

DC Power Featuring High Power, High Voltage and Programmable Features

ADG-P series High Power Programmable DC Power Supply

ADG-P series is a programmable DC power supply with high power density. Using Preen's patented module design, ADG-P series features fast response, high precision and low ripples. Output voltage is up to 2000V. The single unit capacity is up to 100kW and the capacity can be further extended by parallel connection. It is suitable for various industry applications.

**Up to 100kW
In Single-Unit**

Higher output power by parallel connection

**Output Voltage
Up to 2000V**

More than 16 voltage segments for selection.

Ideal for EV Testing

Meet high voltage requirement for renewable energy.

ADG-P Series



RoHS
Compliant



**Output Power
30kW~500kW**

ADG-P Series

High Power Programmable DC Power Supply

Preen's ADG series is a programmable DC power supply with high power density and high output power, offering great response time, high accuracy and many output voltage and current combinations. Designed for the increasing demand of high power DC, ADG is ideal for testing EV's motor/compressor, server power supply, fuse/circuit breaker/contactors, and PV inverter or can be used as a facility power or EMC chamber power.

With output power up to 100kW per unit, the ADG series offers output voltage up to 1600V and output current up to 2500A.

Users can select standard RS-485 interface or optional RS-232 and GPIB. The STEP and GRADUAL modes allow easy setup on test sequence and depending on CV/CC settings and load conditions, ADG series can operate as a current or voltage source. Its remote sensing feature can effectively reduce voltage drop caused by cable length and provides more flexibility on installation.

Interfaces

Standard

RS-485

Option

GPIB

RS-232

Analog

Applications

- Home Appliance
- Laboratory/Certification Bureau
- Industrial Power Supply
- Electric Vehicles
- IT / SMT Production Line
- Renewable Energy
- Transportation
- Motor & Compressor
- Medical Industry
- Aerospace & Defense
- Communication Industry

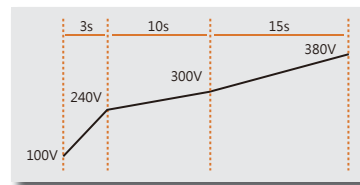
- Wide output voltage range: with maximum voltage up to 1600V, ideal for renewable energy, smart grid, and Electric Vehicle (EV) related applications.
- High Efficiency and Power Factor: up to 90% efficiency and power factor.
- High Output Power: up to 100kW in one chassis with high power density.
- Fast Transient Response Time: <4~12ms.
- Standard RS485 interface with Modbus compatibility and optional RS-232 and GPIB interfaces.
- Programming Sequence Function: STEP and GRADUAL modes allow users to easily set sequences of start/ end voltage, run time and current for testing purposes.
- CV and CC Modes.
- 7" Touch Screen Display for Easy Operation.
- Remote Sense for Line Drop Compensation.
- Comprehensive Protection: Input OVP/UVP, output OVP/OC, OTP.
- 12 Different Output Voltage Ranges & 41 Models.

User-Friendly HMI

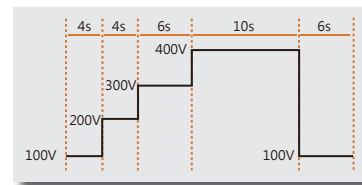


ADG-P series has an intuitive touch screen HMI for easy operation and data display. Users also can easily set up voltage or current variation simulations through the built-in programmable functions in the touch screen.

Built-in Voltage/ Current Programmable Function



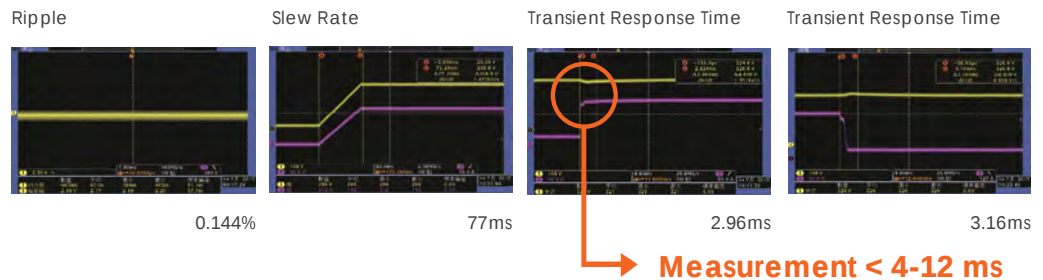
Step



Gradual

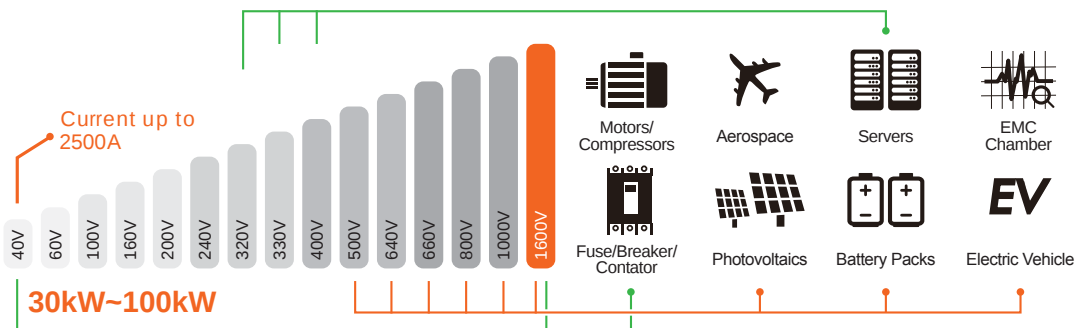
Users can not only realize remote programming through the remote interface, but can also set the voltage / current stepwise or continuously through the built-in STEP and Gradual modes of the ADG-P series. Simulation of various power conditions can be achieved without further programming. It is ideal for performance testing like voltage variation test, ON/OFF test, aging test etc. More customized power curve simulations are also available.

Technically Advanced Performance



ADG-P series has the industry leading performance on ripple, response time, and voltage regulation, which make it an ideal DC power supply for all kinds of testing.

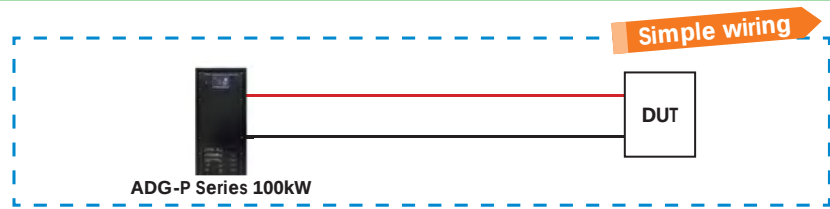
Variety of Applications



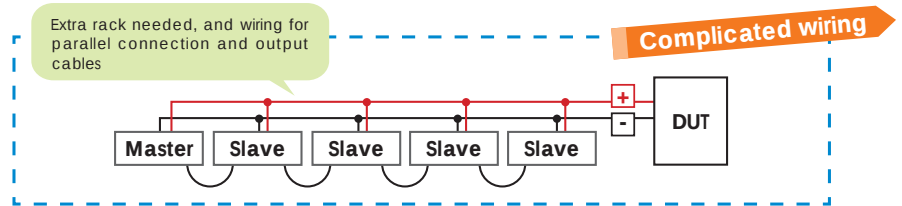
ADG-P series has many output voltage ranges suitable for different market applications. Models over 640V output voltage are applicable for renewable energy, EV, and lithium battery industries. When it comes to circuit breakers, contactors or fuses that require high voltage or current, models with 2000A 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.

High Stability and Simple Wiring

- ADG-P series: high-power unit



- Multiple units connection: small-power unit



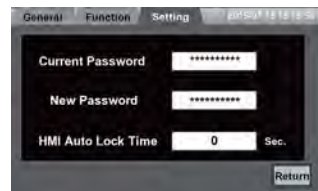
Compared with the DC power supplies which attain high power by parallel connection, the single unit of the ADG-P series is up to 100kW. Without communication between multi-units, users can reduce the risk of interference from parallel connection signals. Moreover, single unit operation features in simple wiring and easy mobility, bringing high stability and easy maintenance.

Easy Remote Control Set Up



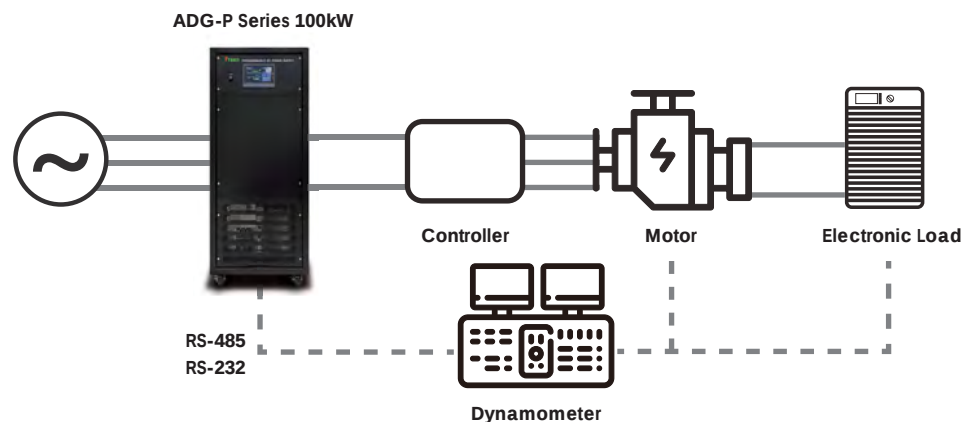
ADG-P series has an intuitive touch screen HMI for easy operation and data display. Users also can easily set up voltage or current variation simulations through the built-in programmable functions in the touch screen.

Screen Lock Password Function



In order to prevent the operator from changing the set parameters by mistake, the new Screen Lock Password function is added on ADG-P series, so that the operator can only perform the output of the device, and only authorized personnel has the password to unlock the screen and edit parameters.

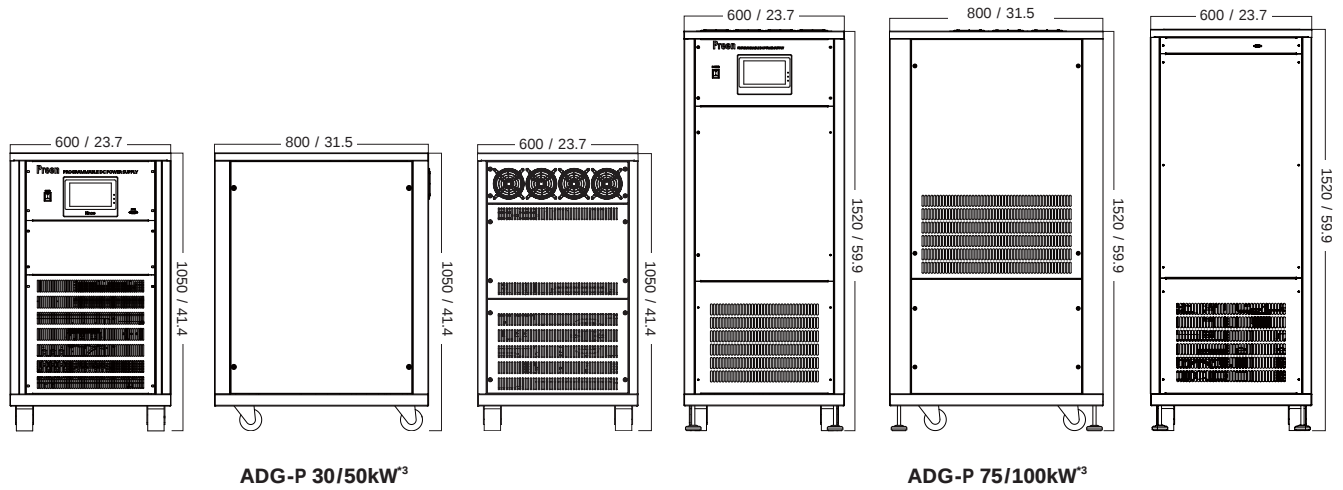
EV Motor Testing Application Case



Alternative fuel vehicle industries have grow rapidly in recent years. The unique technical structure of alternative fuel vehicles makes them very different from traditional vehicle tests. Electric motors become the power engines of EV and HEV in replacement of traditional engine. Therefore, testing and verification for motor system becomes significant. The driving of motor and motor controlling requires accurate programmable DC supply to simulate output voltage of different batteries, and also require high-power DC supply. Preen's ADG-P series is the ideal DC power supply for the testing system.

Dimemnsions

Unit : mm / inch



³ The diagrams and dimensions are for 380V input models.

ORDERING INFORMATION

ADG-P Series DC Output (30kW - 100kW)

Model Number	Description	Model Number	Description
ADG-P-40-1250	High Power Programmable DC Power Supply (50kW/40V/1250A)	ADG-P-40-1875	High Power Programmable DC Power Supply (75kW/40V/1875A)
ADG-P-60-834	High Power Programmable DC Power Supply (50kW/60V/834A)	ADG-P-60-1250	High Power Programmable DC Power Supply (75kW/60V/1250A)
ADG-P-100-500	High Power Programmable DC Power Supply (50kW/100V/500A)	ADG-P-100-750	High Power Programmable DC Power Supply (75kW/100V/750A)
ADG-P-200-250	High Power Programmable DC Power Supply (50kW/200V/250A)	ADG-P-320-234	High Power Programmable DC Power Supply (75kW/320V/234A)
ADG-P-240-208	High Power Programmable DC Power Supply (50kW/240V/208A)	ADG-P-640-117	High Power Programmable DC Power Supply (75kW/640V/117A)
ADG-P-320-156	High Power Programmable DC Power Supply (50kW/320V/156A)	ADG-P-1000-75	High Power Programmable DC Power Supply (75kW/1000V/75A)
ADG-P-400-125	High Power Programmable DC Power Supply (50kW/400V/125A)	ADG-P-1600-47	High Power Programmable DC Power Supply (75kW/1600V/47A)
ADG-P-500-100	High Power Programmable DC Power Supply (50kW/500V/100A)	ADG-P-40-2500	High Power Programmable DC Power Supply (100kW/40V/2500A)
ADG-P-640-78	High Power Programmable DC Power Supply (50kW/640V/78A)	ADG-P-60-1666	High Power Programmable DC Power Supply (100kW/60V/1666A)
ADG-P-800-63	High Power Programmable DC Power Supply (50kW/800V/63A)	ADG-P-100-1000	High Power Programmable DC Power Supply (100kW/100V/1000A)
ADG-P-1000-50	High Power Programmable DC Power Supply (50kW/1000V/50A)	ADG-P-320-312	High Power Programmable DC Power Supply (100kW/320V/312A)
ADG-P-1600-31	High Power Programmable DC Power Supply (50kW/1600V/31A)	ADG-P-640-156	High Power Programmable DC Power Supply (100kW/640V/156A)
ADG-P-40-750	High Power Programmable DC Power Supply (30kW/40V/750A)	ADG-P-1000-100	High Power Programmable DC Power Supply (100kW/1000V/100A)
ADG-P-60-500	High Power Programmable DC Power Supply (30kW/60V/500A)	ADG-P-1600-63	High Power Programmable DC Power Supply (100kW/1600V/63A)
ADG-P-100-300	High Power Programmable DC Power Supply (30kW/100V/300A)	ADG-P-001	GPIB Interface Converter
ADG-P-200-150	High Power Programmable DC Power Supply (30kW/200V/150A)	ADG-P-002	Cable for RS-485 (10m)
ADG-P-240-125	High Power Programmable DC Power Supply (30kW/240V/125A)	ADG-P-004	RS-232 Interface Converter
ADG-P-320-94	High Power Programmable DC Power Supply (30kW/320V/94A)	ADG-P-005	Analog Control (4~20mA)
ADG-P-400-75	High Power Programmable DC Power Supply (30kW/400V/75A)	ADG-P-006	Analog Control (0~5V)
ADG-P-500-60	High Power Programmable DC Power Supply (30kW/500V/60A)	ADG-P-007	200V/208 Input Voltage (30~50kW)
ADG-P-640-47	High Power Programmable DC Power Supply (30kW/640V/47A)	ADG-P-008	480V Input Voltage (30~50kW)
ADG-P-800-38	High Power Programmable DC Power Supply (30kW/800V/38A)	ADG-P-009	200V/208 Input Voltage (100kW)
ADG-P-1000-30	High Power Programmable DC Power Supply (30kW/1000V/30A)	ADG-P-010	480V Input Voltage (100kW)
ADG-P-1600-18	High Power Programmable DC Power Supply (30kW/1600V/18A)		

ADG-P SPECIFICATIONS

ADG-P Series (30kW - 100kW)

30kW	Output Voltage	Output Current	Voltage Ripple (RMS)	Voltage Noise (Peak)	Voltage Slew Rate ^{*1}
ADG-P-40-750	0~40V	0~750A	≦ 0.5%	≦ 3.7%	≦ 65ms
ADG-P-60-500	0~60V	0~500A			
ADG-P-100-300	0~100V	0~300A			
ADG-P-200-150	0~200V	0~150A	≦ 0.26%	≦ 2%	≦ 60ms
ADG-P-240-125	0~240V	0~125A	≦ 0.19%		≦ 85ms
ADG-P-320-94	0~320V	0~94A	≦ 0.16%	≦ 0.88%	
ADG-P-400-75	0~400V	0~75A	≦ 0.13%		≦ 1.34%
ADG-P-500-60	0~500V	0~60A			
ADG-P-640-47	0~640V	0~47A	≦ 0.109%	≦ 0.77%	≦ 280ms
ADG-P-800-38	0~800V	0~38A	≦ 0.07%	≦ 0.29%	
ADG-P-1000-30	0~1000V	0~30A	≦ 0.05%	≦ 0.27%	
ADG-P-1600-18	0~1600V	0~18A	≦ 0.08%	≦ 0.4%	

50kW	Output Voltage	Output Current	Voltage Ripple (RMS)	Voltage Noise (Peak)	Voltage Slew Rate ^{*1}
ADG-P-40-1250	0~40V	0~1250A	≦ 0.5%	≦ 3.7%	≦ 65ms
ADG-P-60-834	0~60V	0~834A			
ADG-P-100-500	0~100V	0~500A			
ADG-P-200-250	0~200V	0~250A	≦ 0.26%	≦ 2%	≦ 60ms
ADG-P-240-208	0~240V	0~208A	≦ 0.19%		≦ 85ms
ADG-P-320-156	0~320V	0~156A	≦ 0.16%	≦ 0.88%	
ADG-P-400-125	0~400V	0~125A	≦ 0.13%		≦ 1.34%
ADG-P-500-100	0~500V	0~100A			
ADG-P-640-78	0~640V	0~78A	≦ 0.109%	≦ 0.77%	
ADG-P-800-63	0~800V	0~63A	≦ 0.07%	≦ 0.29%	≦ 280ms
ADG-P-1000-50	0~1000V	0~50A	≦ 0.05%	≦ 0.27%	
ADG-P-1600-31	0~1600V	0~31A	≦ 0.08%	≦ 0.4%	

75kW	Output Voltage	Output Current	Voltage Ripple (RMS)	Voltage Noise (Peak)	Voltage Slew Rate ^{*1}
ADG-P-40-1875	0~40V	0~1875A	$\leq 1.3\%$	$\leq 7\%$	$\leq 120\text{ms}$
ADG-P-60-1250	0~60V	0~1250A	$\leq 1.5\%$	$\leq 5\%$	
ADG-P-100-750	0~100V	0~750A	$\leq 1.5\%$	$\leq 5\%$	
ADG-P-320-234	0~320V	0~234A	$< 0.1\%$	$< 0.65\%$	$\leq 90\text{ms}$
ADG-P-640-117	0~640V	0~117A	$\leq 0.1\%$	$\leq 0.35\%$	$\leq 120\text{ms}$
ADG-P-1000-75	0~1000V	0~75A	$\leq 0.2\%$	$\leq 0.8\%$	$\leq 130\text{ms}$
ADG-P-1600-47	0~1600V	0~47A	$\leq 0.1\%$	$\leq 0.5\%$	$\leq 300\text{ms}$

100kW	Output Voltage	Output Current	Voltage Ripple (RMS)	Voltage Noise (Peak)	Voltage Slew Rate ^{*1}
ADG-P-40-2500	0~40V	0~2500A	$\leq 1.3\%$	$\leq 7\%$	$\leq 120\text{ms}$
ADG-P-60-1666	0~60V	0~1666A	$\leq 1.5\%$	$\leq 5\%$	
ADG-P-100-1000	0~100V	0~1 000A	$\leq 1.5\%$	$\leq 5\%$	
ADG-P-320-312	0~320V	0~312A	$< 0.1\%$	$< 0.65\%$	$\leq 90\text{ms}$
ADG-P-640-156	0~640V	0~156A	$\leq 0.1\%$	$\leq 0.35\%$	$\leq 120\text{ms}$
ADG-P-1000-100	0~1000V	0~100A	$\leq 0.2\%$	$\leq 0.8\%$	$\leq 130\text{ms}$
ADG-P-1600-63	0~1600V	0~63A	$\leq 0.1\%$	$\leq 0.5\%$	$\leq 300\text{ms}$

*1 For output voltage change from 5% to 90% at maximum power after output softstart.

* Voltage ripple and noise specs are under full scale -

SPECIFICATIONS

30kW		ADG-P-40-750	ADG-P-60-500	ADG-P-100-300	ADG-P-200-150	ADG-P-240-125	ADG-P-320-94
50kW		ADG-P-40-1250	ADG-P-60-834	ADG-P-100-500	ADG-P-200-250	ADG-P-240-208	ADG-P-320-156
AC Input	Voltage	3Ø3W + G 380Vac ± 15% (Option : 200V/208V/480V)					
	Frequency	47-63Hz					
	Power factor	≥ 0.9 at maximum power					
DC Output	Output Voltage	40V	60V	100V	200V	240V	320V
	Output Current (30kW)	750A	500A	300A	150A	125A	94A
	Output Current (50kW)	1250A	834A	500A	250A	208A	156A
	Line Regulation	< 0.3%			< 0.1%		
	Load Regulation	< 0.3%			< 0.065%	< 0.104%	< 0.14%
	Transient Response ^{*2}	≤ 4-12ms					
	Measurement	Voltage Accuracy	0.5% F.S.				
Voltage Resolution		0.1V					
Current Accuracy		0.5% F.S.					
Current Resolution		0.1A					
		Vin OVP, Vin UVP, OVP, OCP, OTP					
Protection	Type	5% - 115% from front panel					
	OVP Range	5% - 115% from front panel					
	OCP Range	5% - 115% from front panel					
General	Efficiency	≥ 87% at maximum power			≥ 90% at maximum power		
	Remote Interface	RS-485 (Opt. GPIB / RS-232/Analog)					
	Operational Temperature	0°C - 40°C					
	Storage Temperature	-20°C - 70°C					
	Isolation	Input to Enclosure: 2000VAC					
	Dimension (H×W×D)	380V Input : 1050 x 600 x 800 (mm) / 41.4 x 23.7 x 31.5(inch) 200V/208V/480V Input : 1385 x 600 x 800 (mm) 54.5 x 23.7 x 31.5(inch)					
	Weight	380V Input : approx. 225 kg / 497 lbs 200V/208V/480V Input : approx. 412 kg / 909 lbs			380V Input : approx. 187 kg / 413 lbs 200V/208V/480V Input : approx. 367 kg / 810 lbs		

30kW		ADG-P-400-75	ADG-P-500-60	ADG-P-640-47	ADG-P-800-38	ADG-P-1000-30	ADG-P-1600-18
50kW		ADG-P-400-125	ADG-P-500-100	ADG-P-640-78	ADG-P-800-63	ADG-P-1000-50	ADG-P-1600-31
AC Input	Voltage	3Ø3W + G 380Vac ± 15% (Option : 200V/208V/480V)					
	Frequency	47-63Hz					
	Power factor	≥ 0.9 at maximum power					
DC Output	Output Voltage	400V	500V	640V	800V	1000V	1600V
	Output Current (30kW)	75A	60A	47A	38A	30A	18A
	Output Current (50kW)	125A	100A	78A	63A	50A	31A
	Line Regulation	< 0.1%					
	Load Regulation	< 0.032%	< 0.14%	< 0.132%	< 0.034%	< 0.02%	< 0.05%
	Transient Response ^{**2}	≤ 4-12ms					
Measurement	Voltage Accuracy	0.5% F.S.					
	Voltage Resolution	0.1V					
	Current Accuracy	0.5% F.S.					
	Current Resolution	0.1A					
Protection	Type	Vin OVP, Vin UVP, OVP, OCP, OTP					
	OVP Range	5% - 115% from front panel					
	OCP Range	5% - 115% from front panel					
General	Efficiency	≥ 90% at maximum power					
	Remote Interface	RS-485 (Opt. GPIB / RS-232/Analog)					
	Operational Temperature	0°C - 40°C					
	Storage Temperature	-20°C - 70°C					
	Isolation	Input to Enclosure: 2000VAC					
	Dimension (H×W×D)	380V Input : 1050 x 600 x 800 (mm) / 41.4 x 23.7 x 31.5(inch) 200V/208V/480V Input : 1385 x 600 x 800 (mm) 54.5 x 23.7 x 31.5(inch)					
	Weight	380V Input : approx. 187 kg / 413 lbs			380V Input : approx. 187 kg / 413 lbs		
		200V/208V/480V Input : approx. 367 kg / 810 lbs			200V/208V/480V Input : approx. 367 kg / 810 lbs		

SPECIFICATIONS

75kW		ADG-P-40-1875	ADG-P-60-1250	ADG-P-100-750	ADG-P-320-234	ADG-P-640-117	ADG-P-1000-75	ADG-P-1600-47
100kW		ADG-P-40-2500	ADG-P-60-1666	ADG-P-100-1000	ADG-P-320-312	ADG-P-640-156	ADG-P-1000-100	ADG-P-1600-63
AC Input	Voltage	3Ø3W + G 380Vac ± 15% (Option : 200V/208V/480V)						
	Frequency	47 - 63Hz						
	Power factor	≥ 90% at maximum power						
DC Output	Output Voltage	40V	60V	100V	320V	640V	1000V	1600V
	Output Current (75kW)	1875A	1250A	750A	234A	117A	75A	47A
	Output Current (100kW)	2500A	1666A	1000A	312A	156A	100A	63A
	Line Regulation	< 0.1%						
	Load Regualtion	< 0.1%	< 0.15%	< 0.15%	< 0.08%	< 0.08%	< 0.1%	< 0.08%
	Transient Response ^{*2}	≤ 10-20ms						
	Voltage Accuracy	0.5% F.S.						
Measurement	Voltage Resolution	0.1V						
	Current Accuracy	0.5% F.S.						
	Current Resolution	0.1A						
Protection	Type	Vin OVP, Vin UVP, OVP, OCP, OTP						
	OVP Range	5% - 115% from front panel						
	OCP Range	5% - 115% from front panel						
General	Efficiency	≥ 87% at maximum power			≥ 90% at maximum power			
	Remote Interface	RS-485 (Opt. GPIB / RS-232/Analog)						
	Operational Temerature	0°C - 40°C						
	Storage Temperature	-20°C - 70°C						
	Isolation	Input to Enclosure: 2000VAC						
	Dimension (H×W×D)	380V Input : 1520 x 600 x 800 (mm) / 59.9 x 23.7 x 31.5 (inch) 200V/208V/480V Input : 2020 x 600 x 800 (mm) / 79.6 x 23.7 x 31.5 (inch)						
	Weight	380V Input : approx. 294kg / 648.3 lbs 200V/208V/480V Input : approx. 574kg / 1265.7 lbs						

*2 Recover to ±0.1% of regulated output with a 50% to 100% or 100% to 50% step load change.

* All specifications are subject to change without notice.

** Above specifications are for output voltage over 1% F.S.

***all specifications are subject to change without notice.