



Your Power House VP ELECTRONIQUE

High Voltage Output, Wide Auto Range, Compact Size

VPG-L Series is a DC supply with high density power output, it features DSP and PWM technologies that enabled significant advances in stability and measurements. The VPG-L series includes 19 models with 5kW, 10kW and 15kW maximum output powers and Auto Range models available to provide a higher output current at lower output voltage. It also supports parallel connections up to 5 units, enabling a total output power up to 75kW.

2000V Output

Wide Voltage Range, Ideal for New Energy Applications



3 Times Auto Range

Lower Voltage, Higher Current



Parallel Connection

Fast Setting, Easy Wiring



SUPPORTS

**1PHASE
3WIRES**



VPG-L series

High Power Programmable DC Power Supply

RoHS
Compliant CE



Output Power
5kW/10kW/15kW

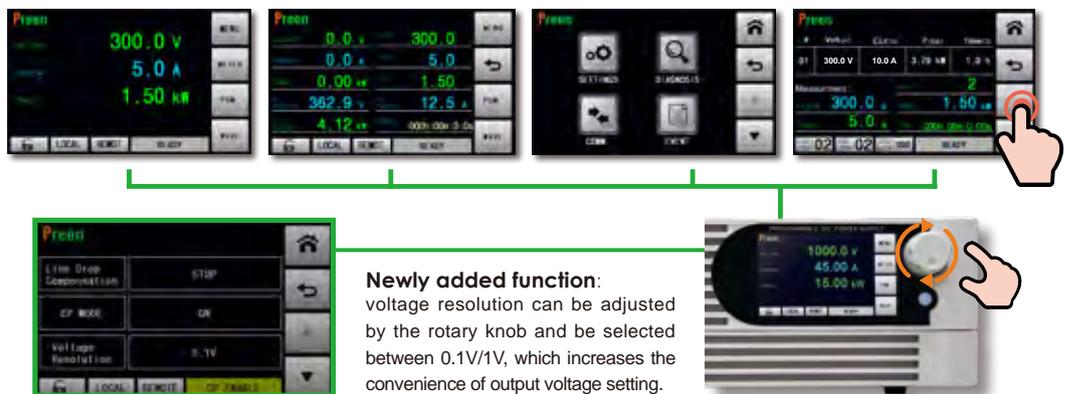
Interfaces

Standard	RS-232	RS-485	USB
	Ethernet	Analog	
Option	GPIO		

New VPG-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. The VPG-L series includes 19 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 VPG-L series is an ideal DC power for applications on photovoltaic (PV), electric vehicle (EV), battery charge simulation, fuse, and contactors.

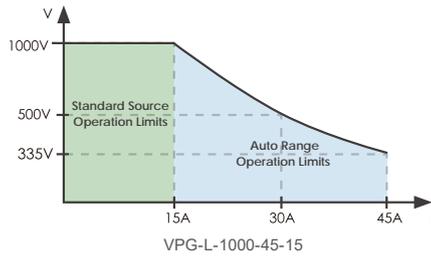
Parallel configuration is available for higher output level. The VPG-L series is operated via the 5" intuitive touch screen or the rotary knob to quickly access measurements, setting parameters, and configurations. The unit can also be controlled via standard RS-232, RS-485, Analog, Ethernet, USB and 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 VPG-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.

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 VPG-L series can be controlled via the 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.

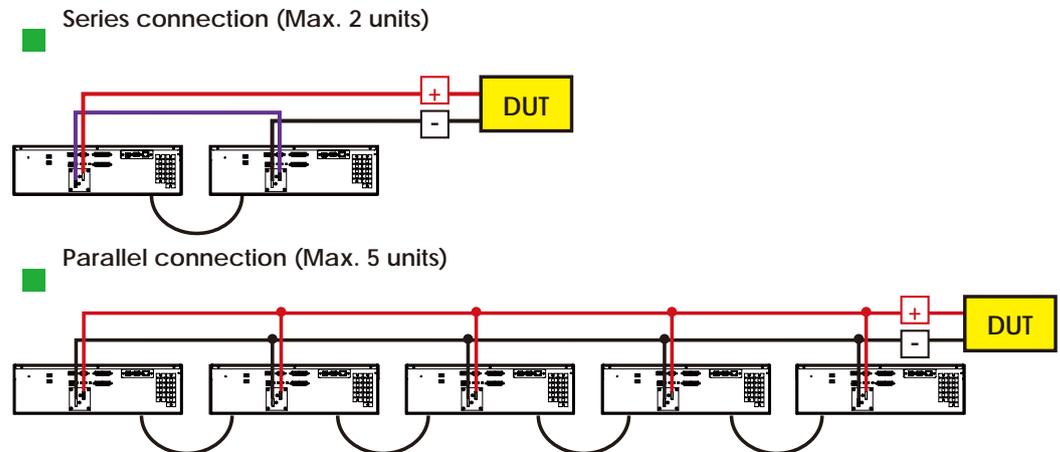
High Power Density: 15kW in 3U



Employing PWM technology and DSP-based control, VPG-L series DC power supply has 15kW available only in 3U package, 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.

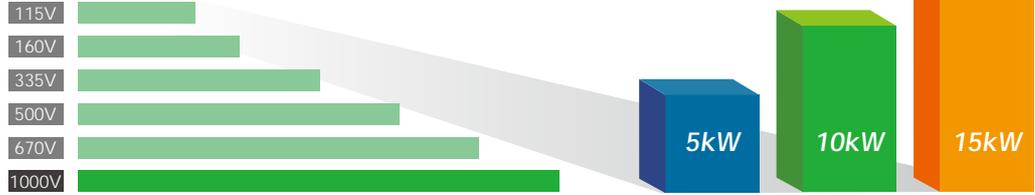
Multiple Connections



The single unit power of VPG-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 VPG-L series according to the load test requirements, thereby increases flexibility of the application.

Wide Voltage and Current Range

19 Models



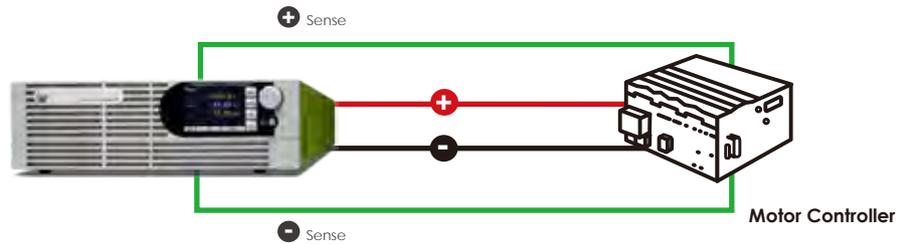
VPG-L series has 19 different models with three output power levels, 5kW, 10kW and 15kW. With up to 1000 V output voltage and multiple Auto Range models, the VPG-L series covers a wide range of applications including electric vehicle, photovoltaic, battery, DCIDC converters and electronic products.

Master/Slave Parallel Operation



Through a simple and fast setup, the VPG-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



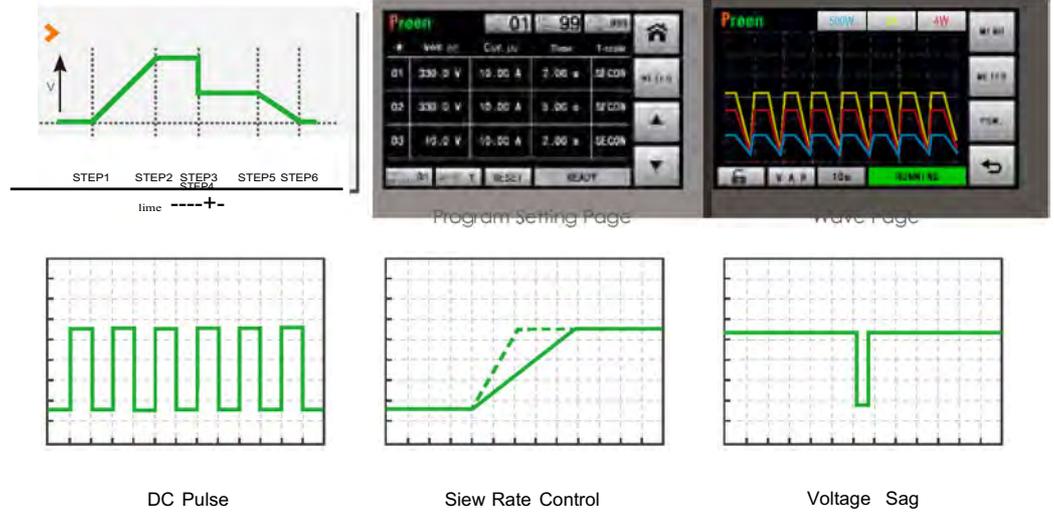
In many laboratories and factories, the DC power supply is located in a certain distance away from the DUT, and sometimes it causes voltage drop due to the resistance of the wires. The VPG-L series' Remote Sensing function is able to compensate voltage drops and provide a stable output voltage.

Screen Lock Password Function



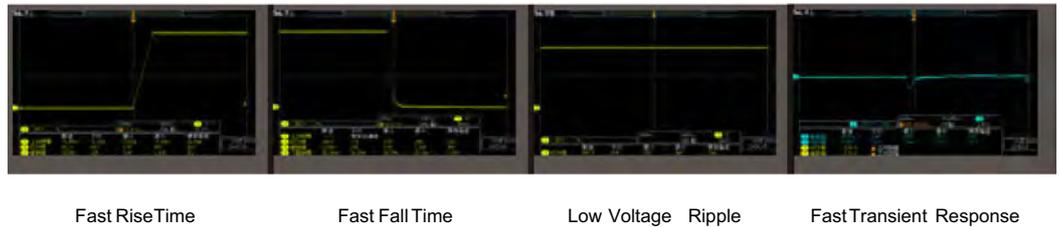
In order to prevent the operator from changing the set parameters by mistake, the new Screen Lock Password function is added on VPG-L series, so that the operator can only perform the output of the device, and only authorized personnel has the password to unlock the screen and edit parameters.

Programming Sequences and SimuJations



The built-in programming function of the VPG-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 VPG-L series' control software allow users to create complex OC waveform without sophisticated coding. Making programming the DC power supply an easy task.

Industry-leading Performance



The VPG-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 VPG-L series' DC sources are ideal to test DUT behavior to voltage sags, dropouts, ON/OFF tests and complex OC 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 VPG-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.)

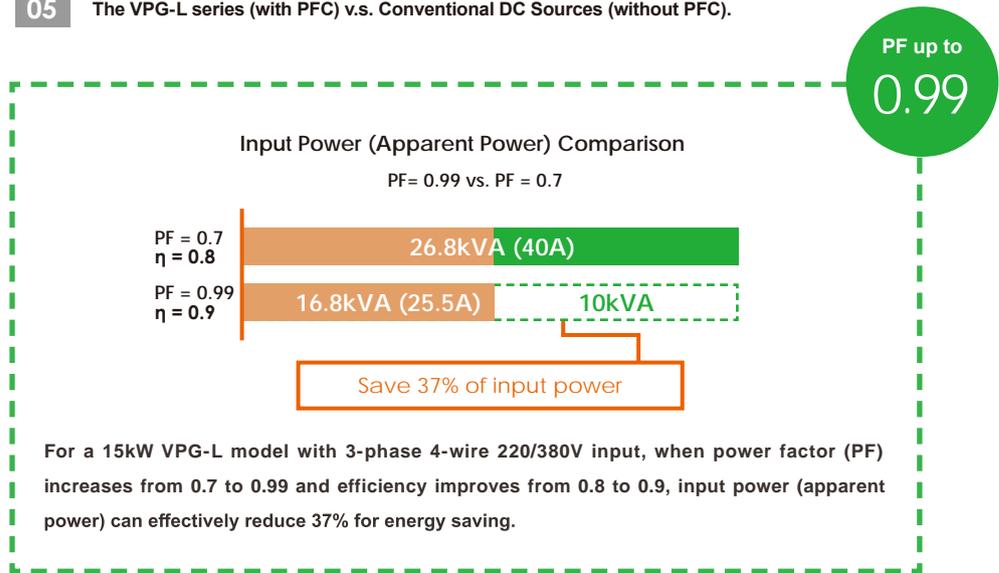
VPG-L series has optional Reverse Current Protection Module. When the DUT generates the reverse energy flowing back to the output of VPG-L series it can effectively block the reverse current to protect VPG-L series from possible damages.

DC Power Supply

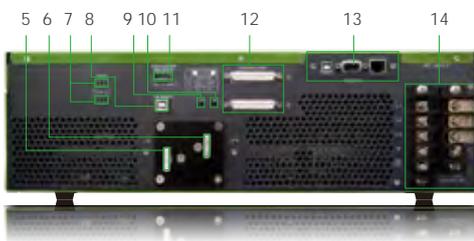
0.99 Input Power Factor

The VPG-L series is equipped with active Power Factor Corrector (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 VPG-L series (with PFC) v.s. Conventional DC Sources (without PFC).



PANEL DESCRIPTION



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

VPG-L Series (5kW-15kW)

Model Number	Description
VPG-L-115-45	Programmable DC Power Supply (5kW/115V/45A)
VPG-L-160-32	Programmable DC Power Supply (5kW/160V/32A)
VPG-L-335-15	Programmable DC Power Supply (5kW/335V/15A)
VPG-L-335-45-5	Programmable DC Power Supply (5kW/335V/45A) (Auto Range Model)
VPG-L-115-90	Programmable DC Power Supply (10kW/115V/90A)
VPG-L-160-63	Programmable DC Power Supply (10kW/160V/63A)
VPG-L-335-30	Programmable DC Power Supply (10kW/335V/30A)
VPG-L-335-90-10	Programmable DC Power Supply (10kW/335V/90A) (Auto Range Model)
VPG-L-500-20	Programmable DC Power Supply (10kW/500V/20A)
VPG-L-670-15	Programmable DC Power Supply (10kW/670V/15A)
VPG-L-670-45-10	Programmable DC Power Supply (10kW/670V/45A) (Auto Range Model)
VPG-L-115-135	Programmable DC Power Supply (15kW/115V/135A)
VPG-L-160-94	Programmable DC Power Supply (15kW/160V/94A)
VPG-L-335-45	Programmable DC Power Supply (15kW/335V/45A)
VPG-L-335-135-15	Programmable DC Power Supply (15kW/335V/135A) (Auto Range Model)
VPG-L-500-30	Programmable DC Power Supply (15kW/500V/30A)
VPG-L-670-23	Programmable DC Power Supply (15kW/670V/23A)
VPG-L-1000-15	Programmable DC Power Supply (15kW/1000V/15A)
VPG-L-1000-45-15	Programmable DC Power Supply (15kW/1000V/45A) (Auto Range Model)
VPG-L-008	Multiple Units Connection Cord DB25(Male * 2) 50 cm
VPG-L-013	GPIB Interface Board
VPG-L-014	Reverse Current Protection Module
VPG-L-015	I-V Curve Simulation and Remote Control Software
VPG-L-017	Input Voltage 3Ø4W+G 340-528 Vac

SPECIFICATIONS

VPG-L Series (5kW-10kW)

Model	VPG-L-115-45	VPG-L-160-32	VPG-L-335-15	VPG-L-335-45-5	VPG-L-115-90	VPG-L-160-63	VPG-L-335-30	VPG-L-335-90-10	VPG-L-500-20
Output Power	5kW	5kW	5kW	5kW	10kW	10kW	10kW	10kW	10kW
INPUT									
Input Voltage	1Ø 2W+G 187-264 VAC 3Ø3W+G 187-264 VAC 3Ø4W+G 340-460 VAC				1Ø 2W+G 187-264 VAC 3Ø3W+G 187-264 VAC 3Ø4W+G 340-460 VAC (Option 3Ø4W+G 340-528 VAC)				
Input Current	30A				1Ø : 60A 3ØΔ: 35A 3ØY : 19A				
Input Frequency	47 Hz-63 Hz				47 Hz-63 Hz				
Power Factor	≥ 0.99 at max. power				≥ 0.99 at max. power				
Voltage	0 - 115V	0 - 160V	0 - 335V	0 - 335V	0 - 115V	0 - 160V	0 - 335V	0 - 335V	0 - 500V
Current	0 - 45A	0 - 32A	0 - 15A	0 - 45A	0 - 90A	0 - 63A	0 - 30A	0 - 90A	0 - 20A
Voltage Ripple (RMS) ¹	≤ 0.25% F.S.	≤ 0.2% F.S.	≤ 0.08% F.S.	≤ 0.08% F.S.	≤ 0.3% F.S.	≤ 0.3% F.S.	≤ 0.15% F.S.	≤ 0.15% F.S.	≤ 0.08% F.S.
Voltage Ripple ¹ (peak to peak)	≤ 1.6% F.S.	≤ 1.6% F.S.	≤ 0.8% F.S.	≤ 0.8% F.S.	≤ 2.5% F.S.	≤ 2.5% F.S.	≤ 1.6% F.S.	≤ 1.6% 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.
Voltage Load Regulation ²	≤ 0.3% F.S.	≤ 0.3% 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.
Current Ripple (RMS)	≤ 0.25% F.S.	≤ 0.2% F.S.	≤ 0.15% F.S.	≤ 0.15% F.S.	≤ 0.3% F.S.	≤ 0.2% F.S.	≤ 0.3% F.S.	≤ 0.2% F.S.	≤ 0.5% F.S.
Current Line Regulation	≤ 0.03% F.S.	≤ 0.03% F.S.	≤ 0.03% F.S.	≤ 0.03% F.S.	≤ 0.1% F.S.	≤ 0.1% F.S.	≤ 0.2% F.S.	≤ 0.2% F.S.	≤ 0.05% F.S. +50mA
Current Load Regulation	≤ 0.2% F.S.	≤ 0.2% F.S.	≤ 0.2% 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.
Slew Rate ³	Rise Time	≤ 25ms	≤ 25ms	≤ 30ms	≤ 30ms	≤ 25ms	≤ 25ms	≤ 30ms	≤ 30ms
	Fall Time (Full Load)	≤ 30ms	≤ 30ms	≤ 45ms	≤ 45ms	≤ 30ms	≤ 30ms	≤ 45ms	≤ 45ms
	Fall Time (No Load)	≤ 3s							
Transient Response ⁴	≤ 5ms								
Voltage Programming Accuracy	≤ 0.08% F.S. +100mV				≤ 0.08% F.S. +100mV				
Voltage Measurement Accuracy	≤ 0.08% F.S. +100mV				≤ 0.08% F.S. +100mV				
Voltage Resolution	100mV				100mV				
Current Programming Accuracy	≤ 0.3% F.S. +60mA				≤ 0.3% F.S. +60mA				
Current Measurement Accuracy	≤ 0.2% F.S. +60mA				≤ 0.3% F.S. +60mA				
Current Resolution	10mA				10mA				
Power Programming Accuracy	≤ 0.4% F.S.				≤ 0.4% F.S.				
Power Measurement Accuracy	≤ 0.4% F.S.				≤ 0.4% F.S.				
Power Resolution	0.01kW				0.01kW				
Efficiency ⁵	≥ 87% at max. power		≥ 90% at max. power		≥ 87% at max. power		≥ 90% at max. power		≥ 87% at max. power
Interfaces	Standard: RS-232, RS-485, Ethernet, USB, Analog Option: GPIB				Standard: RS-232, RS-485, Ethernet, USB, Analog Option: GPIB				
Remote Sensing	≤ 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 692 mm / 5.2 x 17.4 x 27.2 inch				132 x 442 x 692 mm / 5.2 x 17.4 x 27.2 inch				
Weight	approx. 19.1kg / 42.1 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

* 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.

VPG-L Series (10kW-15kW)

Model	VPG-L-670-15	VPG-L-670-45-10	VPG-L-115-135	VPG-L-160-94	VPG-L-335-45	VPG-L-335-135-15	VPG-L-500-30	VPG-L-670-23	VPG-L-1000-15	VPG-L-1000-45-15
Output Power	10kW	10kW	15kW	15kW	15kW	15kW	15kW	15kW	15kW	15kW
INPUT										
Input Voltage	1Ø 2W+G 187-264 VAC 3Ø3W+G 187-264 VAC 3Ø4W+G 340-460 VAC (Option 3Ø4W+G 340-528 VAC)									
Input Current	1Ø : 60A 3ØΔ: 35A 3ØY : 19A					1Ø : 90A 3ØΔ: 52A 3ØY : 30A				
Input Frequency	47 Hz-63 Hz					47 Hz-63 Hz				
Power Factor	≥ 0.99 at max. power					≥ 0.99 at max. power				
Voltage	0 - 670V	0 - 670V	0 - 115V	0 - 160V	0 - 335V	0 - 335V	0 - 500V	0 - 670V	0 - 1000V	0 - 1000V
Current	0 - 15A	0 - 45A	0 - 135A	0 - 94A	0 - 45A	0 - 135A	0 - 30A	0 - 23A	0 - 15A	0 - 45A
Voltage Ripple (RMS)¹	≤0.08% F.S.	≤0.08% 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)¹	≤0.8% F.S.	≤0.8% 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	≤0.03% F.S.									
Voltage Load Regulation²	≤0.05% F.S.	≤0.05% 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)	≤0.5% F.S.	≤0.25% 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. +50mA	≤0.05% F.S. +50mA	≤0.05% F.S. +50mA	≤0.05% F.S. +50mA	≤0.05% F.S. +50mA	≤0.05% F.S. +50mA	≤0.05% F.S. +50mA	≤0.05% F.S. +50mA	≤0.05% F.S.	≤0.05% F.S.
Current Load Regulation	≤0.25% F.S.	≤0.25% F.S.	≤0.1% F.S.	≤0.1% F.S.	≤0.2% F.S.	≤0.2% F.S.	≤0.2% F.S.	≤0.3% F.S.	≤0.3% F.S.	≤0.3% F.S.
Slew Rate³	Rise Time	≤ 60ms	≤ 60ms	≤ 25ms	≤ 30ms	≤ 30ms	≤ 30ms	≤ 55ms	≤ 60ms	≤ 90ms
	Fall Time (Full Load)	≤ 45ms	≤ 45ms	≤ 30ms	≤ 45ms	≤ 45ms	≤ 45ms	≤ 45ms	≤ 45ms	≤ 40ms
	Fall Time (No Load)	≤ 3s								
Transient Response⁴	≤ 5ms									
Voltage Programming Accuracy	≤ 0.08% F.S. +100mV					≤ 0.08% F.S. +100mV				
Voltage Measurement Accuracy	≤ 0.08% F.S. +100mV					≤ 0.08% F.S. +100mV				
Voltage Resolution	100mV					100mV				
Current Programming Accuracy	≤ 0.3% F.S. +60mA					≤ 0.4% F.S. +60mA				
Current Measurement Accuracy	≤ 0.3% F.S. +60mA					≤ 0.4% F.S. +60mA				
Current Resolution	10mA					10mA				
Power Programming Accuracy	≤ 0.4% F.S.					≤ 0.4% F.S.				
Power Measurement Accuracy	≤ 0.4% F.S.					≤ 0.4% F.S.				
Power Resolution	0.01kW					0.01kW				
Efficiency⁵	≥ 90% at max. power	≥ 87% at max. power	≥ 90% at max. power	≥ 87% at max. power	≥ 90% at max. power	≥ 87% at max. power	≥ 90% at max. power	≥ 87% at max. power	≥ 90% at max. power	≥ 90% at max. power
Interfaces	Standard: RS-232, RS-485, Ethernet, USB, Analog Option: GPIB									
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 692 mm / 5.2 x 17.4 x 27.2 inch									
Weight	approx. 26.5kg / 58.42lbs					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.

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