

# Full-Range DC Power Supply for Your Needs

Wide voltage range from 0-30V to 0-2000V, with current capability up to 2550A

Designed for demanding applications, the ADG-L series delivers high-density power with exceptional stability and accuracy. Its modular design allows for scalable power up to 75kW, making it ideal for a wide range of industries.

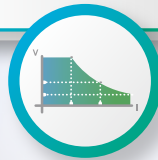
## 2000V Output

Wide Voltage Range, Ideal for New Energy Applications

2000v  
30v

## 3 Times Auto Range

Lower Voltage, Higher Current



## Parallel Connection

Fast Setting, Easy Wiring



NEW



# ADG-L series

## Programmable DC Power Supply

### Interfaces

Standard **RS-232** **RS-485** **USB**  
**Ethernet** **Analog**

Option **GPIO**

### QR Code



Product Info.



Product Video

**NEW**



### Output Power

**5kW/10kW/15kW**

**RoHS**  
Compliant **CE**

Preen's new ADG-L series is a programmable DC power supply with high power density, low noise, and tight regulation. The combination of DSP and PWM technologies has enabled significant advances in stability and measurements.

To meet the needs of emerging low-voltage applications, the ADG-L Series offers multiple low-voltage versions suitable for testing and verification of protection components such as fuses and air circuit breakers. In addition, these models are particularly suitable for AI servers and data center power modules, providing long-term stable testing under unbalanced or fluctuating voltage conditions.

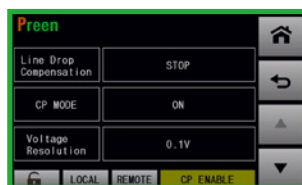
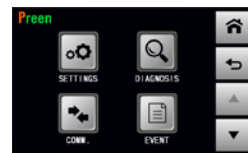
The ADG-L series includes 31 models with 5kW, 10kW and 15kW maximum output powers and several Auto Range models to provide a higher output current at lower output voltage. With

CV/CC/CP modes and its high voltage and high power features, the ADG-L series is an ideal DC power for applications on photovoltaic (PV), electric vehicle (EV), battery charge simulation, fuse, and contactors.

Parallel configuration is available for higher output level. The ADG-L series is operated via the 5" intuitive touch screen or the rotary knob to quickly access measurements, setting parameters, and configurations. The unit can also be controlled via standard RS-232, RS-485, Analog, Ethernet, USB and Analog remote interfaces, or through optional GPIB interface. The built-in simulation function allows devices to be tested on voltage dropouts, spikes and other repetitive testing for voltage and current.

### Intuitive Touch Screen and Rotary Knob

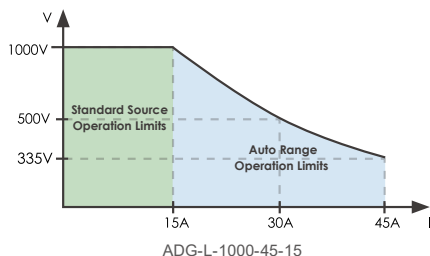
The ADG-L series equips 5" touch screen and rotary knob to provide intuitive display and easy-to-use control. Users can quickly access output settings, measurements, sequences and system configurations from the touch screen. Sophisticated sequences can not only be set from the PC easily but also can be set from the touch screen.



**Fine-Tuned Voltage Setting:**  
voltage resolution can be adjusted by the rotary knob and be selected between 0.1V/1V, which increases the convenience of output voltage setting.



## Auto Range Functions



Auto range feature can generate a higher output current at lower output voltage, or a higher output voltage at lower output current. This feature is an ideal solution for both high current/low voltage and low voltage/high current DUT, and makes one unit to cover a wide range of applications to further save cost and space.

## Complimentary Control Software and Various Interfaces



The ADG-L series can be controlled via the Preen Program to configure sophisticated sequences, save/recall STEPs, and generate test result reports. This intuitive control software makes remote programming no longer a difficult task.

RS-232 RS-485 Ethernet USB Analog Standard GPIB Optional

The DC power supply is equipped with RS-232/RS-485, Ethernet, USB and Analog for standard interfaces. Optional GPIB are also available for better integrations with automatic test systems and the needs of industry 4.0.

## Broader Voltage and Current Range



The ADG-L series delivers highly flexible DC power solutions, ranging from 0-30V to 0-2000V<sup>\*1</sup> with up to 2550A<sup>\*2</sup> output current. Ideal for testing in the renewable energy and electric vehicle components, this series offers precise voltage and current control for various applications.

## High Power Density: 15kW in 3U

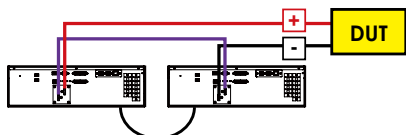


Employing PWM technology and DSP-based control, Preen's ADG-L series DC power supply has 15kW available only in 3U chassis, and with parallel configuration, 30kW only has 6U height.

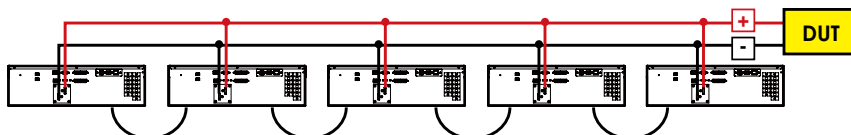
The rack-mount enclosure is designed to accommodate a wide range of applications, especially for automatic test systems and integrations.

## Multiple Connections

Series connection (Max. 2 units)



Parallel connection (Max. 5 units)

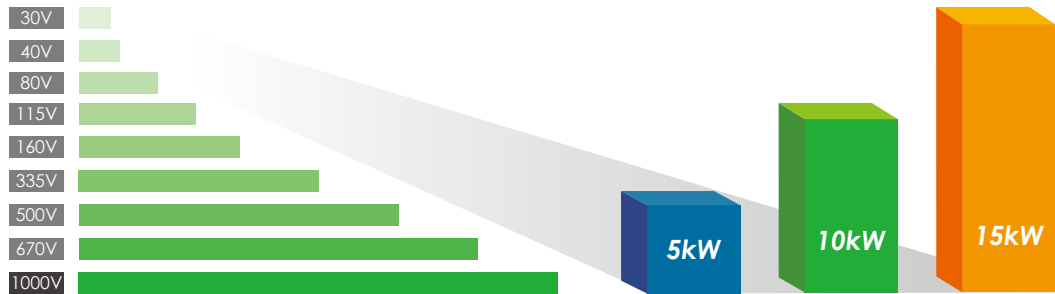


The single unit power of ADG-L series can reach up to 15kW, and can be expanded to 75kW through parallel connection, or can output up to 2000V through series connection. Each unit can be set as Master or Slave. The user can freely combine ADG-L series according to the load test requirements, thereby increases flexibility of the application.

\*1 via series connection \*2 via parallel connection

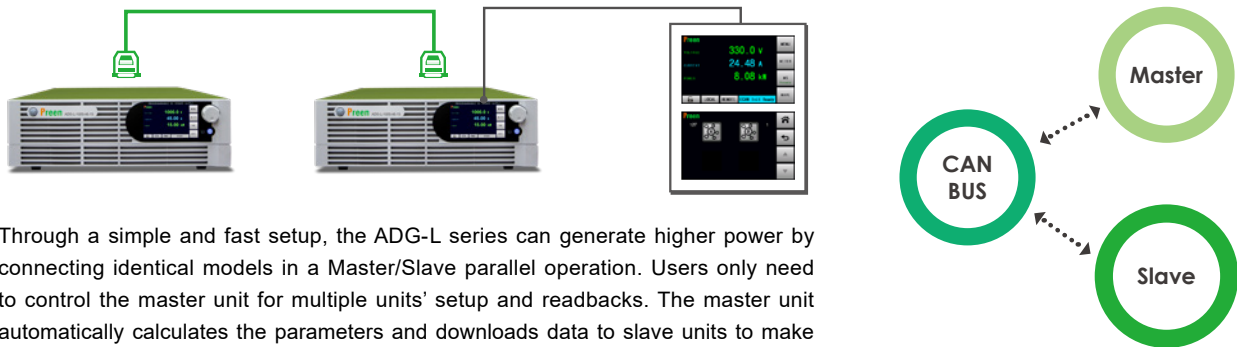
## Wide Voltage and Current Range

**31 Models**



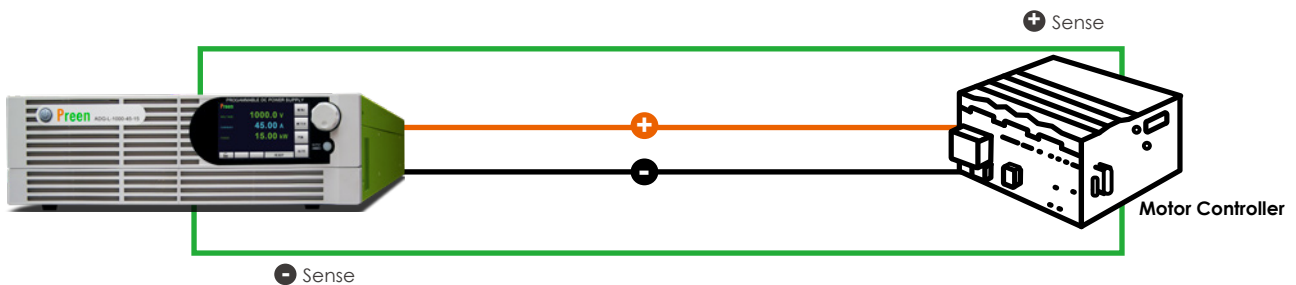
Preen's ADG-L series has 31 different models with three output power levels, 5kW, 10kW and 15kW. With up to 1000V output voltage and multiple Auto Range models, the ADG-L series covers a wide range of applications including electric vehicle, photovoltaic, battery, DC/DC converters and electronic products.

## Master/Slave Parallel Operation



Through a simple and fast setup, the ADG-L series can generate higher power by connecting identical models in a Master/Slave parallel operation. Users only need to control the master unit for multiple units' setup and readbacks. The master unit automatically calculates the parameters and downloads data to slave units to make programming easier and current sharing more precise.

## Remote Sensing



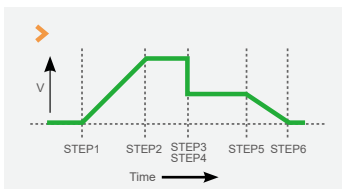
In many laboratories and factories, the DC power supply is located in a certain distance away from the DUT, and sometimes it causes voltage drop due to the resistance of the wires. The ADG-L series' Remote Sensing function is able to compensate voltage drops and provide a stable output voltage.

## Screen Lock Password Function



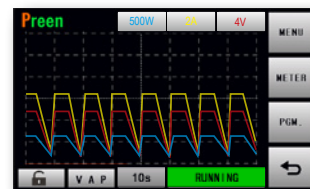
In order to prevent the operator from changing the set parameters by mistake, the new Screen Lock Password function is added on ADG-L series, so that the operator can only perform the output of the device, and only authorized personnel has the password to unlock the screen and edit parameters.

## Programming Sequences and Simulations

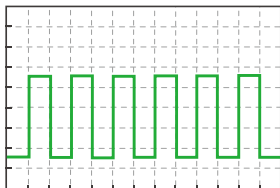


| #  | Volt. (V) | Cur. (A) | Time   | T-scale |
|----|-----------|----------|--------|---------|
| 01 | 330.0 V   | 10.00 A  | 2.00 s | SECON   |
| 02 | 330.0 V   | 10.00 A  | 5.00 s | SECON   |
| 03 | 10.0 V    | 10.00 A  | 2.00 s | SECON   |

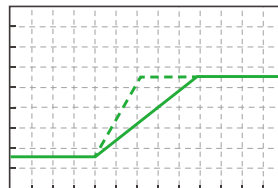
Program Setting Page



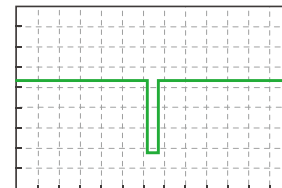
Wave Page



DC Pulse



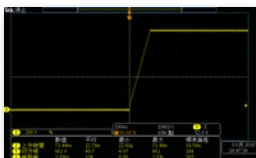
Slew Rate Control



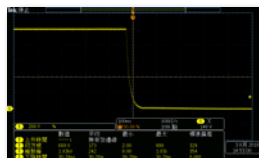
Voltage Sag

The built-in programming function of the ADG-L series has four types: Mode 1 : Group 25 / Step 16, Mode 2 : Group 10 / Step 40, Mode 3 : Group 5 / Step 80, Mode 4 : Group 2 / Step 200. Users can set each STEP's output voltage, output current and time to generate consecutive voltage/current changes or set different rise/fall time. This built-in function and the ADG-L series' control software allow users to create complex DC waveform without sophisticated coding. Making programming the DC power supply an easy task.

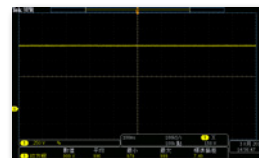
## Industry-leading Performance



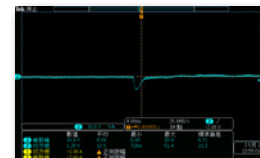
Fast Rise Time



Fast Fall Time



Low Voltage Ripple



Fast Transient Response

The ADG-L series is designed for low ripple, high accuracy and tight regulation for simulating different DC voltages. With fast transient response and rise time, the ADG-L series' DC sources are ideal to test DUT behavior to voltage sags, dropouts, ON/OFF tests and complex DC waveforms.

## Multiple Ways of AC Input Connections

Conventional DC power supplies have only one type of AC input range and one way of input wirings. Different from most of high power DC power supply, the ADG-L series models offer more than two ways of input connections. For example, the 10kW models can have single phase or three phase input without factory modifications. This feature provides flexibility and convenience for users to operate the unit in different environments.

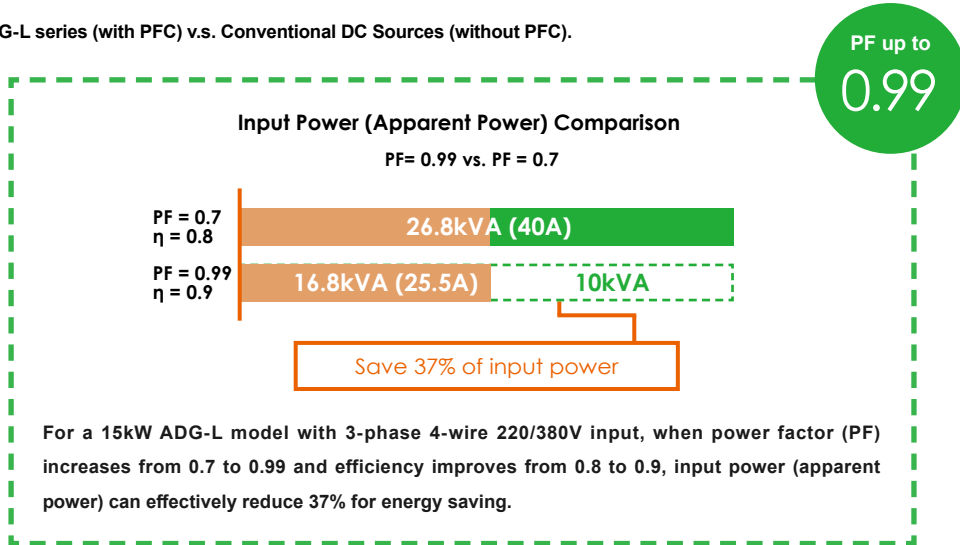
## Reverse Current Protection Module (opt.)

ADG-L series has optional Reverse Current Protection Module. When the DUT generates the reverse energy flowing back to the output of ADG-L series it can effectively block the reverse current to protect ADG-L series from possible damages.

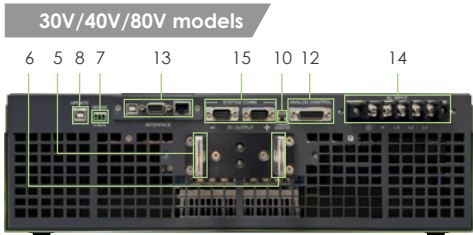
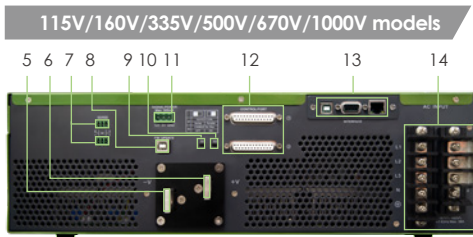
## 0.99 Input Power Factor

The ADG-L series is equipped with active Power Factor Correction (PFC) to enhance input PF up to industry-leading 0.99, which helps reducing the interference on the grid.

- 01 Effectively increase real power (P) and reduce reactive power (Q) for better energy saving and operation cost.
- 02 Able to suppress peak current and power loss to have lower harmonic distortions.
- 03 Reduce input current to have compact and high power density DC sources.
- 04 Save more energy and lower carbon footprint for better environment.
- 05 The ADG-L series (with PFC) v.s. Conventional DC Sources (without PFC).



## PANEL DESCRIPTION



- |                                          |                                                       |
|------------------------------------------|-------------------------------------------------------|
| 1. Power Switch                          | 12. Analog Interface                                  |
| 2. Touch Screen HMI                      | 13. Communication Interface :                         |
| 3. Rotary Knob                           | • USB                                                 |
| 4. Output / Reset Button                 | • RS-232/RS-485(SCPI&MODBUS)                          |
| 5. DC Negative Output Terminal           | • Ethernet                                            |
| 6. DC Positive Output Terminal           | • GPIB(opt.)                                          |
| 7. Remote Sense Connector                | 14. Input Terminals                                   |
| 8. USB Interface ( for firmware update ) | 15. System Comm.<br>(Master-Slave Parallel Interface) |
| 9. Serial and Parallel Switch            |                                                       |
| 10. CANBUS Terminal Resister Switch      |                                                       |
| 11. Accessory Power Outlet ( 5V&12V )    |                                                       |

## ORDERING INFORMATION

### ADG-L Series (5kW-15kW)

| Model Number     | Description                                                      |
|------------------|------------------------------------------------------------------|
| ADG-L-30-170     | Programmable DC Power Supply(5kW/30V/170A)                       |
| ADG-L-40-125     | Programmable DC Power Supply(5kW/40V/125A)                       |
| ADG-L-80-62      | Programmable DC Power Supply(5kW/80V/62.5A)                      |
| ADG-L-80-170-5   | Programmable DC Power Supply(5kW/80V/170A) (Auto Range Model)    |
| ADG-L-115-45     | Programmable DC Power Supply (5kW/115V/45A)                      |
| ADG-L-160-32     | Programmable DC Power Supply (5kW/160V/32A)                      |
| ADG-L-335-15     | Programmable DC Power Supply (5kW/335V/15A)                      |
| ADG-L-30-340     | Programmable DC Power Supply(10kW/30V/340A)                      |
| ADG-L-40-250     | Programmable DC Power Supply(10kW/40V/250A)                      |
| ADG-L-80-125     | Programmable DC Power Supply(10kW/80V/125A)                      |
| ADG-L-80-340-10  | Programmable DC Power Supply(10kW/80V/340A) (Auto Range Model)   |
| ADG-L-335-45-5   | Programmable DC Power Supply (5kW/335V/45A) (Auto Range Model)   |
| ADG-L-115-90     | Programmable DC Power Supply (10kW/115V/90A)                     |
| ADG-L-160-63     | Programmable DC Power Supply (10kW/160V/63A)                     |
| ADG-L-335-30     | Programmable DC Power Supply (10kW/335V/30A)                     |
| ADG-L-335-90-10  | Programmable DC Power Supply (10kW/335V/90A) (Auto Range Model)  |
| ADG-L-500-20     | Programmable DC Power Supply (10kW/500V/20A)                     |
| ADG-L-670-15     | Programmable DC Power Supply (10kW/670V/15A)                     |
| ADG-L-670-45-10  | Programmable DC Power Supply (10kW/670V/45A) (Auto Range Model)  |
| ADG-L-30-510     | Programmable DC Power Supply(15kW/30V/510A)                      |
| ADG-L-40-375     | Programmable DC Power Supply(15kW/40V/375A)                      |
| ADG-L-80-187     | Programmable DC Power Supply(15kW/80V/187.5A)                    |
| ADG-L-80-510-15  | Programmable DC Power Supply(15kW/80V/510A) (Auto Range Model)   |
| ADG-L-115-135    | Programmable DC Power Supply (15kW/115V/135A)                    |
| ADG-L-160-94     | Programmable DC Power Supply (15kW/160V/94A)                     |
| ADG-L-335-45     | Programmable DC Power Supply (15kW/335V/45A)                     |
| ADG-L-335-135-15 | Programmable DC Power Supply (15kW/335V/135A) (Auto Range Model) |
| ADG-L-500-30     | Programmable DC Power Supply (15kW/500V/30A)                     |
| ADG-L-670-23     | Programmable DC Power Supply (15kW/670V/23A)                     |
| ADG-L-1000-15    | Programmable DC Power Supply (15kW/1000V/15A)                    |
| ADG-L-1000-45-15 | Programmable DC Power Supply (15kW/1000V/45A) (Auto Range Model) |
| ADG-L-008        | Multiple Units Connection Cord DB25 (Male*2) 50 cm               |
| ADG-L-013        | GPIB Interface Board                                             |
| ADG-L-014        | Reverse Current Protection Module                                |
| ADG-L-015        | I-V Curve Simulation and Remote Control Software                 |
| ADG-L-017        | Input Voltage 3Ø4W+G 340-528 Vac <sup>*1</sup>                   |
| ADG-L-018        | Remote Control Box                                               |
| ACCS-001         | USB to RS-485 converter +RS-232/RS-485 Cable M-F type (2M)       |
| ACCS-003         | RS-232/RS-485 Cable M-F type (2M)                                |

<sup>\*1</sup> Only available for models with an output of 115V or above.

\* For 30V, 40V, 80V models, please contact us for input voltage options.

## SPECIFICATIONS

### ADG-L Series (5kW)

| Model                                          |                       | ADG-L-30-170                                                              | ADG-L-40-125        | ADG-L-80-62         | ADG-L-80-170-5 | ADG-L-115-45                                                    | ADG-L-160-32 | ADG-L-335-15        | ADG-L-335-45-5 |
|------------------------------------------------|-----------------------|---------------------------------------------------------------------------|---------------------|---------------------|----------------|-----------------------------------------------------------------|--------------|---------------------|----------------|
| Output Power                                   |                       | 5kW                                                                       | 5kW                 | 5kW                 | 5kW            | 5kW                                                             | 5kW          | 5kW                 | 5kW            |
| INPUT                                          |                       |                                                                           |                     |                     |                |                                                                 |              |                     |                |
| Input Voltage                                  |                       | 1Ø 2W+G 187-264 VAC                                                       |                     |                     |                | 1Ø 2W+G 187-264 VAC<br>3Ø3W+G 187-264 VAC<br>3Ø4W+G 340-460 VAC |              |                     |                |
| Input Current                                  |                       | 30A                                                                       |                     |                     |                |                                                                 |              |                     |                |
| Input Frequency                                |                       | 47 Hz-63 Hz                                                               |                     |                     |                |                                                                 |              |                     |                |
| Power Factor                                   |                       | ≥ 0.99 at max. power                                                      |                     |                     |                | ≥ 0.99 at max. power                                            |              |                     |                |
| OUTPUT                                         |                       |                                                                           |                     |                     |                |                                                                 |              |                     |                |
| Voltage                                        |                       | 0~30V                                                                     | 0~40V               | 0~80V               | 0~80V          | 0 - 115V                                                        | 0 - 160V     | 0 - 335V            | 0 - 335V       |
| Current                                        |                       | 0~170A                                                                    | 0~125A              | 0~62.5A             | 0~170A         | 0 - 45A                                                         | 0 - 32A      | 0 - 15A             | 0 - 45A        |
| Voltage Ripple (RMS) <sup>*1</sup>             |                       | ≤0.15% F.S.                                                               | ≤0.1% F.S.          | ≤0.05% F.S.         | ≤0.08% F.S.    | ≤0.25% F.S.                                                     | ≤0.2% F.S.   | ≤0.08% F.S.         | ≤0.08% F.S.    |
| Voltage Ripple <sup>*1</sup><br>(peak to peak) |                       | ≤2% F.S.                                                                  | ≤1.5% F.S.          | ≤0.8% F.S.          | ≤0.8% F.S.     | ≤1.6% F.S.                                                      | ≤1.6% F.S.   | ≤0.8% F.S.          | ≤0.8% F.S.     |
| Voltage Line Regulation                        |                       | ≤0.1% F.S.                                                                | ≤0.1% F.S.          | ≤0.1% F.S.          | ≤0.1% F.S.     | ≤0.1% F.S.                                                      | ≤0.1% F.S.   | ≤0.1% F.S.          | ≤0.1% F.S.     |
| Voltage Load Regulation <sup>*2</sup>          |                       | ≤0.1% F.S.                                                                | ≤0.1% F.S.          | ≤0.1% F.S.          | ≤0.1% F.S.     | ≤0.3% F.S.                                                      | ≤0.3% F.S.   | ≤0.1% F.S.          | ≤0.1% F.S.     |
| Current Ripple (RMS)                           |                       | ≤0.05% F.S.                                                               | ≤0.08% F.S.         | ≤0.1% F.S.          | ≤0.05% F.S.    | ≤0.25% F.S.                                                     | ≤0.2% F.S.   | ≤0.15% F.S.         | ≤0.15% F.S.    |
| Current Line Regulation                        |                       | ≤0.05% F.S.                                                               | ≤0.05% F.S.         | ≤0.05% F.S.         | ≤0.05% F.S.    | ≤0.03% F.S.                                                     | ≤0.03% F.S.  | ≤0.03% F.S.         | ≤0.03% F.S.    |
| Current Load Regulation                        |                       | ≤0.15% F.S.                                                               | ≤0.15% F.S.         | ≤0.15% F.S.         | ≤0.15% F.S.    | ≤0.2% F.S.                                                      | ≤0.2% F.S.   | ≤0.2% F.S.          | ≤0.15% F.S.    |
| Slew Rate <sup>*3</sup>                        | Rise Time             | ≤ 8ms                                                                     | ≤8ms                | ≤ 15ms              | ≤ 15mS         | ≤ 25ms                                                          | ≤ 25ms       | ≤ 30ms              | ≤ 30ms         |
|                                                | Fall Time (Full Load) | ≤ 3ms                                                                     | ≤ 3ms               | ≤ 8ms               | ≤ 8mS          | ≤ 30ms                                                          | ≤ 30ms       | ≤ 45ms              | ≤ 45ms         |
|                                                | Fall Time (No Load)   | ≤ 3s                                                                      |                     |                     |                |                                                                 |              |                     |                |
| Transient Response <sup>*4</sup>               |                       | ≤ 5ms                                                                     |                     |                     |                |                                                                 |              |                     |                |
| Programming & Measurement                      |                       |                                                                           |                     |                     |                |                                                                 |              |                     |                |
| Voltage Programming Accuracy                   |                       | ≤ 0.08% F.S. +0.01V                                                       |                     |                     |                | ≤ 0.08% F.S. +100mV                                             |              |                     |                |
| Voltage Measurement Accuracy                   |                       | ≤ 0.08% F.S. +0.01V                                                       |                     |                     |                | ≤ 0.08% F.S. +100mV                                             |              |                     |                |
| Voltage Resolution                             |                       | 10mV                                                                      |                     |                     |                | 100mV                                                           |              |                     |                |
| Current Programming Accuracy                   |                       | ≤ 0.2% F.S. +0.1A                                                         |                     |                     |                | ≤ 0.3% F.S. +60mA                                               |              |                     |                |
| Current Measurement Accuracy                   |                       | ≤ 0.2% F.S. +0.1A                                                         |                     |                     |                | ≤ 0.2% F.S. +60mA                                               |              |                     |                |
| Current Resolution                             |                       | 0.1A                                                                      |                     |                     |                | 10mA                                                            |              |                     |                |
| Power Programming Accuracy                     |                       | ≤ 0.3% F.S.                                                               |                     |                     |                | ≤ 0.4% F.S.                                                     |              |                     |                |
| Power Measurement Accuracy                     |                       | ≤ 0.3% F.S.                                                               |                     |                     |                | ≤ 0.4% F.S.                                                     |              |                     |                |
| Power Resolution                               |                       | 0.01kW                                                                    |                     |                     |                | 0.01kW                                                          |              |                     |                |
| General Specs                                  |                       |                                                                           |                     |                     |                |                                                                 |              |                     |                |
| Efficiency <sup>*5</sup>                       |                       | ≥ 87% at max. power                                                       | ≥ 88% at max. power | ≥ 90% at max. power |                | ≥ 87% at max. power                                             |              | ≥ 90% at max. power |                |
| Interfaces                                     |                       | Standard: RS-232, RS-485, Ethernet, USB, Analog<br>Option: GPIB           |                     |                     |                |                                                                 |              |                     |                |
| Analog Input Control (V & I )                  |                       | 0-5V, 4-20mA, Accuracy : 1% F.S. (at output rated voltage & current ≥ 5%) |                     |                     |                | 0-5V, Accuracy : 2%                                             |              |                     |                |
| Analog Output Monitor (V & I )                 |                       | 0-5V, Accuracy : 2% F.S.                                                  |                     |                     |                | -                                                               |              |                     |                |
| Remote Sensing                                 |                       | ≤ 5V                                                                      |                     |                     |                |                                                                 |              |                     |                |
| Operating Temperature                          |                       | 0°C ~ 40°C                                                                |                     |                     |                |                                                                 |              |                     |                |
| Storage Temperature                            |                       | -20°C ~ 70°C                                                              |                     |                     |                |                                                                 |              |                     |                |
| Protections                                    |                       | OVP、OCP、OPP、OTP、Vin OV、LDC OV、Remote Error、FAN Error                      |                     |                     |                | OVP、OCP、OPP、OTP、Vin OV、Vin Unbalance、LDC OV                     |              |                     |                |
| OVP Range                                      |                       | 0 - 110% F.S.                                                             |                     |                     |                | 0 - 110% F.S.                                                   |              |                     |                |
| OCP Range                                      |                       | 0 - 110% F.S.                                                             |                     |                     |                | 0 - 110% F.S.                                                   |              |                     |                |
| OPP Range                                      |                       | 0 - 110% F.S.                                                             |                     |                     |                | 0 - 110% F.S.                                                   |              |                     |                |
| Dimension (HxWxD)                              |                       | 132 x 442 x 731.5 mm / 5.2 x 17.4 x 28.8 inch                             |                     |                     |                | 132 x 442 x 692 mm / 5.2 x 17.4 x 27.2 inch                     |              |                     |                |
| Weight <sup>*6</sup>                           |                       | approx. 20.7kg / 45.7 lbs                                                 |                     |                     |                | approx. 19.1kg / 42.1 lbs                                       |              |                     |                |

\*1 When output current is ≥ 2% of rated current. \*2 The load variation is 0-100% at rated input voltage. \*3 The time required for the output voltage to change from 10% to 90% or 90% to 10% at full scale.

\*4 Under nominal AC input, recovers to ±1% of full-scale output voltage for a 50% to 100% or 100% to 50% load change. \*5 When voltage output is at the max. voltage

\*6 weight tolerance is within ±10% \* The above is the specification when the output voltage and current are 1% or more

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# SPECIFICATIONS

## ADG-L Series (10kW)

| Model                                       |                       | ADG-L-30-340                                                                       | ADG-L-40-250        | ADG-L-80-125        | ADG-L-80-340-10     | ADG-L-115-90                                                                                   | ADG-L-160-63       | ADG-L-335-30       | ADG-L-335-90-10     | ADG-L-500-20          | ADG-L-670-15         | ADG-L-670-45-10      |
|---------------------------------------------|-----------------------|------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|------------------------------------------------------------------------------------------------|--------------------|--------------------|---------------------|-----------------------|----------------------|----------------------|
| Output Power                                |                       | 10kW                                                                               | 10kW                | 10kW                | 10kW                | 10kW                                                                                           | 10kW               | 10kW               | 10kW                | 10kW                  | 10kW                 | 10kW                 |
| INPUT                                       |                       |                                                                                    |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Input Voltage                               |                       | A: 3Ø4W+G 340-460 Vac<br>B: 3Ø3W+G 187-264 Vac                                     |                     |                     |                     | 1Ø 2W+G 187-264 VAC<br>3Ø3W+G 187-264 VAC<br>3Ø4W+G 340-460 VAC<br>(Option 3Ø4W+G 340-528 VAC) |                    |                    |                     |                       |                      |                      |
| Input Current                               |                       | A: 3ØY : 52A<br>B: 3ØΔ : 52A                                                       |                     |                     |                     | 1Ø : 60A<br>3ØΔ: 35A<br>3ØY : 19A                                                              |                    |                    |                     |                       |                      |                      |
| Input Frequency                             |                       | 47 Hz-63 Hz                                                                        |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Power Factor                                |                       | ≥ 0.99 at max. power                                                               |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| OUTPUT                                      |                       |                                                                                    |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Voltage                                     |                       | 0~30V                                                                              | 0~40V               | 0~80V               | 0~80V               | 0 - 115V                                                                                       | 0 - 160V           | 0 - 335V           | 0 - 335V            | 0 - 500V              | 0 - 670V             | 0 - 670V             |
| Current                                     |                       | 0~340A                                                                             | 0~250A              | 0~125A              | 0~340A              | 0 - 90A                                                                                        | 0 - 63A            | 0 - 30A            | 0 - 90A             | 0 - 20A               | 0 - 15A              | 0 - 45A              |
| Voltage Ripple (RMS) <sup>*1</sup>          |                       | ≤0.25% F.S.                                                                        | ≤0.15% F.S.         | ≤0.1% F.S.          | ≤0.1% F.S.          | ≤ 0.3% F.S.                                                                                    | ≤ 0.3% F.S.        | ≤0.15% F.S.        | ≤0.15% F.S.         | ≤0.08% F.S.           | ≤0.08% F.S.          | ≤0.08% F.S.          |
| Voltage Ripple (peak to peak) <sup>*1</sup> |                       | ≤ 4% F.S.                                                                          | ≤3% F.S.            | ≤1.5% F.S.          | ≤2% F.S.            | ≤ 2.5% F.S.                                                                                    | ≤ 2.5% F.S.        | ≤ 1.6% F.S.        | ≤ 1.6% F.S.         | ≤ 0.8% F.S.           | ≤0.8% F.S.           | ≤0.8% F.S.           |
| Voltage Line Regulation                     |                       | ≤0.1% F.S.                                                                         | ≤0.1% F.S.          | ≤0.1%F.S.           | ≤0.1% F.S.          | ≤ 0.1% F.S.                                                                                    | ≤ 0.1% F.S.        | ≤ 0.1% F.S.        | ≤ 0.1% F.S.         | ≤0.03% F.S.           | ≤0.03% F.S.          | ≤0.03% F.S.          |
| Voltage Load Regulation <sup>*2</sup>       |                       | ≤0.1% F.S.                                                                         | ≤0.1% F.S.          | ≤0.1% F.S.          | ≤0.1% F.S.          | ≤ 0.3% F.S.                                                                                    | ≤ 0.3% F.S.        | ≤ 0.3% F.S.        | ≤ 0.3% F.S.         | ≤0.05% F.S.           | ≤0.05% F.S.          | ≤0.05% F.S.          |
| Current Ripple (RMS)                        |                       | ≤ .05% F.S.                                                                        | ≤0.05% F.S.         | ≤0.08% F.S.         | ≤0.05% F.S.         | ≤ 0.3% F.S.                                                                                    | ≤ 0.2% F.S.        | ≤ 0.3% F.S.        | ≤ 0.2% F.S.         | ≤ 0.5% F.S.           | ≤0.5% F.S.           | ≤0.25% F.S.          |
| Current Line Regulation                     |                       | ≤ 0.05%F.S.                                                                        | ≤0.05% F.S.         | ≤ 0.05% F.S.        | ≤ 0.05% F.S.        | ≤ 0.1% F.S.                                                                                    | ≤ 0.1% F.S.        | ≤ 0.2% F.S.        | ≤ 0.2% F.S.         | ≤ 0.05% F.S.<br>+50mA | ≤ 0.05%F.S.<br>+50mA | ≤ 0.05%F.S.<br>+50mA |
| Current Load Regulation                     |                       | ≤0.15% F.S.                                                                        | ≤0.15% F.S.         | ≤0.15% F.S.         | ≤0.15% F.S.         | ≤ 0.2% F.S.                                                                                    | ≤ 0.2% F.S.        | ≤ 0.3% F.S.        | ≤ 0.3% F.S.         | ≤0.25% F.S.           | ≤0.25% F.S.          | ≤0.25% F.S.          |
| Slew Rate <sup>*3</sup>                     | Rise Time             | ≤ 8ms                                                                              | ≤ 8ms               | ≤ 15ms              | ≤ 15ms              | ≤ 25ms                                                                                         | ≤ 25ms             | ≤ 30ms             | ≤ 30ms              | ≤ 55ms                | ≤ 60ms               | ≤ 60ms               |
|                                             | Fall Time (Full Load) | ≤ 3ms                                                                              | ≤ 3ms               | ≤ 8ms               | ≤ 8ms               | ≤ 30ms                                                                                         | ≤ 30ms             | ≤ 45ms             | ≤ 45ms              | ≤ 45ms                | ≤ 45ms               | ≤ 45ms               |
|                                             | Fall Time (No Load)   | ≤ 3s                                                                               |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Transient Response <sup>*4</sup>            |                       | ≤ 5ms                                                                              |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Programming & Measurement                   |                       |                                                                                    |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Voltage Programming Accuracy                |                       | ≤ 0.08% F.S. +0.01V                                                                |                     |                     |                     | ≤ 0.08% F.S. +100mV                                                                            |                    |                    |                     |                       |                      |                      |
| Voltage Measurement Accuracy                |                       | ≤ 0.08% F.S. +0.01V                                                                |                     |                     |                     | ≤ 0.08% F.S. +100mV                                                                            |                    |                    |                     |                       |                      |                      |
| Voltage Resolution                          |                       | 10mV                                                                               |                     |                     |                     | 100mV                                                                                          |                    |                    |                     |                       |                      |                      |
| Current Programming Accuracy                |                       | ≤ 0.2% F.S. +0.1A                                                                  |                     |                     |                     | ≤ 0.3% F.S. +60mA                                                                              |                    |                    |                     |                       |                      |                      |
| Current Measurement Accuracy                |                       | ≤ 0.2% F.S. +0.1A                                                                  |                     |                     |                     | ≤ 0.3% F.S. +60mA                                                                              |                    |                    |                     |                       |                      |                      |
| Current Resolution                          |                       | 0.1A                                                                               |                     |                     |                     | 10mA                                                                                           |                    |                    |                     |                       |                      |                      |
| Power Programming Accuracy                  |                       | ≤ 0.3% F.S.                                                                        |                     |                     |                     | ≤ 0.4% F.S.                                                                                    |                    |                    |                     |                       |                      |                      |
| Power Measurement Accuracy                  |                       | ≤ 0.3% F.S.                                                                        |                     |                     |                     | ≤ 0.4% F.S.                                                                                    |                    |                    |                     |                       |                      |                      |
| Power Resolution                            |                       | 0.01kW                                                                             |                     |                     |                     | 0.01kW                                                                                         |                    |                    |                     |                       |                      |                      |
| General Specs                               |                       |                                                                                    |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Efficiency <sup>*5</sup>                    |                       | ≥ 87% at max. power                                                                | ≥ 88% at max. power | ≥ 90% at max. power | ≥ 90% at max. power | ≥ 87% at max. power                                                                            | ≥ 90% at max.power | ≥ 90% at max.power | ≥ 87% at max. power | ≥ 90% at max. power   | ≥ 90% at max. power  | ≥ 90% at max. power  |
| Interfaces                                  |                       | Standard: RS-232, RS-485, Ethernet, USB, Analog<br>Option: GPIB                    |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Analog Input Control (V & I)                |                       | 0-5V, 4-20mA, Accuracy : 1% F.S. (at output rated voltage & current ≥ 5%)          |                     |                     |                     | 0-5V, Accuracy : 2%                                                                            |                    |                    |                     |                       |                      |                      |
| Analog Output Monitor (V & I)               |                       | 0-5V, Accuracy : 2% F.S.                                                           |                     |                     |                     | -                                                                                              |                    |                    |                     |                       |                      |                      |
| Remote sense compensation                   |                       | ≤ 5V                                                                               |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Operating Temperature                       |                       | 0°C ~ 40°C                                                                         |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Storage Temperature                         |                       | -20°C ~ 70°C                                                                       |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Protections                                 |                       | OVP · OCP · OPP · OTP · Vin OV · Vin Unbalance · LDC OV · Remote Error · FAN Error |                     |                     |                     | OVP · OCP · OPP · OTP · Vin OV · Vin Unbalance · LDC OV                                        |                    |                    |                     |                       |                      |                      |
| OVP Range                                   |                       | 0 - 110% F.S.                                                                      |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| OCP Range                                   |                       | 0 - 110% F.S.                                                                      |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| OPP Range                                   |                       | 0 - 110% F.S.                                                                      |                     |                     |                     |                                                                                                |                    |                    |                     |                       |                      |                      |
| Dimension (HxWxD)                           |                       | 132 x 442 x 731.5 mm / 5.2 x 17.4 x 28.8 inch                                      |                     |                     |                     | 132 x 442 x 692 mm / 5.2 x 17.4 x 27.2 inch                                                    |                    |                    |                     |                       |                      |                      |
| Weight <sup>*6</sup>                        |                       | approx. 28.6kg / 63 lbs                                                            |                     |                     |                     | approx. 26.5kg / 58.42 lbs                                                                     |                    |                    |                     |                       |                      |                      |

\*1 When output current is ≥ 2% of rated current. \*2 The load variation is 0-100% at rated input voltage. \*3 The time required for the output voltage to change from 10% to 90% or 90% to 10% at full scale.

\*4 Under nominal AC input, recovers to ±1% of full-scale output voltage for a 50% to 100% or 100% to 50% load change. \*5 When voltage output is at the max. voltage

\*6 weight tolerance is within ±10% \* The above is the specification when the output voltage and current are 1% or more

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# SPECIFICATIONS

## ADG-L Series (15kW)

| Model                                       |                       | ADG-L-30-510                                                              | ADG-L-40-375        | ADG-L-80-187        | ADG-L-80-510-15 | ADG-L-115-135                                                                                  | ADG-L-160-94          | ADG-L-335-45          | ADG-L-335-135-15      | ADG-L-500-30          | ADG-L-670-23          | ADG-L-1000-15 | ADG-L-1000-45-15 |
|---------------------------------------------|-----------------------|---------------------------------------------------------------------------|---------------------|---------------------|-----------------|------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|------------------|
| Output Power                                |                       | 15kW                                                                      | 15kW                | 15kW                | 15kW            | 15kW                                                                                           | 15kW                  | 15kW                  | 15kW                  | 15kW                  | 15kW                  | 15kW          | 15kW             |
| INPUT                                       |                       |                                                                           |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Input Voltage                               |                       | A: 3Ø4W+G 340-460 Vac<br>B: 3Ø3W+G 187-264 Vac                            |                     |                     |                 | 1Ø 2W+G 187-264 VAC<br>3Ø3W+G 187-264 VAC<br>3Ø4W+G 340-460 VAC<br>(Option 3Ø4W+G 340-528 VAC) |                       |                       |                       |                       |                       |               |                  |
| Input Current                               |                       | A: 3ØY : 30A<br>B: 3ØΔ : 52A                                              |                     |                     |                 | 1Ø : 90A<br>3ØΔ: 52A<br>3ØY : 30A                                                              |                       |                       |                       |                       |                       |               |                  |
| Input Frequency                             |                       | 47 Hz-63 Hz                                                               |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Power Factor                                |                       | ≥ 0.99 at max. power                                                      |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| OUTPUT                                      |                       |                                                                           |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Voltage                                     |                       | 0~30V                                                                     | 0~40V               | 0~80V               | 0~80V           | 0 - 115V                                                                                       | 0 - 160V              | 0 - 335V              | 0 - 335V              | 0 - 500V              | 0 - 670V              | 0 - 1000V     | 0 - 1000V        |
| Current                                     |                       | 0~510A                                                                    | 0~375A              | 0~187.5A            | 0~510A          | 0 - 135A                                                                                       | 0 - 94A               | 0 - 45A               | 0 - 135A              | 0 - 30A               | 0 - 23A               | 0 - 15A       | 0 - 45A          |
| Voltage Ripple (RMS) <sup>*1</sup>          |                       | ≤0.25% F.S.                                                               | ≤0.2% F.S.          | ≤0.15% F.S.         | ≤0.15% F.S.     | ≤0.3% F.S.                                                                                     | ≤0.3% F.S.            | ≤0.15% F.S.           | ≤0.15% F.S.           | ≤0.15% F.S.           | ≤0.15% F.S.           | ≤0.1% F.S.    | ≤0.1% F.S.       |
| Voltage Ripple (peak to peak) <sup>*1</sup> |                       | ≤ 4% F.S.                                                                 | ≤ 3% F.S.           | ≤ 1.5% F.S.         | ≤ 2% F.S.       | ≤ 1.6% F.S.                                                                                    | ≤ 1.6% F.S.           | ≤ 1% F.S.             | ≤ 1% F.S.             | ≤ 0.8% F.S.           | ≤ 0.8% F.S.           | ≤ 0.5% F.S.   | ≤ 0.5% F.S.      |
| Voltage Line Regulation                     |                       | ≤0.1% F.S.                                                                | ≤0.1% F.S.          | ≤0.1% F.S.          | ≤0.1% F.S.      | ≤0.1% F.S.                                                                                     | ≤0.1% F.S.            | ≤0.1% F.S.            | ≤0.1% F.S.            | ≤0.1% F.S.            | ≤0.1% F.S.            | ≤0.1% F.S.    | ≤0.1% F.S.       |
| Voltage Load Regulation <sup>*2</sup>       |                       | ≤0.1% F.S.                                                                | ≤0.1% F.S.          | ≤0.1% F.S.          | ≤0.1% F.S.      | ≤0.2% F.S.                                                                                     | ≤0.2% F.S.            | ≤0.2% F.S.            | ≤0.2% F.S.            | ≤0.2% F.S.            | ≤0.2% F.S.            | ≤0.1% F.S.    | ≤0.1% F.S.       |
| Current Ripple (RMS)                        |                       | ≤ 0.05% F.S.                                                              | ≤ 0.05% F.S.        | ≤ 0.08% F.S.        | ≤ 0.05% F.S.    | ≤0.1% F.S.                                                                                     | ≤0.1% F.S.            | ≤0.15% F.S.           | ≤0.1% F.S.            | ≤0.25% F.S.           | ≤0.25% F.S.           | ≤0.5% F.S.    | ≤0.25% F.S.      |
| Current Line Regulation                     |                       | ≤ 0.05% F.S.                                                              | ≤ 0.05% F.S.        | ≤ 0.05% F.S.        | ≤ 0.05% F.S.    | ≤0.05% F.S.<br>+50mA                                                                           | ≤ 0.05% F.S.<br>+50mA | ≤ 0.05% F.S.<br>+50mA | ≤ 0.05% F.S.<br>+50mA | ≤ 0.05% F.S.<br>+50mA | ≤ 0.05% F.S.<br>+50mA | ≤ 0.05% F.S.  | ≤ 0.05% F.S.     |
| Current Load Regulation                     |                       | ≤0.15% F.S.                                                               | ≤0.15% F.S.         | ≤0.15% F.S.         | ≤ 0.15% F.S.    | ≤0.1% F.S.                                                                                     | ≤0.1% F.S.            | ≤0.2% F.S.            | ≤0.2% F.S.            | ≤0.3% F.S.            | ≤0.3% F.S.            | ≤0.3% F.S.    | ≤0.3% F.S.       |
| Slew Rate <sup>*3</sup>                     | Rise Time             | ≤ 8ms                                                                     | ≤ 8ms               | ≤ 15ms              | ≤ 15ms          | ≤ 25ms                                                                                         | ≤ 30ms                | ≤ 30ms                | ≤ 30ms                | ≤ 55ms                | ≤ 60ms                | ≤ 90ms        | ≤ 90ms           |
|                                             | Fall Time (Full Load) | ≤ 3ms                                                                     | ≤ 3ms               | ≤ 8ms               | ≤ 8ms           | ≤ 30ms                                                                                         | ≤ 45ms                | ≤ 45ms                | ≤ 45ms                | ≤ 45ms                | ≤ 45ms                | ≤ 40ms        | ≤ 40ms           |
|                                             | Fall Time (No Load)   | ≤ 3s                                                                      |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Transient Response <sup>*4</sup>            |                       | ≤ 5ms                                                                     |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Programming & Measurement                   |                       |                                                                           |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Voltage Programming Accuracy                |                       | ≤ 0.08% F.S. +0.01V                                                       |                     |                     |                 | ≤ 0.08% F.S. +100mV                                                                            |                       |                       |                       |                       |                       |               |                  |
| Voltage Measurement Accuracy                |                       | ≤ 0.08% F.S. +0.01V                                                       |                     |                     |                 | ≤ 0.08% F.S. +100mV                                                                            |                       |                       |                       |                       |                       |               |                  |
| Voltage Resolution                          |                       | 10mV                                                                      |                     |                     |                 | 100mV                                                                                          |                       |                       |                       |                       |                       |               |                  |
| Current Programming Accuracy                |                       | ≤ 0.2% F.S. +0.1A                                                         |                     |                     |                 | ≤ 0.4% F.S. +60mA                                                                              |                       |                       |                       |                       |                       |               |                  |
| Current Measurement Accuracy                |                       | ≤ 0.2% F.S. +0.1A                                                         |                     |                     |                 | ≤ 0.4% F.S. +60mA                                                                              |                       |                       |                       |                       |                       |               |                  |
| Current Resolution                          |                       | 0.1A                                                                      |                     |                     |                 | 10mA                                                                                           |                       |                       |                       |                       |                       |               |                  |
| Power Programming Accuracy                  |                       | ≤ 0.3% F.S.                                                               |                     |                     |                 | ≤ 0.4% F.S.                                                                                    |                       |                       |                       |                       |                       |               |                  |
| Power Measurement Accuracy                  |                       | ≤ 0.3% F.S.                                                               |                     |                     |                 | ≤ 0.4% F.S.                                                                                    |                       |                       |                       |                       |                       |               |                  |
| Power Resolution                            |                       | 0.01kW                                                                    |                     |                     |                 | 0.01kW                                                                                         |                       |                       |                       |                       |                       |               |                  |
| General Specs                               |                       |                                                                           |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Efficiency <sup>*5</sup>                    |                       | ≥ 87% at max. power                                                       | ≥ 88% at max. power | ≥ 90% at max. power |                 | ≥ 87% at max. power                                                                            |                       | ≥ 90% at max. power   |                       | ≥ 87% at max. power   | ≥ 90% at max. power   |               |                  |
| Interfaces                                  |                       | Standard: RS-232, RS-485, Ethernet, USB, Analog<br>Option: GPIB           |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Analog Input Control (V & I)                |                       | 0-5V, 4-20mA, Accuracy : 1% F.S. (at output rated voltage & current ≥ 5%) |                     |                     |                 | 0-5V, Accuracy : 2%                                                                            |                       |                       |                       |                       |                       |               |                  |
| Analog Output Monitor (V & I)               |                       | 0-5V, Accuracy : 2% F.S.                                                  |                     |                     |                 | -                                                                                              |                       |                       |                       |                       |                       |               |                  |
| Remote sense compensation                   |                       | ≤ 5V                                                                      |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Operating Temperature                       |                       | 0°C ~ 40°C                                                                |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Storage Temperature                         |                       | -20°C ~ 70°C                                                              |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Protections                                 |                       | OVP・OCP・OPP・OTP・Vin OV・Vin Unbalance・LDC OV                               |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| OVP Range                                   |                       | 0 - 110% F.S.                                                             |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| OCP Range                                   |                       | 0 - 110% F.S.                                                             |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| OPP Range                                   |                       | 0 - 110% F.S.                                                             |                     |                     |                 |                                                                                                |                       |                       |                       |                       |                       |               |                  |
| Dimension (HxWxD)                           |                       | 132 x 442 x 731.5 mm / 5.2 x 17.4 x 28.8 inch                             |                     |                     |                 | 132 x 442 x 692 mm / 5.2 x 17.4 x 27.2 inch                                                    |                       |                       |                       |                       |                       |               |                  |
| Weight <sup>*6</sup>                        |                       | approx. 34.4kg / 76 lbs                                                   |                     |                     |                 | approx. 31.8kg / 70.1lbs                                                                       |                       |                       |                       |                       |                       |               |                  |

\*1 When output current is ≥ 2% of rated current. \*2 The load variation is 0-100% at rated input voltage. \*3 The time required for the output voltage to change from 10% to 90% or 90% to 10% at full scale.

\*4 Under nominal AC input, recovers to ±1% of full-scale output voltage for a 50% to 100% or 100% to 50% load change. \*5 When voltage output is at the max. voltage

\*6 weight tolerance is within ±10% \* The above is the specification when the output voltage and current are 1% or more

\*\* The company's products are constantly being developed and improved, and the specifications are subject to change without prior notice.