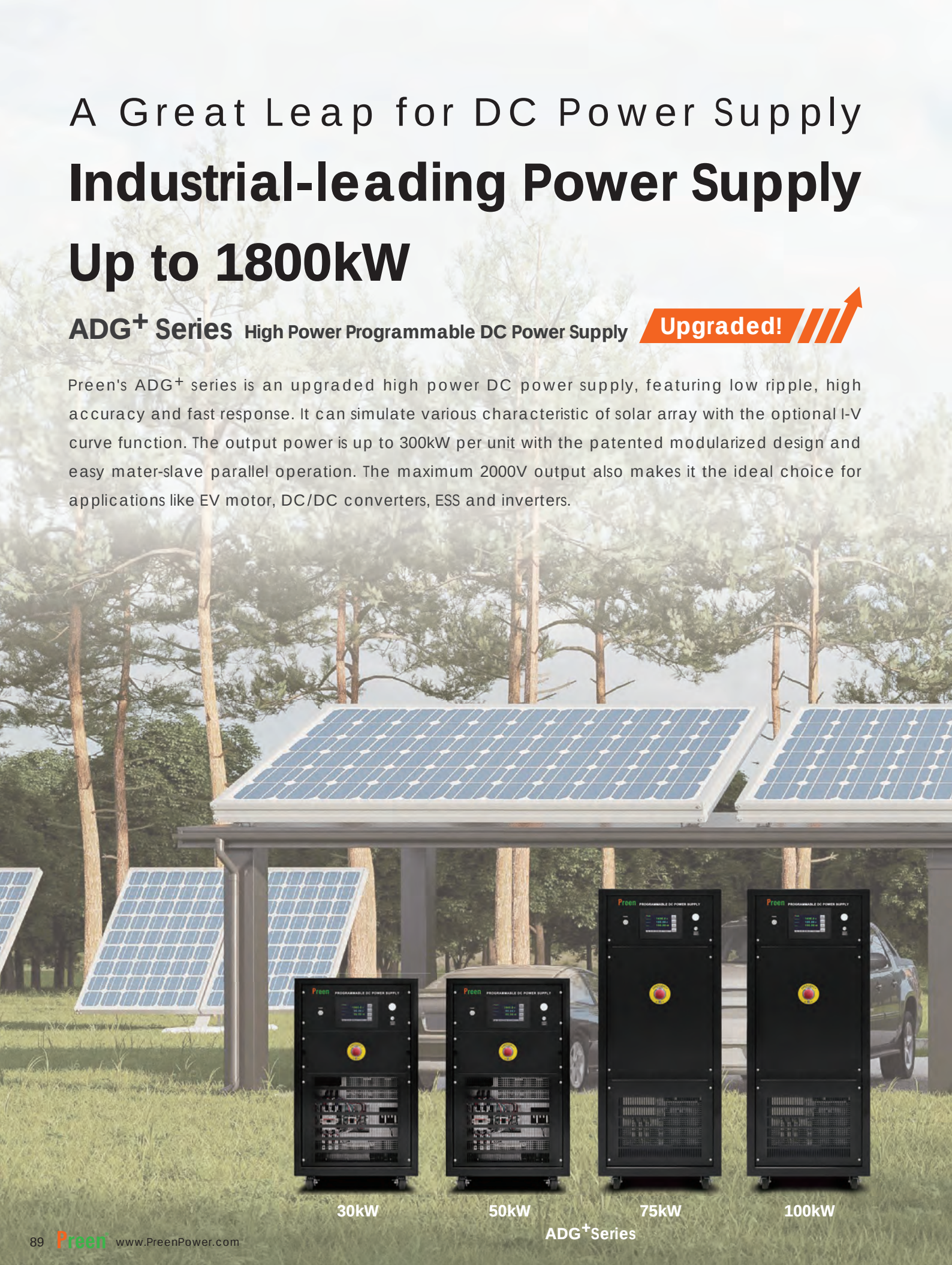
Industrial-leading Power Supply

Up to 1800kW

ADG+ Series High Power Programmable DC Power Supply

Upgraded!

Preen's ADG+ series is an upgraded high power DC power supply, featuring low ripple, high accuracy and fast response. It can simulate various characteristic of solar array with the optional I-V curve function. The output power is up to 300kW per unit with the patented modularized design and easy mater-slave parallel operation. The maximum 2000V output also makes it the ideal choice for applications like EV motor, DC/DC converters, ESS and inverters.



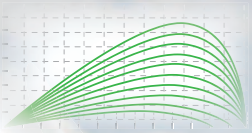
Auto Range*2

0-1500V, 0-300A
Adjustable

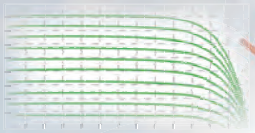
Solar Array Simulation

(Built-in EN50530 Simulation)

PV Curve



IV Curve



High Output Power

30 kW-1800 kW*1

Low Ripple
≤ 0.05 %

High Precision
≤ 0.1 %

Complimentary Control Software

User-friendly &
Intuitive Operation

PV Emulator up to 1800kW *1

*1 with parallel connection
*2 Available for specific ADG+(300kw) models, please refer to specifications for more information

High Power Programmable DC Power Supply

RoHS Compliant CE

Preen's newly released ADG+ series is a high-power-density programmable DC power supply. With the design of DSP control, it offers a great response time and high accuracy. The self-developed high power module enhances stability and heat dissipation, thus improving product quality. The output mode of CV, CC and CP are fully equipped. This series' single-unit power ranges from 30kW to 100kW, and with wide range of output voltage / current, it can reach up to 2000V, and up to 2500A in low-voltage high-current models. The output voltage and current can even be further expanded via parallel operation and series operation. The ADG+ series is ideal for testing EV-type motor/compressor, server power supply, fuse, circuit breaker, contactor and PV inverter.

For communication interface, the user can select the standard RS-485, RS-232, Analog Control, Ethernet, USB and optional GPIB. The product also equips with remote control software for user to control with ease via PC. The product is CE and RoHS certified.

Product Features

- Wide range of output voltage up to 2000V.
- Simple master-slave operation, output power can up to 300kW via parallel connection.
- Easy master/slave operation up to 1800kW parallel or series connection.
- Low ripple ≤0.05% and high accuracy ≤ 0.1%.
- Fast response ≤ 4-20 ms
- Optional I-V curve function for Solar Array Simulation (built-in EN50530 mathematical formula).
- Large 7" touch screen and rotary knob for easy operation and measurement display.
- Time setting resolution 0.01S for fast response programming testings.
- Capable of simulating all kinds of load testing conditions: step or consecutive voltage variation can be set via STEP & Gradual function.
- Remote Sensing Compensation.
- Equipped with emergency stop button, which meets the requirement for laboratory related testing field.

Output Power

30kVA~1800kVA

Interfaces

Standard: RS-232, RS-485, USB, Analog, Ethernet

Option: GPIB

Applications

- Renewable Energy
- Electric Vehicles
- Automated Testing System
- Power Battery
- Inverter
- Switching Supply / Connectors
- Passive Components
- Semiconductor Test Equipment
- Testing Laboratories
- Electrolytic Deposition, Sputtering, Surface Coating
- Aerospace & Defense

QR Code

Product Info.

Product Video

Industrial leading 1800kW Power Supply

Preen has supported one of the leading testing center in Taiwan on setting up the largest PV inverter testing laboratories. Preen's ADG+ series can be paralleled up to 1800kW which is ideal for PV Inverter, Renewable Energy and EV verification.

Intuitive Touch Screen and Rotary Knob

The upgraded HMI and 7" colored touch screen can clearly display the parameters and status of the product, and combined with the built-in programing function, user can easily perform various simulations.

The rotary knob can be used for fine tuning and quick selection to improves convenience on operation.

Emergency stop button is used for quick shut down, thus enhancing the protection function and meet the requirement for laboratory related testing field.

UPGRADED **Upgraded HMI with Intuitive Design for Easier and Safer Operaotin**

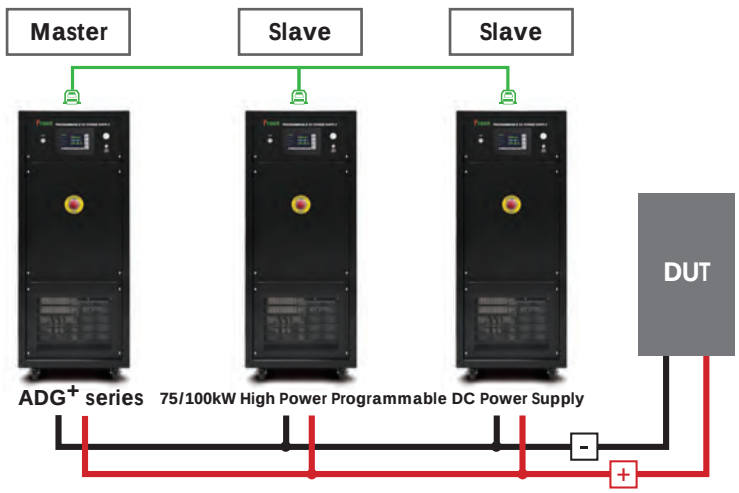
The ADG+ series employs 7" touch screen and rotary knob to provide intuitive display and easy-to-use control. The built-in programming function has been upgraded, so not only can complex sequences be set from the PC, but also from the touch screen. Emergency stop button is equipped for quick shut down, thus enhancing the product safety.

Users can quickly access output settings and measurements, including voltage, current and power.

Master/Slave Parallel Operation

Fast Power Expansion

High Power + Master/Slave Operation = Flexibility



The output power of the ADG+ series is up to 100kW per unit, which can be expanded to 300kW through simple master-slave operation (max. 3 units). User can simply operate the master unit, the slave unit will receive and reply the data accordingly and equally share the load current. ADG+ series is one of the few high-power DC power supply with parallel feature on the market. The availability for single-unit and parallel operation provides greater flexibility for application.

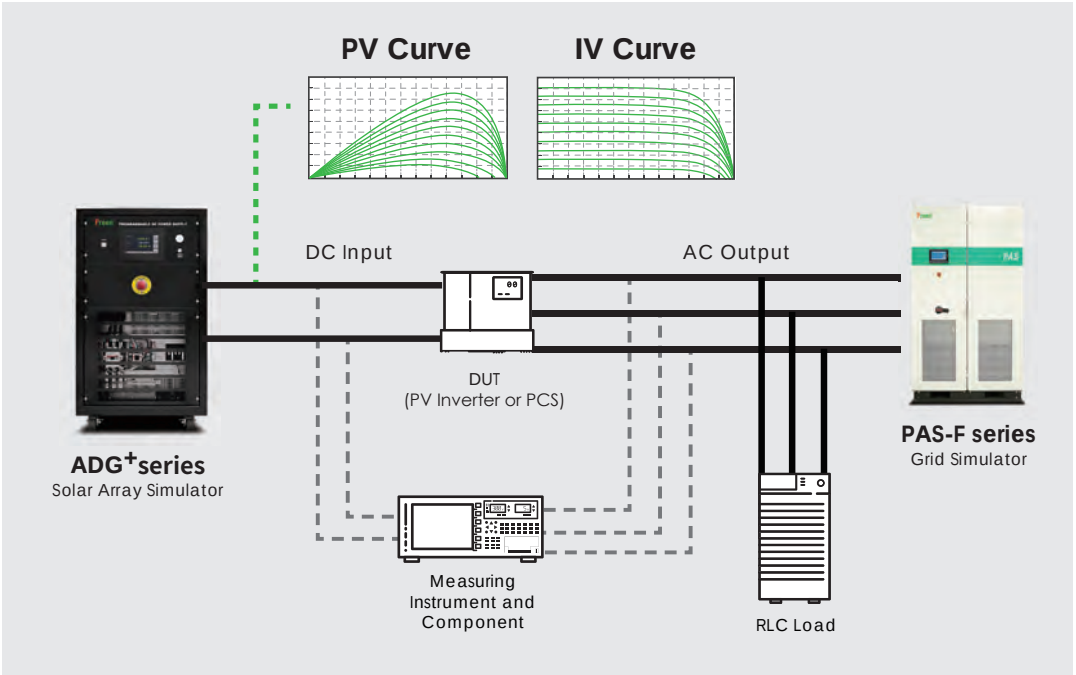
Solar Array Simulation (opt.)

ADG+ series high power programmable DC power supply options as solar array simulation function can be programmed from the front panel without using a controller. Using built-in SAS mode, only four input parameters are needed to establish an I-V curve, which simulates solar panels under different irradiation and temperature.

Using built-in EN50530 mode, the I-V curve is established according to the solar cell material (C-SI or thin film), and the user can program the output according to the irradiation and temperature.In addition, the user can also define I-V curves based on different material characteristic to simulate various solar cell materials.

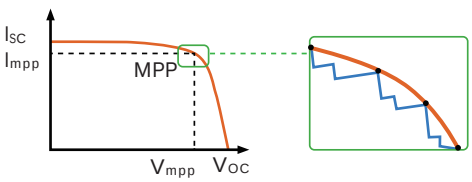
UPGRADED Complete solar array simulation and easy static & dynamic MPPT efficiency validation.

- **Static & dynamic MPPT efficiency test (with optional remote control software).**
- **Simulation of I-V curve under different irradiation and temperature.**
- **Complied with standard SAS, EN50530, Sandia test regulation.**
- **IV curve can be user-defined and edited via remote control software.**
- **Simulation of output characteristic of various solar cell (C-SI and thin film).**
- **Accurate voltage and current measurement.**



SAS Testing Mode

Using SAS mode, user can set Voc, Isc, Vmpp and Impp according to the spec of PV inverter, then the DSP control system performs P-V and I-V curve calculation accordingly. The dynamic irradiation adjustment is also available during output.



- **Voc** open circuit voltage
- **Vmp** voltage at the peak power point on the curve
- **Isc** short circuit current
- **Imp** current at the peak power point on the curve

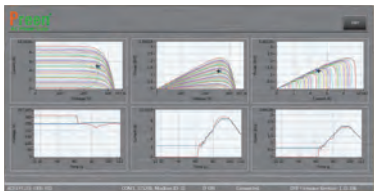
EN50530 Testing Mode

Mainly used for grid-tie inverters, the EN50530 Testing Mode features solar cell model of C-SI/thin-film and the feature of dynamic irradiations/temperature adjustment, user can verify the performance of the inverters: static & dynamic MPPT tracking efficiency, conversion efficiency and overall efficiency.

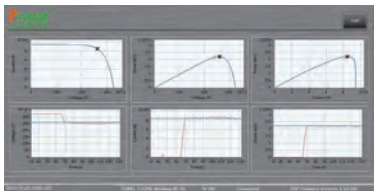
Solar Array Simulation Control Software (opt.)

ADG+ series options I-V curve remote control software with parameter setting and output waveform display to verify Dynamic & Static MPPT Efficiency of SAS mode and EN50530 test regulations.

Dynamic MPPT Efficiency

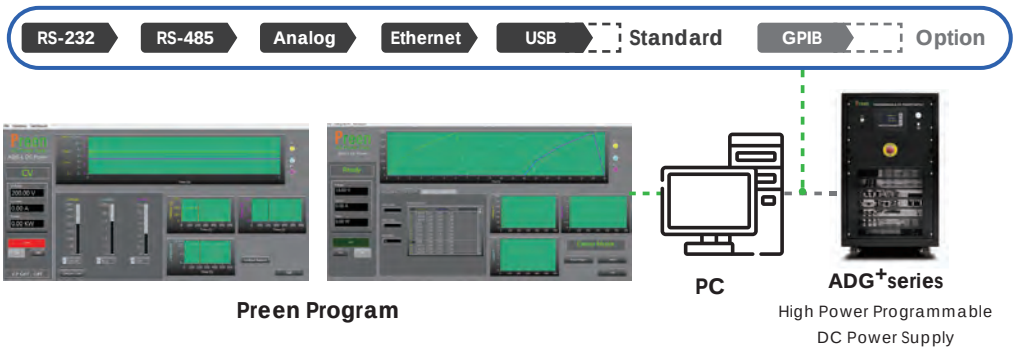



Static MPPT Efficiency

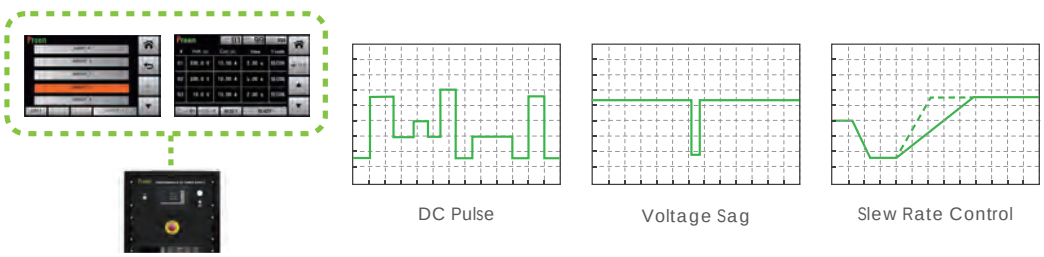



Complimentary Control Software and Various Interfaces

The ADG+ series offers complimentary remote control software, Preen Program. This graphical user interface provides easy settings and user-friendly configurations for users to fully control the unit. The Preen Program includes GENERAL mode or PROGRAMMABLE mode with STEP and RAMP features available. The preview waveform and report functions also greatly enhance convenience for on review parameters and results before or after testing.



Programming Sequences and Simulations

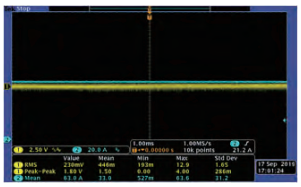


The built-in programming function of the ADG+ series is consisted of GROUPs and STEPs. Users can set output voltage, output current and time to generate step or consecutive voltage/current changes, and set different rise/fall time according to their requirement. This built-in function and the ADG+ series control software allow users to create complex DC waveform with sophisticated coding. Making programming the DC power supply an easy task.

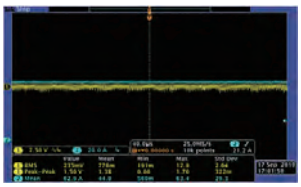
Industry-leading Performance

As an unique high-power single-unit programmable DC power supply, ADG+ series has a wide range of output voltage and current, which reach up to 1600V and 2500A continuously adjustable. Its singleunit output is up to 100kW and provides customized parallel operation to expand capacity up to 300kW. It features high power with excellent programming function, fast response and high stability. For communication interface, it has standard RS-485, RS-232, Ethernet, Analog Control, USB and optional GPIB. The STEP & Gradual modes allow easy setup on test sequence and depending on CV/CC/CP settings and load conditions, ADG+ series can operate as a current or voltage source.

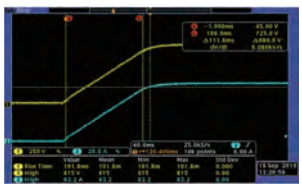
Low Ripple



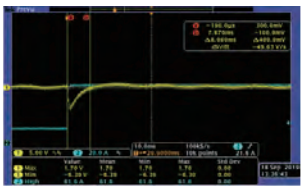
Low Noise



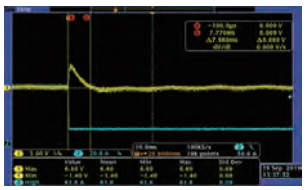
Fast Rise Time



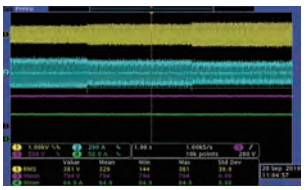
Fast Transient Response When Added Load



Fast Transient Response When Removed Load



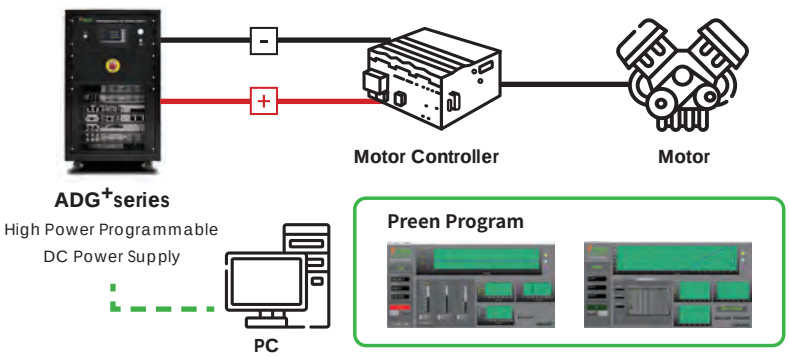
High Stability



EV Testing Applications

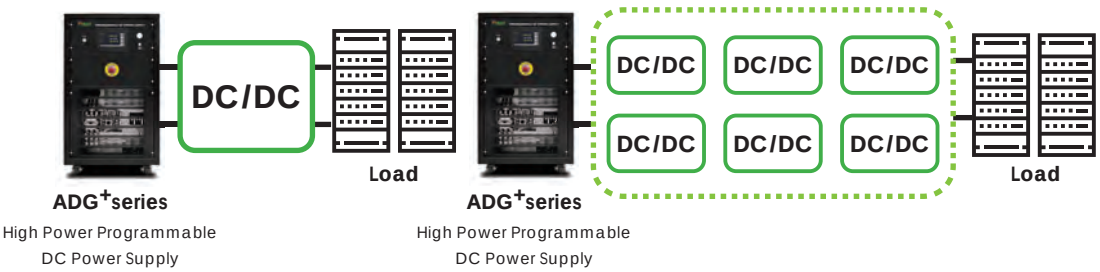
EV Motor Controlling

Motor controlling, as the core component of electric vehicle, controls the initiation, speed, movement and direction of the motor drive, and converts the electrical energy of power battery and provide to the motor drive. ADG+ series has many high voltage models to simulate power battery of EV for motor controlling verification or aging testing.

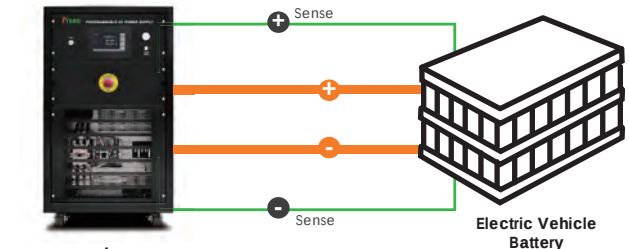


DC/DC Converters

Power batteries of electric vehicle convert DC high voltage to DC low voltage through DC/DC converters, such as 12V/24V of car lamp, wiper and car stereo. Featuring high power and high voltage, ADG+ series is suitable to simulate power batteries on different working conditions, such as voltage dip(sag), as voltage ramp or missing. From R&D verification to HALT/HASS Accelerated Life Testing, ADG+ series is an ideal choice for DC power supply.



Remote Sensing Compensation

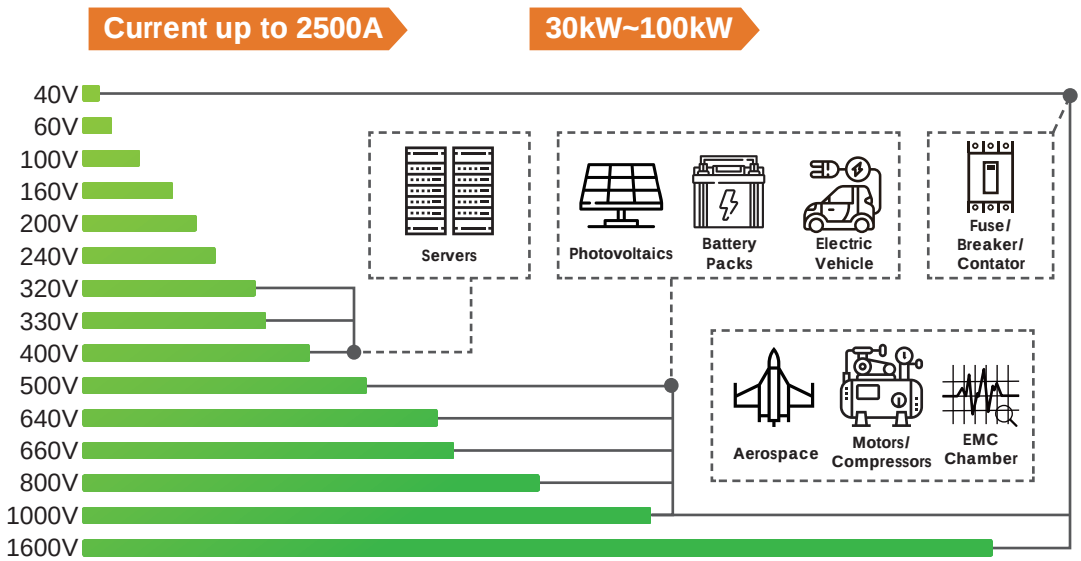


ADG+series
High Power Programmable
DC Power Supply

In the factory or laboratory, there is often a certain distance in the configuration of power and load. The Remote Sensing of ADG+ series is able to compensate the voltage drop caused by the cable length, so the user can avoid the inconvenience of adjusting the voltage.

Variety of Applications

ADG+ series has many output voltage ranges suitable for different market applications. Models over 400V output voltage are applicable for renewable energy, EV, and lithium battery industries. When it comes to circuit breakers, contactors or fuses that require high voltage or current, models with 2000A or 1600V can fulfill the power demands of this type of component testing. The 400V or 320V models can be applied to server related applications due to the increased needs for high voltage DC in data centers.

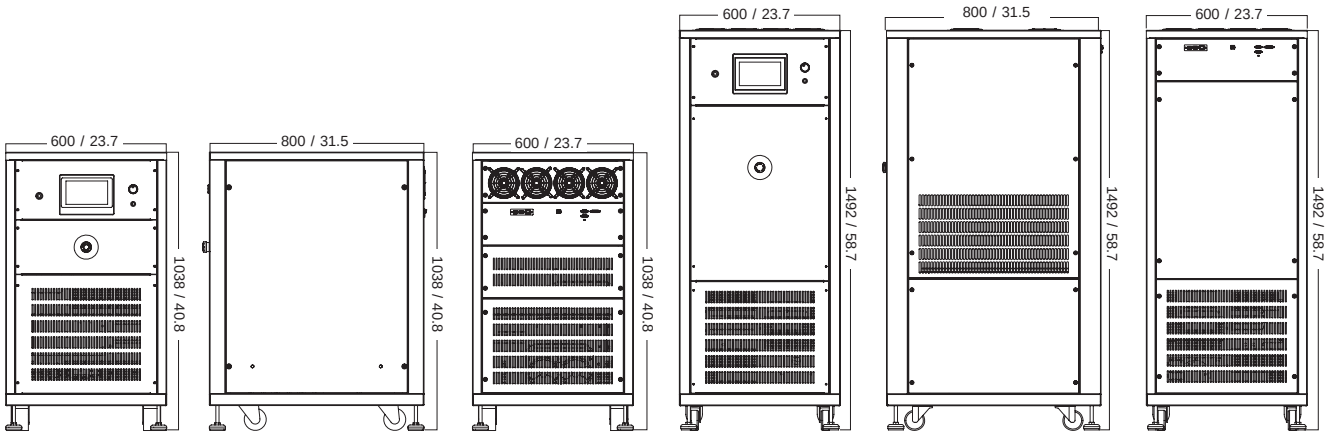


Device Protection

The ADG+ series has multiple levels of protection to safeguard your device. These include over-voltage, over-current, over-power, over-temperature, line-drop-compensation, over-voltage, input over-voltage, input unbalance and to shut down the power supply and prevent fault conditions and further damages.

Dimemsions

Unit : mm / inch



ADG-P 30/50kW *

ADG-P 75/100kW *

* The diagrams and dimensions are for 380V input models.

ORDERING INFORMATION

ADG+ Series (30kW - 100kW)

Model Number	Description
ADG-PLUS-40-750	Programmable DC Power Supply (30kW/40V/750A)
ADG-PLUS-60-500	Programmable DC Power Supply (30kW/60V/500A)
ADG-PLUS-100-300	Programmable DC Power Supply (30kW/100V/300A)
ADG-PLUS-200-150	Programmable DC Power Supply (30kW/200V/150A)
ADG-PLUS-240-125	Programmable DC Power Supply (30kW/240V/125A)
ADG-PLUS-320-94	Programmable DC Power Supply (30kW/320V/94A)
ADG-PLUS-400-75	Programmable DC Power Supply (30kW/400V/75A)
ADG-PLUS-500-60	Programmable DC Power Supply (30kW/500V/60A)
ADG-PLUS-640-47	Programmable DC Power Supply (30kW/640V/47A)
ADG-PLUS-800-38	Programmable DC Power Supply (30kW/800V/38A)
ADG-PLUS-1000-30	Programmable DC Power Supply (30kW/1000V/30A)
ADG-PLUS-1600-18	Programmable DC Power Supply (30kW/1600V/18A)
ADG-PLUS-40-1250	Programmable DC Power Supply (50kW/40V/1250A)
ADG-PLUS-60-834	Programmable DC Power Supply (50kW/60V/834A)
ADG-PLUS-100-500	Programmable DC Power Supply (50kW/100V/500A)
ADG-PLUS-200-250	Programmable DC Power Supply (50kW/200V/250A)
ADG-PLUS-240-208	Programmable DC Power Supply (50kW/240V/208A)
ADG-PLUS-320-156	Programmable DC Power Supply (50kW/320V/156A)
ADG-PLUS-400-125	Programmable DC Power Supply (50kW/400V/125A)
ADG-PLUS-500-100	Programmable DC Power Supply (50kW/500V/100A)
ADG-PLUS-640-78	Programmable DC Power Supply (50kW/640V/78A)
ADG-PLUS-800-63	Programmable DC Power Supply (50kW/800V/63A)
ADG-PLUS-1000-50	Programmable DC Power Supply (50kW/1000V/50A)
ADG-PLUS-1600-31	Programmable DC Power Supply (50kW/1600V/31A)
ADG-PLUS-40-1875	Programmable DC Power Supply (75kW/40V/1875A)

Model Number	Description
ADG-PLUS-60-1250	Programmable DC Power Supply (75kW/60V/1250A)
ADG-PLUS-100-750	Programmable DC Power Supply (75kW/100V/750A)
ADG-PLUS-320-234	Programmable DC Power Supply (75kW/320V/234A)
ADG-PLUS-640-117	Programmable DC Power Supply (75kW/640V/117A)
ADG-PLUS-1000-75	Programmable DC Power Supply (75kW/1000V/75A)
ADG-PLUS-1600-47	Programmable DC Power Supply (75kW/1600V/47A)
ADG-PLUS-40-2500	Programmable DC Power Supply (100kW/40V/2500A)
ADG-PLUS-60-1666	Programmable DC Power Supply (100kW/60V/1666A)
ADG-PLUS-100-1000	Programmable DC Power Supply (100kW/100V/1000A)
ADG-PLUS-320-312	Programmable DC Power Supply (100kW/320V/312A)
ADG-PLUS-640-156	Programmable DC Power Supply (100kW/640V/156A)
ADG-PLUS-1000-100	Programmable DC Power Supply (100kW/1000V/100A)
ADG-PLUS-1600-63	Programmable DC Power Supply (100kW/1600V/63A)
ADG-PLUS-500-900-300	Programmable DC Power Supply (300kW/500V/900A)
ADG-PLUS-1000-450-300	Programmable DC Power Supply (300kW/1000V/450A)
ADG-PLUS-1500-300-300	Programmable DC Power Supply (300kW/1500V/300A)
ADG-PLUS-001	GPIB Interface Converter
ADG-PLUS-002	Cable for RS-485 (10m)
ADG-PLUS-003	200V/208V Input Voltage (30~50kW)
ADG-PLUS-004	480V Input Voltage (30~50kW)
ADG-PLUS-005	200V/208V Input Voltage (100kW)
ADG-PLUS-006	480V Input Voltage (75-100kW)
ADG-PLUS-007	I-V Curve Simulation and Remote Control Software
ADG-PLUS-008	200V/208V Input Voltage (75kW)

SPECIFICATIONS

ADG+ series (30kW - 50kW)

Model												
30kW	ADG-PLUS-40-750	ADG-PLUS-60-500	ADG-PLUS-100-300	ADG-PLUS-200-150	ADG-PLUS-240-125	ADG-PLUS-320-94	ADG-PLUS-400-75	ADG-PLUS-500-60	ADG-PLUS-640-47	ADG-PLUS-800-38	ADG-PLUS-1000-30	ADG-PLUS-1600-18
50kW	ADG-PLUS-40-1250	ADG-PLUS-60-834	ADG-PLUS-100-500	ADG-PLUS-200-250	ADG-PLUS-240-208	ADG-PLUS-320-156	ADG-PLUS-400-125	ADG-PLUS-500-100	ADG-PLUS-640-78	ADG-PLUS-800-63	ADG-PLUS-1000-50	ADG-PLUS-1600-31
AC Input												
Voltage	3Ø3W+G 380VAC~ 400VAC ± 15% (Option 200VAC/208VAC/415VAC/440VAC/480VAC)						3Ø3W+G 380VAC~ 400VAC ± 15% (Option 200VAC/208VAC/415VAC/440VAC/480VAC)					
Frequency	47-63Hz						47-63Hz					
Power Factor	≧ 90% at maximum power						≧ 90% at maximum power					
DC Output												
Voltage	40V	60V	100V	200V	240V	320V	400V	500V	640V	800V	1000V	1600V
Current(30kW)	750A	500A	300A	150A	125A	94A	75A	60A	47A	38A	30A	18A
Current(50kW)	1250A	834A	500A	250A	208A	156A	125A	100A	78A	63A	50A	31A
Line Regulation	≦ 0.05%											
Load Regulation[*1]	≦ 0.1%									≦ 0.034%	≦ 0.02%	≦ 0.05%
Voltage Ripple (RMS)	≦ 0.4% F.S.			≦ 0.1% F.S.			≦ 0.1% F.S.				≦ 0.05% F.S.	
Voltage Noise (Peak)	≦ 2% F.S.					≦ 0.88% F.S.	≦ 0.88% F.S.	≦ 1.34% F.S.	≦ 0.88% F.S.	≦ 0.2% F.S.	≦ 0.2% F.S.	≦ 0.4% F.S.
Voltage Slew Rate[*2]	≦ 50ms			≦ 60ms	≦ 85ms		≦ 100ms	≦ 100ms	≦ 100ms	≦ 115ms	≦ 120ms	≦ 120ms
Transient Response[*3]	≦ 12ms						≦ 12ms					
Measurement[*4]												
Voltage Accuracy	0.5% F.S.						0.1% F.S					
Voltage Resolution	≦ 100V@ 0.01V > 100V@0.1V											
Current Accuracy	0.5% F.S. (≧ 1% Rated Current)											
Current Resolution	≦ 100A@ 0.01A, >100A@0.1A											
Power Accuracy	P=V*I											
Power Resolution	0.01KW											
General												
MODE	CC/CV/CP											
Efficiency	≧ 87% at maximum power for input 380V~ 400V ≧ 84% at maximum power for input 200VAC/208VAC/415VAC/440VAC/480VAC			≧ 90% at maximum power for input 380V~ 400V ≧ 87% at maximum power for input 200VAC/208VAC/415VAC/440VAC/480VAC								
Interfaces	Standard : Ethernet/RS-232&RS-485/USB/Analog Option : GPIB											
Analog Input Control (V & I)	0-5V, Accuracy: 1% (at output rated voltage & current ≧ 5%)											
Analog Output Monitor (V & I)	0-5V, Accuracy : 5%											
Remote Sensing	5% maximum voltage drop from product output to load			3% maximum voltage drop from product output to load						2% maximum voltage drop from product output to load		
Protections	Input : Vin OV、Vin Unbalance Output : OVP、OCP、OPP、OTP, LDC OV						Input : Vin OV、Vin Unbalance Output : OVP、OCP、OPP、OTP, LDC OV					
OVP Range	0 - 110% F.S.											
OCP Range	0 - 110% F.S.											
OPP Range	0 - 110% F.S.											
Operational Temperature	0°C-40°C											
Storage Temperature	-20°C-70°C											
Humidity	0-90%(Non condensing)											
Isolation	Input to Enclosure : 1500VAC Input to Output : 2000VDC Output to Enclosure : 2000VDC											
Dimension(H×W×D)[*5]	200VAC/208VAC/415VAC/440VAC/480VAC Input:1382×600×800 mm / 54.4x23.7x31.5 inch 380VAC Input:1038×600×800 mm / 40.8x23.7x31.5 inch											
Weight[*5]	approx. 225 kg / 496.1 lbs			approx. 190 kg / 418.8 lbs								
	200VAC/208VAC/415VAC/440VAC/480VAC Input: approx. 420 kg / 925.9 lbs			200VAC/208VAC/415VAC/440VAC/480VAC Input: approx. 390 kg / 859.8 lbs								

*1. Load changes from 5% to 100% under nominal AC input. *2. Measured from 10% to 90% of the output voltage change - resistive load, typical.
*3. Under nominal AC input, recovers to ±1% of full-scale output voltage for a 50% to 100% or 100% to 50% load change. *4. The specifications are tested at ambient temperature of 25°C ± 5°C.
*5. Including wheels and weight tolerance is within ± 10 kg.
* Above specifications are under output voltage over 1% F.S. and all specifications are subject to change without notice.

SPECIFICATIONS

ADG+ series (75kW - 100kW)

Model							
75kW	ADG-PLUS-40-1875	ADG-PLUS-60-1250	ADG-PLUS-100-750	ADG-PLUS-320-234	ADG-PLUS-640-117	ADG-PLUS-1000-75	ADG-PLUS-1600-47
100kW	ADG-PLUS-40-2500	ADG-PLUS-60-1666	ADG-PLUS-100-1000	ADG-PLUS-320-312	ADG-PLUS-640-156	ADG-PLUS-1000-100	ADG-PLUS-1600-63
AC Input							
Voltage	3Ø3W+G 380VAC~ 400VAC ± 15% (Option 200VAC/208VAC/415VAC/440VAC/480VAC)						
Frequency	47-63Hz						
Power Factor	≧ 90% at maximum power						
DC Output							
Voltage	40V	60V	100V	320V	640V	1000V	1600V
Current(75kW)	1875A	1250A	750A	234A	117A	75A	47A
Current(100kW)	2500A	1666A	1000A	312A	156A	100A	63A
Line Regulation	≦ 0.05%						
Load Regulation*1	≦ 0.1%	≦ 0.1%	≦ 0.1%	≦ 0.05%	≦ 0.05%	≦ 0.05%	≦ 0.05%
Voltage Ripple (RMS)	≦ 0.5% F.S.	≦ 0.5% F.S.	≦ 0.4% F.S.	≦ 0.1% F.S.		≦ 0.1% F.S.	≦ 0.1% F.S.
Voltage Noise (Peak)	≦ 2.5% F.S.			≦ 0.65% F.S.	≦ 0.35% F.S.	≦ 0.3% F.S.	≦ 0.3% F.S.
Voltage Slew Rate*2	≦ 50ms			≦ 90ms	≦ 120ms	≦ 120ms	≦ 120ms
Transient Response*3	≦ 20ms						
Measurement*4							
Voltage Accuracy	0.5% F.S				0.1% F.S		
Voltage Resolution	≦ 100V@ 0.01V > 100V@0.1V						
Current Accuracy	0.5% F.S. (≧ 1% Rated Current)						
Current Resolution	≦ 100A@ 0.01A > 100A@0.1A						
Power Accuracy	P=V*I						
Power Resolution	0.01KW						
General							
MODE	CC/CV/CP						
Efficiency	≧ 87% at maximum power for input 380V~ 400V ≧ 84% at maximum power for input 200VAC/208VAC/415VAC/440VAC/480VAC			≧ 90% at maximum power for input 380V~ 400V ≧ 87% at maximum power for input 200VAC/208VAC/415VAC/440VAC/480VAC			
Interfaces	Standard : Ethernet/RS-232&RS-485/USB/Analog Option : GPIB						
Analog Input Control (V & I)	0-5V, Accuracy: 1% (at output rated voltage & current ≧ 5%)						
Analog Output Monitor (V & I)	0-5V, Accuracy : 5%						
Remote Sensing	5% maximum voltage drop from product output to load			3% maximum voltage drop from product output to load		2% maximum voltage drop from product output to load	
Protections	Input : Vin OV、Vin Unbalance Output : OVP、OCP、OPP、OTP, LDC OV						
OVP Range	0 - 110% F.S.						
OCP Range	0 - 110% F.S.						
OPP Range	0 - 110% F.S.						
Operational Temperature	0°C-40°C						
Storage Temperature	-20°C-70°C						
Humidity	0-90%(Non condensing)						
Isolation	Input to Enclosure : 1500VAC Input to Output : 2000VDC Output to Enclosure : 2000VDC						
Dimension(H×W×D)*5	200VAC/208VAC Input: 1902×600×800 mm / 74.8x23.7x31.5 inch 480VAC Input:1837x600x800 mm / 72.3x23.7x31.5 inch 380VAC Input: 1492x600x800 mm / 58.7x23.7x31.5inch						
Weight*5	approx. 345 kg / 760.6 lbs			approx. 300kg / 661.3 lbs			
	200VAC/208VAC/415VAC/440VAC/480VAC Input: approx. 625 kg / 1377.9 lbs			200VAC/208VAC/415VAC/440VAC/480VAC Input: approx. 574kg / 1265.4 lbs			

*1. Load changes from 5% to 100% under nominal AC input. *2. Measured from 10% to 90% of the output voltage change - resistive load, typical.

*3. Under nominal AC input, recovers to ±1% of full-scale output voltage for a 50% to 100% or 100% to 50% load change. *4. The specifications are tested at ambient temperature of 25°C ± 5°C.

*5. Including wheels and weight tolerance is within ± 10 kg.

* Above specifications are under output voltage over 1% F.S. and all specifications are subject to change without notice.

SPECIFICATIONS

ADG+ series (300kW)

Model			
300kW	ADG-PLUS-500-900-300	ADG-PLUS-1000-450-300	ADG-PLUS-1500-300-300
AC Input			
Voltage	3Ø3W+G 380VAC~ 400VAC ± 15%		
Frequency	47-63Hz		
Power Factor	≧ 90% at maximum power		
DC Output			
Voltage	500V	1000V	1500V
Current	900A	450A	300A
Line Regulation	≦ 0.05%		
Load Regulation*1	≦ 0.1%	≦ 0.05%	≦ 0.03%
Voltage Ripple (Vrms)	≦ 0.15% F.S.	≦ 0.1% F.S.	
Voltage Noise (Vp-p)	≦ 0.5% F.S.		
Voltage Slew Rate*2	≦ 150ms		
Transient Response*3	≦ 20ms		
Measurement*4			
Voltage Accuracy	≦ 0.2% F.S		
Voltage Resolution	0.1V		
Current Accuracy	≦ 0.5% F.S. (at ≧ 1% Rated Current)		
Current Resolution	0.1A		
Power Accuracy	P=V*I		
Power Resolution	0.1KW		
General			
MODE	CC/CV/CP		
Efficiency	≧ 90% at maximum voltage & power for input 380V~ 400V		
Interfaces	Standard: Ethernet/RS-232&RS-485/USB/Analog Option : GPIB		
Analog Input Control (V & I)	0-5V, Accuracy : 1% (at output rated voltage & current ≧ 5%)		
Analog Output Monitor (V & I)	0-5V, Accuracy : 5%		
Remote Sensing	3% maximum voltage drop from product output to load		
Protections	Input : Vin OV、Vin Unbalance Output : OVP、OCP、OPP、OTP, LDC OV, Module OCP, Interlock open.		
OVP Range	0 - 110% F.S.		
OCP Range	0 - 110% F.S.		
OPP Range	0 - 110% F.S.		
Operational Temperature	0°C-40°C		
Storage Temperature	-20°C-70°C		
Humidity	0-90%(Non condensing)		
Isolation	Input to Enclosure : 1500VAC , Input to Output : 2000VDC , Output to Enclosure : 2000VDC		
Dimension(H×W×D)	2000×1200×1100 mm / 78.7x47.2x43.3 inch		
Weight	approx. 2180kg / 4806 lbs	approx. 2150kg / 4740 lbs	

*1. Load changes from 5% to 100% under nominal AC input.
*2. Measured from 10% to 90% of the output voltage change - resistive load, typical.
*3. Under nominal AC input, recovers to ±1% of full-scale output voltage for a 50% to 100% or 100% to 50% load change.
*4. The specifications are tested at ambient temperature of 25°C ± 5°C.
* Above specifications are under output voltage over 1% F.S. and all specifications are subject to change without notice.