Doc. IA-0049

MULTI-OUTPUT PROGRAMMABLE DC POWER SUPPLY

Your Power House
VP ELECTRONIQUE

VPP-1326/2323/3323/4323

CE | RS-232 | GPIB | USB | LAN | Ext I/O

With the maximum output power of 217W, the VPP-Series, the multi-channel programmable DC power supply, includes four models: VPP-1326 (0~32V/0~6A) for single-channel output and VPP-2323 for dual-channel output (CH1:0~32V/0~3A, CH2:0~32V/0~3A), VPP-3323 for three-channel output (CH1: 0~32V/0~3A, CH2:0~32V/ 0~3A, CH3: 1.8V, 2.5V, 3.3V, 5.0V/5A) and VPP-4323 for four-channel output (CH1:0~32V/0~3A, CH2:0~32V/0~3A, CH3:0~5V/0 ~1A, CH4: 0~15V/0~1A). This series not only provides high program resolution (1mV/0.1mA) and read back resolution (0.1mV/0.1mA), but also features optimal low-ripple noise characteristics ≦350uVrms/≦ 2mArms and output transient recovery capability≦50uS. Independent output on-off switch is provided for each channel.

For series and parallel applications of CH1 and CH2, the tracking function of the VPP-Series utilizes the internal circuit to automatically switch the output to serial or parallel output without additional external wiring, providing users with convenience not only in operating procedures but also a more stable output. The tracking function design of other brands requires additional external wiring connections for the output in series or parallel. However, excessively long, thin or inconsistent external wiring may cause inaccurate voltage or current output.

The VPP-Series offers a variety of display modes, including single or multi-channel setting values, measurement values, and waveform displays. The Monitor function of the VPP-Series allows users to set monitoring conditions according to requirements, sound alarms or stop output during the measurement process, and stop measurement and protect the customer's DUT. The VPP-Series provides output recorder function, which records the voltage/current of the output process to the internal memory, and the result can be stored as a (*.REC) or (*.CSV) file, which can then be transferred to the USB flash drive. The stored *.CSV can be exported to the Excel to conduct the future analysis.

The CH1/CH2 of the VPP-Series are designed with the load function. A single power supply can set one channel as the power output, and one channel for the load function to consume the power of the DUT so as to meet the basic charging and discharging test requirements for battery. Channel 1 and channel 2 not only provide 32V/3A power output, but also feature built-in maximum 32V constant voltage load (CV), maximum 3.2A constant current load (CC) and maximum 1kΩ constant resistance load (CR) function.

The VPP-Series provides the sequential output function on Channel 1 and Channel 2. This function not only allows users to edit the power output waveform, but also allows users to set the sequential constant voltage (CV) or constant current (CC) load waveform, i.e. a serial power output or a simulation test of a dynamic load. In order to simplify the setting of waveform editing, the GPP-Series has 8 built-in Templet waveforms in the sequence output function for users to directly apply for output, including Sine, Pulse, Ramp, Stair Up, Stair Dn, Stair UpDn, Exp Rise, Exp Fall waveforms.

The sound protection functions include OVP/OCP/OPP/OTP, in which the protection mechanism for OVP/OCP/OTP is implemented by hardware circuit that has the advantage of faster response time compared with competitors who adopt software to achieve protections. The OVP/OCP functions allow users to set the protection action point (except CH3 of VPP-3323) according to the conditions of the DUT. The OPP is only activated during the operation of the load function. The Delay Function sets the length of time during channel 1 or channel 2 power output on or during power output off.

In addition, the Trigger In/Trigger Out functions synchronize external devices. The VPP-3323 channel 3 adds a 3A USB (Type A) output terminal for USB charging test. The intelligent temperature-controlled fan can adjust the speed according to the temperature of the power transistor so as to reduce unnecessary noise. The output value setting and the Sequence/Delay/Recorder functions provide 10 sets of internal memory for use, and can be loaded/stored using a USB flash drive. In addition to the standard RS-232 and USB remote interfaces, the VPP- Series also has an optional LAN or LAN+ GPIB interface to facilitate different requirements. The commands of the VPP series conform to SCPI requirements and are compatible with the commands of the **VPD-X303S** series.

FEATURES

- 4.3" TFT LCD Display
- Supports Setting Value, Measurement Value and
- Output Waveform Display
  Load Function (CC, CV, CR Mode)
- Setting Resolution: 1mV/0.1mA ; Read Back
- Resolution: 0.1mV/0.1mA
  Low Ripple Noise: ≦350μVrms/≦2mArms
- Transient Response Time: ≦50μs
- Tracking Series and Parallel Function without
- Additional External Wiring
  Utilizing Hardware to Realize Over Voltage
- Protection/Over Current Protection/Over Temperature Protection
  Delay Function/Output Monitoring Function/
- Output Recorder Function
  Intelligent Temperature Control Fan Effectively
- Reduces Noise
  Sequential Output Function and Built-in
- 8 Template Waveforms
  The Output Recorder Function Records The
- Output Voltage & Current Parameters with A
  Minimum Recording Interval of 1 Second
  Provides 10 Sets of Memory for Each Sequence/
- Delay/Recorder/Panel Setting Condition
  VPP-3323 Supports A USB(Type A)Output Terminal
- Standard: RS-232, USB, Ext I/O ; Optional
- (Manufacturer Installed Only) : LAN, GPIB+LAN
  Compatible with Commands of GPD-X303S Series
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Front Panel

Rear Panel

APPLICATIONS

- School and Research Institute
- Energy Storage Device Industry
- Semiconductor Industry
- Consumer Electronics Industry

Simply Reliable

SPECIFICATIONS

		VPP-4323				VPP-3323			VPP-2323		VPP-1326
OUTPUT MODE	Number of Channel	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH1	CH2	CH1
	Voltage	0~32V	0~32V	0~5V	0~15V	0~32V	0~32V	1.8/2.5/3.3/5.0V	0~32V	0~32V	0~32V
	Current	0~3A	0~3A	0~1A	0~1A	0~3A	0~3A	5A	0~3A	0~3A	0~6A
	Tracking Series Voltage	0~64V		–		0~64V		–	0~64V		–
	Tracking Parallel Current	0~6A				0~6A			0~6A		
CONSTANT VOLTAGE OPERATION	Line Regulation	≦0.01%+3mV									
	Load Regulation	≦0.01%+3mV(rating current ≦3A); ≦0.02%+5mV(rating current >3A)									
	Ripple & Noise(5Hz~1MHz)	≦350μVrms		≦1mVrms		≦350μVrms		≦2mVrms	≦350μVrms		≦500μVrms
	Recovery Time	≦50μs		≦50μs		≦50μs		≦100μs	≦50μs		≦100μs
CONSTANT CURRENT OPERATION	Line Regulation	≦0.2%+3mA									
	Load Regulation	≦0.2%+3mA									
	Ripple & Noise	≦2mArms				≦2mArms			≦2mArms		≦4mArms
PROGRAMMING RESOLUTION	Voltage	1mV				1mV		–	1mV		1mV
	Current	0.1mA				0.1mA		–	0.1mA		0.2mA
TRACKING OPERATION (CH1,CH2)	Tracking Error	≦0.1%+10mV of Master(0~32V, No Load, with Load add Load regulation≦100mV)									
	Parallel Regulation	Line : ≦0.01%+3mV Load : ≦0.01%+3mV(rating current≦3A); ≦0.02%+5mV(rating current>3A)									
	Series Regulation	Line : ≦0.01%+5mV ; Load : ≦100mV									
	Ripple & Noise	≦1mVrms, 5Hz ~ 1MHz									
CH3 OPERATION FOR (GPP-3323)	Output Voltage	1.8V/2.5V/3.3V/5.0V, ±5%									
	Output Current	5A									
	Line Regulation	≦3mV									
	Load Regulation	≦5mV									
	Ripple & Noise	2mVrms(5Hz~1MHz)									
	Transient Recovery Time	100μs									
	USB Port Output	1.8V/2.5V/3.3V/5.0V, ±0.35V, 3A									
METER	Voltage Resolution	0.1mV				0.1mV		–	0.1mV		0.1mV
	Current Resolution	0.1mA				0.1mA			0.1mA		0.2mA
	Setting Accuracy	≦±(0.03%+10mV) ≦±(0.30%+10mA)				≦±(0.03%+10mV) ≦±(0.30%+10mA)			≦±(0.03%+10mV) ≦±(0.30%+10mA)		≦±(0.03%+10mV) ≦±(0.30%+10mA)
	Readback Accuracy	≦±(0.03%+10mV) ≦±(0.30%+10mA)				≦±(0.03%+10mV) ≦±(0.30%+10mA)			≦±(0.03%+10mV) ≦±(0.30%+10mA)		≦±(0.03%+10mV) ≦±(0.30%+10mA)
DC LOAD CHARACTERISTIC	Channel	2		–		2		–	2		1
	Display Power	0~50.00W				0~50.00W			0~50.00W		0~100.00W
	Display Voltage	1~33.00V				1~33.00V			1~33.00V		1~33.00V
	Display Current	0~3.200A				0~3.200A			0~3.200A		0~6.200A
	CV Mode Setting Range	1.500V~33.00V				1.500V~33.00V			1.500V~33.00V		1.500V~33.00V
	Resolution	10mV				10mV			10mV		10mV
	Set Accuracy	≦0.1%+30mV				≦0.1%+30mV			≦0.1%+30mV		≦0.1%+30mV
	Read Accuracy	≦0.1%+30mV				≦0.1%+30mV			≦0.1%+30mV		≦0.1%+30mV
	CC Mode Setting Range	0~3.200A				0~3.200A			0~3.200A		0~6.200A
	Resolution	1mA				1mA			1mA		1mA
	Set Accuracy	≦0.3%+10mA				≦0.3%+10mA			≦0.3%+10mA		≦0.3%+10mA
	Read Accuracy	≦0.3%+10mA				≦0.3%+10mA			≦0.3%+10mA		≦0.3%+10mA
	CR Mode Setting Range	1~1kΩ				1~1kΩ			1~1kΩ		1~1kΩ
	Resolution	1 Ω				1 Ω			1 Ω		1 Ω
	Set Accuracy	≦0.3%+1Ω(Voltage ≧0.1V,and current≧0.1A)				≦0.3%+1Ω(Voltage ≧0.1V,and current≧0.1A)			≦0.3%+1Ω(Voltage ≧0.1V,and current≧0.1A)		≦0.3%+1Ω(Voltage ≧0.1V,and current≧0.1A)
	Read Accuracy										
INSULATION	Chassis and Terminal	20MΩ or above (DC 500V)									
	Chassis and AC Cord	30MΩ or above (DC 500V)									
ENVIRONMENT CONDITION	Operation Temp	0~40℃									
	Storage Temp	-10~70℃									
	Operating Humidity	≦80% RH									
	Storage Humidity	≦70% RH									
EXTERNAL CONTROL		Yes									
INTERFACE		Std: RS-232/USB(CDC), Opt(Manufacturer installed only): LAN/ GPIB+LAN									
POWER SOURCE		AC100V/120V/220V/230V±10%, 50/60Hz									
DIMENSION & WEIGHT		213(W) x 145 (H) x 312(D) mm ; Approx. 7.5kg									

Specifications subject to change without notice.

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