GPP-1205/1323

Programming Linear DC Power Supply

CE | USB Host | USB Device | GPIB | Contro I/O



The GPP-1000 series is a high-precision programmable DC power supply designed for accuracy in precision testing. It features voltage resolution up to 1 mV / 0.1 mV and three levels of current resolution, with a maximum of 1 µA / 0.1 µA. Supporting both Constant Voltage (CV) and Constant Current (CC) modes, it also includes a switchable power supply and electronic load function. The series consists of two models: GPP-1205 (20 V / 5 A / 100 W) and GPP-1323 (32 V / 3 A / 96 W), offering flexible output options.

Equipped with Remote Sense functionality, the GPP-1000 series compensates for voltage drops due to lead resistance, ensuring accurate output. It supports data logging and external series/parallel connections of up to four units for higher power applications. Safety features include OVP, OCP, OTP, and reverse polarity protection, along with a front panel lock to prevent accidental operation. Communication interfaces include USB-TMC/CDC and LAN, with optional GPIB for remote control. A 2.4-inch TFT-LCD provides clear data visualization, while an intelligent temperature-controlled fan enhances cooling efficiency.

With its high resolution, versatile communication options, robust safety protections, and flexible application modes, the GPP-1000 series is a powerful solution for R&D, testing, and production environments. It exemplifies modern test equipment trends, making testing more accurate, convenient, and efficient.

FEATURES

* Voltage Resolution: 1 mV / 0.1 mV
* Current Resolution: Three levels: 0.1 mA / 0.01 mA (H), 10 µA / 1 µA (M), 1 µA / 0.1 µA (L)
* Output Modes: Constant Voltage (CV) / Constant Current (CC)
* Switchable Power Supply & Electronic Load Function
* Output Control: On/Off with delay function
* Slew Rate Control for Voltage & Current
* Remote Sense for Voltage Compensation
* Sequence Programming for Power Output
* Bleeder Circuit Control
* Voltage Averaging & Data Collection
* External Series & Parallel Connection Support
* Safety Protections: OVP, OCP, OTP, Reverse Polarity, Panel Lock
* Communication Interfaces: USB-TMC/CDC, LAN, Optional GPIB
* Display: 2.4-inch TFT-LCD with three modes
* Temperature-Controlled Fan
* Rack Compatibility: Supports GRA-441-J/E

European Type Jack Terminal



APPLICATIONS

* Research & Education
* HiFi Audio Circuit
* Devie/Components Testing
* 3C Products Testing

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SPECIFICATIONS

		GPP-1323	GPP-1205
OUTPUT RATING			
Output Voltage		0.000 V to 32.000 V	0.000 V to 20.000 V
Output Current		0.0000 A to 3.0000 A	0.0000 A to 5.0000 A
Output Power		96 W	100 W
CONSTANT VOLTAGE OPERATION			
Line Regulation		± (0.01 % of setting + 3 mV)	
Load Regulation		≤ 0.01 % + 3 mV (rating current ≤ 3 A) ≤ 0.02 % + 5 mV (rating current > 3 A)	
Transient Response		< 100 µs	
Ripple Noise		0.8 mVrms	
Setting Range		0 V to 33.600 V	0 V to 21.000 V
Rise Time		≤ 100 ms	
Fall Time		≤ 100 ms	
Maximum Remote Sensing Compensation Voltage (Single Line)		0.5 V	
Temperature Coefficient (TYP.)		300 ppm/°C	
CONSTANT CURRENT OPERATION			
Line Regulation		≤ 0.1 % + 3 mA	
Load Regulation		≤ 0.1 % + 3 mA	
Setting Range		0 A to 3.1500 A	0 A to 5.2500 A
Ripple Noise (Arms)		≤ 2 mArms	
Temperature Coefficient (TYP.)		300 ppm/°C	
RESOLUTION			
Voltage	Programming/Readback	1 mV / 0.1 mV	
Current	Programming/Readback	(High) 0.1 mA / 0.01 mA; (Middle) 10 µA / 1 µA; (Low) 1 µA/ 0.1 µA	
METER			
Full Scale	Voltage/Current	33.6000 V / 3.1500 A	21.0000 V / 5.2500 A
Programming	Voltage/Current	5 digits / 5 digits	
Readback Resolution	Voltage/Current	6 digits / 6 digits	
Setting Accuracy		Voltage: ± (0.03 % of reading + 10 mV); Current: ± (0.3 % of reading + 10 mA) (H) Current: ± (0.3 % of reading + 1 mA) (M); Current: ± (0.3 % of reading + 0.1 mA) (L)	
Readback Accuracy		Voltage: ± (0.03 % of reading + 10 mV); Current: ± (0.3 % of reading + 10 mA) (H) Current: ± (0.3 % of reading + 1 mA) (M); Current: ± (0.3 % of reading + 0.1 mA) (L)	
DC LOAD MODE			
Display	Voltage	3.000 V to 32.000 V	3.000 V to 20.000 V
	Current	0 A to 3.0000 A	0 A to 5.0000 A
	Power	96 W	100 W
CV Mode	Setting Range	3.000 V to 32.000 V	3.000 V to 20.000 V
	Setting/Readback	≤ 0.1 % + 30 mV	
	Resolution	1 mV	
CC Mode	Setting Range	0 A to 3.0000 A	0 A to 5.0000 A
	Setting/Readback	≤ ± 0.3 % + 10 mA	
	Resolution	0.1 mA	
PROTECTION *1			
OVP	Setting Range	1.8 V to 35.2 V	1.0 V to 22.0 V
	Setting Accuracy	± 100 mV	
	Operation	Turns the output off, displays OVP	
OCP	Setting Range	0.15 A to 3.3 A	0.25 A to 5.5 A
	Setting Accuracy	± 20 mA	
	Operation	Turns the output off, displays OCP	
OTP	Operation	Turns the output off, displays OTP	
Insulation Resistance		Between chassis and terminal : 20 MΩ or above (DC 500 V) Between chassis and DC power cord : 30 MΩ or above (DC 500 V)	
SERIES AND PARALLEL CAPABILITY			
Parallel Number		4 units	
Series Number		4 units	
ADVANCED FUNCTION			
Trigger Signal *2	Trigger Input	A high- or low-level CMOS signal is applied for 100 µs or longer. It receives a pulse to perform actions like power output, V/I set operation or memory recall.	
	Trigger Output	Trigger output: approx. 3.3 V Pulse width: approx. 1ms, Output impedance: approx. 50 Ω It outputs a pulse when power output, V/I set operation or memory recall is executed.	
Status Signal Output *2 *3	Output ON/OFF Status	Turns on when the output is on	
	CV Status	Turns on during CV operation	
	CC Status	Turns on during CC operation	
	ALM Status	Turns on when an alarm has been activated	
	PWR ON Status	Turns on when the power is turned on	
GENERAL SPECIFICATIONS			
Display		2.4-inch TFT LCD	
Interface	LAN	MAC Address, Gateway IP Address, Instrument IP Address, Subnet Mask	
	USB	Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB-CDC/TMC	
	GPIB (Factory Optional)	SCPI-1993, IEEE 488.2 compliant interface	
Operating Environment		Indoor use, Overvoltage Category II, Altitude: ≤ 2000 m, Ambient temperature: 0 °C to 40 °C, Relative humidity: 20 % to 80 % RH; No condensation	
Storage Environment		Ambient temperature: -20 °C to 70 °C, Relative humidity: 20 % to 85 % RH; No condensation	
Power Source		AC (100 V, 120 V, 220 V, 240 V) ± 10 %, 50 or 60 Hz	
Power Consumption		300 VA	
Max. Inrush Current		30 A max or less	
Dimensions & Weight		107 mm x 124 mm x 313 mm (W x H x D) (not including protrusions), Approx. 5.5 kg	

Note: *1. When the protection function is activated, it turns the output off, displays OVP, OCP, or OTP.
*2. EXT I/O connector on the rear panel.
*3. Open collector output: Maximum voltage of 30 V and maximum current of 8 mA. The common line for the status pins is floating (isolated voltage of 60 V or less), it is isolated from the output and control circuits.

The specifications apply when the GPP-1205/1323 are powered on for at least 30 minutes under +20 °C to +30 °C. Specifications subject to change without notice. GPP-1000_E_ID1DH

ORDERING INFORMATION

GPP-1205 100 W Single Channel Programming Linear DC Power Supply (USB, LAN) (20 V /5 A)
GPP-1323 96 W Single Channel Programming Linear DC Power Supply (USB, LAN) (32 V/3 A)

ACCESSORIES:

Standard Type Jack Terminal:
Power Cord x 1, Packing List x 1, Test lead GTL-104A

European Type Jack Terminal:
Power Cord x 1, Packing List x 1, Test lead GTL-204A x 1

OPTION (Manufacturer Installed Only)

GPIB interface

OPTIONAL ACCESSORIES

GTL-104A	Test Lead, U-type to Alligator Test Lead, Max. Current 10 A, 1000 mm	**GTL-246**	USB Cable (USB 2.0 A-B Type, approx. 1200 mm)
GTL-204A	Test Lead, Banana to Alligator, European Terminal, Max. Current 10 A, 1000 mm	**GRA-441-J**	Rack Mount Kit for JIS type
GTL-303	RF Cable, for Trigger In/Out use	**GRA-441-E**	Rack Mount Kit for EIA type

FREE DOWNLOAD

PC Software, LabVIEW Driver

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