

GPP-1205/1323

Programming Linear DC Power Supply



FEATURES

- * Voltage Resolution: 1 mV / 0.1 mV
- * Current Resolution: Three levels: 0.1 mA / 0.01 mA (H), 10 μ A / 1 μ A (M), 1 μ A / 0.1 μ A (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

APPLICATIONS

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

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 μ mV / 0.1 μ mV and three levels of current resolution, with a maximum of 1 μ A / 0.1 μ A. 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.

European Type Jack Terminal



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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 Resolution	≤ 0.1 % + 30 mV 1 mV		
CC Mode	Setting Range	0 A to 3.0000 A	0 A to 5.0000 A	
	Setting/Readback Resolution	≤ ± 0.3 % + 10 mA 0.1 mA		
PROTECTION *3				
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 Turns the output off, displays OTP		
Insulation Resistance		Between chassis and terminal : 20 MΩ or above (DC 500V) Between chassis and DC power cord : 30 MΩ or above (DC 500V)		
SERIES AND PARALLEL CAPABILITY				
Parallel Number		4 units		
Series Number		4 units		
ADVANCED FUNCTION				
Trigger Signal *1	Trigger Input	A high- or low-level CMOS signal is applied for 100 μs or longer.		
	Trigger Output	It receives a pulse to perform actions like power output, V/I set operation or memory recall. 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 Out *1 *2	OUT 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		
	GPIOB (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. EXT I/O connector on the rear panel.

*2. 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.

*3. When the protection function is activated, it turns the output off, displays OVP, OCP, or OTP.

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:			
Power Cord x 1, Packing List x 1, Test lead: Non-European: GTL-104A x 1 Test lead: European: GTL-204A x 1			
OPTION (Manufacturer Installed Only)			
GPIO interface			
OPTIONAL ACCESSORIES			
GTL-303	RF Cable, for Trigger In/Out use	GRA-441-J	Rack Mount Kit for JIS type
GTL-246	USB Cable (USB 2.0 A-B Type, approx. 1200mm)	GRA-441-E	Rack Mount Kit for EIA type
FREE DOWNLOAD			
PC Software, LabVIEW Driver			

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