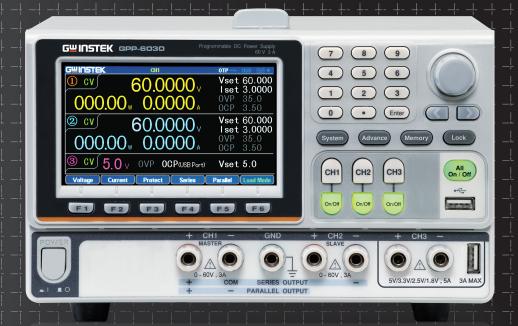


VPELECTRONIQUE



GPP-3060/6030/3650

Triple-Channel Programmable DC Power Supply

FEATURES

- 4.3"TFT_LCD Display
- Setting Resolution: 1mV / 0.1mA; Read Back Resolution: 0.1mV/0.1mA
- Low Ripple Noise: ≨1mVrms/≦2mArms
- Transient Response Time: ≤100μs
- Load Function (CC, CV, CR mode)
- 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
- Supports Setting Value, Measurement Value and Output Waveform Display
- 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
- Supports a USB (Type A) Output Terminal
- Intelligent Temperature Control Fan Effectively Reduces Noise
- Standard: RS-232, USB, Ext I/O
 Optional(manufacturer installed only): LAN, LAN+GPIB



Meet Your Necessity of High Resolution in Multi-Channel Measurement

GPP-3060 and GPP-6030 triple-channel programmable DC power supplies are extension models of the GPP-X323 series. The maximum output power of these three models is 385W. GPP-3650 supports CH1/CH2: $0 \sim 36V / 0 \sim 5A$ output; CH3 supports 1.8V, 2.5V, 3.3V, 5.0V / 5A. GPP-3060 supports CH1/CH2: $0 \sim 30V / 0 \sim 6A$ output; GPP-6030 supports CH1/CH2: $0 \sim 60V / 0 \sim 3A$ output; CH3 of both models supports 1.8V, 2.5V, 3.3V, 5.0V/5A.

GPP-3650, GPP-3060 and GPP-6030 inherit the high program resolution (1mV/0.1mA) and read back resolution (0.1mV/0.1mA) of the GPP series with low-ripple noise characteristics ≤ 1 mVrms/ ≤ 2 mArms and ≤ 100 µs output transient recovery ability. An independent output on-off switch is provided for each channel.

For series and parallel applications of CH1 and CH2, the tracking function can automatically switch to series or parallel output without additional external wiring. Multiple display modes including single channel or multi-channel setting value, measurement value and waveform display to collocate with the built-in output monitoring function allow users to set the monitoring conditions according to their needs so as to generate an alarm or stop the output during the measurement process in order to stop the measurement and protect the customer's DUT. The output recorder function can record the voltage/current of the output process in the internal memory, and save the result as a (*.REC) or (*.CSV) file, and then save it to a USB flash drive. The unique load function of the GPP series can arbitrarily set CH1/CH2 as power supply or load function. For example, one channel is set as power output, and the other channel is set as load function to consume the power of the DUT to satisfy simple battery charging and discharging or load characteristic test by a single power supply. The sequence output function allows users to edit the power output waveforms by themselves, and also allows users to set the sequential constant voltage (CV) or constant current (CC) load waveforms such as serial power output or dynamic load simulation test. Channel 3 (CH3) incorporates 3A USB (Type A) output terminal, which can be used for USB charging test.

Pertaining to measurement protections, OVP/OCP/OPP/OTP protection functions are provided. The protection mechanism of OVP/OCP/OTP is implemented by hardware circuits, which has a faster response time to protect equipment or DUT while comparing with competitors who use software for protection. The OVP and OCP functions allow users to set the protection action point according to the conditions of the DUT. OPP only provides protection during the operation of the load function.

In addition, GPP-3650, GPP-3060 and GPP-6030 incorporate terminal output on the rear panel, and include a voltage remote sensing terminal. Users can choose front panel or rear panel terminal output, which is convenient for stand-alone or rack operation. Output value setting and Sequence/ The Delay/Recorder functions provide 10 sets of internal memory, which can be uploaded/stored by a USB flash drive.

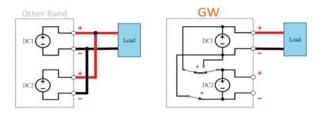




GPP-6030/3060/3650

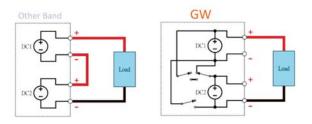


TRACKING SERIES AND PARALLEL FUNCTION



Output in Parallel Connections

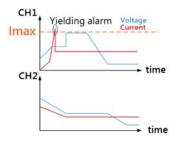
For series and parallel applications of CH1 and CH2, the tracking function of the GPP-Series utilizes the internal circuit to automatically switch the output to serial or parallel output without additional external wiring, providing users with convenience not only in operating procedures but also a more stable output.



Output in Series Connections

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.

B. OUTPUT MONITORING FUNCTION



Output Monitoring

The output monitoring function allows users to set the monitoring conditions according to the requirements, including the voltage, current, and power greater than or less than the setting and the logical relationship of AND, OR. It also allows users to sound

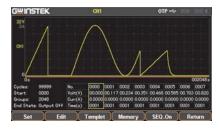


Monitoring Function Setting

alarms or stop the output during the measurement process, stop the measurement, and protect the customer's DUT. Both Channel could be monitored simultaneously as well.

* Channel 3 does not support the output monitoring function.

C. SEQUENCE OUTPUT FUNCTION



Sequence Output Waveform

The GPP-Series provides a 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. The maximum settable points for sequence function are 2048, and interval range of each point can be set from 1 to 300 seconds. In order to simplify the setting of waveform editing, the GPP-Series has 8 built-in Templet waveforms in sequence output function for

users to directly apply for output, including Sine, Pulse, Ramp, Stair Up, Stair Dn, Stair UpDn, Exp Rise, and Exp Fall waveforms.

The editing data of the sequence output can be stored in the internal 10 sets of the memory, or to be saved by USB flash drive (Save/Recall) and saved as *.SEQ or *.CSV file; The stored *.CSV can be exported into Excel for editing and analysis. The final edited file can be imported to (Save/Recall) of the power supply using a USB flash drive.



HARDWARE PROTECTION FUNCTION (OVP/OCP/OTP)

LOAD FUNCTION



OVP Trigger

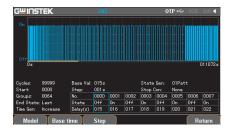


GPP-Series Application

The protection mechanism of OVP/OCP/OTP is implemented by hardware circuit, which has the advantage of faster response time than competitors who use software to achieve protection. When it is detected that the voltage of the DUT exceeds the setting value of the OVP, the output of the power supply can be stopped in a short time to achieve the purpose of protecting the DUT.

The CH1/CH2 of the GPP series is designed with the load function. A single power supply can meet the basic battery charging and discharging test requirements. It can provide power output in channel 1 and channel 2. The rated constant voltage load (CV), rated constant current load (CC) and maximum $1k\Omega$ constant resistance load (CR) function are built-in to allow users to conduct discharging test without using an electronic load. In application, users can also set either that one channel of the single GPP series as the power output, one channel as the load function to consume the power of the DUT, or that both channels as load functions to consume the power of different loads simultaneously.

OUTPUT DELAY FUNCTION

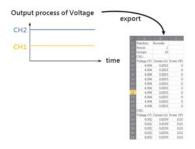


GPP-Series Delayed Waveform

Output delay function allows users to edit the timing waveform of the power output on/off when the front panel voltage and current settings are unchanged. In order to simplify the setting of waveform editing, the GPP-Series has three built-in timing modes in the delay output function, including Fixtime, Increase, Decline for users to apply directly. The editing data of the output delay can be stored in

the internal 10 sets of memory, or to be saved by USB flash drive (Save/Recall) and saved as *.DLY or *.CSV file. The stored *.CSV can be exported into Excel for editing and analysis. The final edited file can be exported to (Save/Recall) of the power supply using a USB flash drive.

OUTPUT RECORDER FUNCTION





Schematic Diagram for Recorder Function

Recorder Function Setting

Save as*.REC

The output recorder function records the voltage & current parameters of the output process. The recording interval of each point can be set according to user's requirements, and the shortest interval is 1 second and the longest is 300 seconds. The results can be stored in *.REC or *.CSV format to the power supply or directly

saved in the USB flash drive. The stored *.CSV can be exported into Excel to conduct the future analysis. (*.REC can be saved to 2048 records, *.CSV can be saved to 614400 records)

^{*} Channel 3 does not support the output recorder function



PANEL INTRODUCTION



GRA-437-J Rack Mount Kit (JIS)



GRA-437-E Rack Mount Kit (EIA)



OPERATING RANGE

Model Number	Number of Output	Max. Power	CH1	CH2	CH3	Interface
GPP-3060	3	385W	0-30V/0-6A	0-30V/0-6A	1.8V/2.5V/3.3V/5V; 5A	USB, RS-232, LAN, GPIB
GPP-6030	3	385W	0-60V/0-3A	0-60V/0-3A	1.8V/2.5V/3.3V/5V; 5A	USB, RS-232, LAN, GPIB
GPP-3650	3	385W	0-36V/0-5A	0-36V/0-5A	1.8V/2.5V/3.3V/5V; 5A	USB, RS-232, LAN, GPIB

^{*} GPIB interfaces cannot be retrofitted after the shipment. When ordering the model, please confirm whether to order GPIB. * Model ordering varies by region.

OUTPUT FUNCTION LIST

Model Number	GPP-3060/GPP-6030/3650				
Functions	CH1	CH2	CH3		
Sequence Output Function	✓	✓	_		
Load Functions (CC, CV, CR mode)	✓	✓	_		
Output Delay Function	✓	✓	_		
Output Monitoring Function (10 sets)	✓	✓	-		
Output Recorder Function	✓	✓	_		
Panel Save/Recall	✓	✓	✓		



		GPP-30	60	GPP-60)30	GPP-365	50
Output Mode		•					
Number of Channel		CH1 CH2	CH3	CH1 CH2	CH3	CH1 CH2	CH3
'oltage		0 ~ 30.000V 0 ~ 30.000V	1.8V/2.5V/3.3V/5.0V,±5%	0 ~ 60.000V 0 ~ 60.000V	1.8V/2.5V/3.3V/5.0V,±5%	0 ~ 36.000V 0 ~ 36.000V	1.8V/2.5V/3.3V/5.0V,±
Current		0 ~ 6.0000A 0 ~ 6.0000A	5A (USB Port 3A)	0 ~ 3.0000A 0 ~ 3.0000A	5A (USB Port 3A)	0 ~ 5.0000A 0 ~ 5.0000A	5A (USB Port 3A)
Tracking Series Voltage / Current		0 ~ 60.000V / 0 ~ 6.0000A		0 ~ 120.000V / 0 ~ 3.0000A		0 ~ 72.000V / 0 ~ 5.0000A	
racking Parallel Vol	tage / Current	0 ~ 30.000V / 0 ~ 12.0000A	-	0 ~ 60.000V / 0 ~ 6.0000A	-	0 ~ 36.000V / 0 ~ 10.0000A	
arning/				The CH3 output current from the 2 terr	ninals should Not exceed 5A		•
onstant Voltage Op	peration	•		·			
ne Regulation		≤ 0.01% + 3mV	≤ 3mV	≤ 0.01% + 3mV	≤ 3mV	≤ 0.01% + 3mV	≤ 3mV
Load regulation		\leq 0.01% + 5mV (rating current \leq 10A)	_ 5mV	≤ 0.01% + 5mV (rating current ≤ 10A)	≤ 5mV	≤ 0.01% + 5mV (rating current ≤ 10A)	≤ 5mV
Ripple & noise (5Hz-1MHz)		≤1mVrms	≤ 2mVrms	≤1mVrms	≤ 2mVrms	≤1mVrms	≤ 2mVrms
tippie & noise (3112-1111112)		ZIIIIVIIIIS	≥ ZITIVITIIS		≥ ZITIVITIIS	SIIIIVIIIIS	≥ ZITIVITIIS
ransient recovery ti	me			≤100μs			
•				(50% load change) minii			
emperature coeffici				≤ 300ppm/°	C		
onstant Current Op	peration						
ne Regulation				≤ 0.01% + 3r	nA		
oad regulation				≤ 0.01% + 3r	nA		
ipple & noise				≤ 2mArms			
esolution				2 Z11741113			
	Voltage	1mV		2mV		2mV	1
ogramming	Voltage	0.2mA		0.1mA	4	0.1mA	4
	Current				-		-
eedback	Voltage	0.1mV		0.1mV	4	0.1mV	4
	Current	0.1mA		0.1mA	1	0.1mA	I
acking Operation(CH1/CH2)	10.70/ -2 -1 -1				L .0.10/	
		≤ 0.1% +10mV of Master		≤ 0.2% +20mV of Master	4	≤ 0.1% +10mV of Master	4
acking error		(No Load, with load add load		(No Load, with load add load		(No Load, with load add load	
		regulation ≤200mV)		regulation ≤200mV)	_	regulation ≤200mV)	4
	Line	≤ 0.01% + 3mV		≤ 0.01% + 3mV]	≤ 0.01% + 3mV]
arallel regulation	Land	≤ 0.01% + 5mV (rating current ≤ 10A)		≤ 0.01% + 5mV (rating current ≤ 10A)		≤ 0.01% + 5mV (rating current ≤ 10A)	-
-	Load	\leq 0.02% + 5mV (rating current > 10A)		≤ 0.02% + 5mV (rating current > 10A)		≤ 0.02% + 5mV (rating current > 10A)	1
	Line	≤ 0.01% + 5mV		≤ 0.01% + 5mV	1	≤ 0.01% + 5mV	1
eries regulation	Load	≤ 0.01% + 3mV ≤ 200mV		≤ 0.01% + 3friV ≤ 200mV	1	≤ 0.01% + 3mV ≤ 200mV	1
pple & noise	LUAU	≤ 200mv ≤2mVrms(5Hz-1MHz)		≤ 200mv ≤2mVrms (5Hz-1MHz)	4	≤ 200mv ≤2mVrms(5Hz-1MHz)	4
ote		≤2mvrms(5Hz-1MHz)				≤2mvrms(5Hz-1IVIHz)	
				Tracking is not supported	In LOAD mode.		
eter	Lyth	32.0000V	1.0)//2.5)//2.2)//5.0)/	62.0000V	3 00//2 50//2 20//5 00/	36.0000V	I 1 01//2 51//2 21//5
ıll Scale	Voltage		1.8V/2.5V/3.3V/5.0V		1.8V/2.5V/3.3V/5.0V		1.8V/2.5V/3.3V/5.0
	Current	6.2000A		3.2000A	_	5.2000A	
ogramming	Voltage	5 digits		5 digits	_	5 digits	
esolution	Current	5 digits		5 digits	<u> </u>	5 digits	
eedback	Voltage	6 digits		6 digits		6 digits	
esolution	Current	5 digits	-	5 digits] -	5 digits	
atting aggregati	Voltage	± (0.03% of reading + 10mV)		± (0.03% of reading + 10mV)		± (0.03% of reading + 10mV)	
etting accuracy	Current	± (0.3% of reading + 10mA)		± (0.3% of reading + 10mA)	1	± (0.3% of reading + 10mA)	1
	Voltage	± (0.03% of reading + 10mV)		± (0.03% of reading + 10mV)	1	± (0.03% of reading + 10mV)	
eadback accuracy	Current	± (0.3% of reading + 10mA)		± (0.3% of reading + 10mA)	1	± (0.3% of reading + 10mA)	
C Load Mode		, , , , , , , , , , , , , , , , , , , ,					
	Voltage	1 ~ 32.00V		1 ~ 62.00V		1 ~ 36.5.00V	
isplay	Current	0 ~ 6.200A		0 ~ 3.200A	₫	0 ~ 5.200A	
	Power	0 ~ 50.00W		0 ~ 50.00W	-	0 ~ 50.00W	1
	CH1/CH2	1.500V - 32.00V		1.500V - 62.00V	-	1.500V - 36.50V	1
	Setting Accuracy	≤±(0.1% + 30mV)		≤±(0.1% + 30mV)	-	≤±(0.1% + 30mV)	1
CV Mode	Reedback Accuracy	≤±(0.1% + 30mV)		≤±(0.1% + 30mV)	-	≤±(0.1% + 30mV)	1
	Resoltion	10mV		10mV	-	10mV	-
	CH1/CH2	0 ~ 6.200A		0 ~ 3.200A	-	0 ~ 5.200A	-
					4		-
C Mode	Setting Accuracy	≤±(0.3% + 10mA)	-	≤±(0.3% + 10mA)		≤±(0.3% + 10mA)	-
	Reedback Accuracy	≤±(0.3% + 10mA)		≤±(0.3% + 10mA)	_	≤±(0.3% + 10mA)	
	Resoltion	1mA		1mA	_	1mA	
	CH1/CH2	1Ω- 1kΩ		1Ω- 1kΩ	4	1Ω- 1kΩ	4
	Setting Accuracy	≤±(3% + 1Ω)		≤±(3% + 1Ω)	_	≤±(3% + 1Ω)	1
R Mode	John S. Iccuracy	(voltage≥0.1V, and current≥0.1A)		(voltage≥0.1V, and current≥0.1A)]	(voltage≥0.1V, and current≥0.1A)]
WINNE	Donall I. A	≤±(3% + 1Ω)		≤±(3% + 1Ω)		≤±(3% + 1Ω)	
	Reedback Accuracy		l	(voltage≥0.1V, and current≥0.1A)	7	(voltage≥0.1V, and current≥0.1A)	1
		(voltage≥0.1V, and current>0.1A)					
	Resoltion	(voltage≥0.1V, and current≥0.1A) 1Ω		1Ω		1Ω	
	Resoltion			1Ω	1	1Ω	
	Resoltion Power Mode		Fixed 5.5V	1Ω OFF,ON (0.5V-65.0V)	Fixed 5.5V	1Ω OFF,ON(0.5V-38.0V)	Fixed 5.5V
rotection	I Down Made	1Ω	Fixed 5.5V		Fixed 5.5V		Fixed 5.5V
rotection	Power Mode Load Mode	1Ω OFF,ON(0.5V-35.0V)	Fixed 5.5V -	OFF,ON (0.5V-65.0V)	Fixed 5.5V	OFF,ON(0.5V-38.0V)	Fixed 5.5V
rotection	Power Mode	1Ω OFF,ON(0.5V-35.0V)	Fixed 5.5V	OFF,ON (0.5V-65.0V) OFF,ON (1.5V-65.0V)	Fixed 5.5V	OFF,ON(0.5V-38.0V)	Fixed 5.5V
rotection	Power Mode Load Mode Setting Accuracy Resoltion	1Ω OFF,ON(0.5V-35.0V)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV	-	OFF,ON(0.5V-38.0V)	-
rotection	Power Mode Load Mode Setting Accuracy Resoltion Power Mode	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V)	Fixed 5.5V - 3.1A(USB port)	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV	Fixed 5.5V	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V)	Fixed 5.5V
rotection	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A)	-	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
rotection	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA	-	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
rotection VP	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA 10mA	3.1A(USB port)	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
vP CP	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA	3.1A(USB port)	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
otection VP CP sulation	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA 10mA 20MΩ or above (C	3.1A(USB port)	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
otection VP CP	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA 10mA	3.1A(USB port)	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
/P EP sulation	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA 10mA 20MΩ or above (C	3.1A(USB port)	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
/P CP sulation sistance	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mA 10mA 20MΩ or above (C	3.1A(USB port) - C 500V) C 500V)	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
VP CP sulation sistance	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA 10mA 20MΩ or above (C 30MΩ or above (C	3.1A(USB port) C 500V) C 500V)	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
CP sulation sistance	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA 10mA 20MΩ or above (C 30MΩ or above (I Indoor use, Altitude Ambient temperatur	3.1A(USB port) C 500V) C 500V) S 2000m C 0 - 40°C	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
CP sulation sistance eneral	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mA 10mA 20MΩ or above (C 30MΩ or above (I Indoor use, Altitude Ambient temperatur Relative humidity	3.1A(USB port) - C 500V) C 500V) ≤ 2000m e: 0 – 40°C ≤ 80%	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
CP sulation sistance	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V)	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ≤ 2000m e: 0 - 40°C ≤ 80% Solution degree: 2	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
rotection VP CP sulation sistance eneral peration Environm	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V)	3.1A(USB port) C 500V) C 500V) ≤ 2000m E: 0 − 40°C ≤ 80% Ollution degree: 2 C ~ 70°C	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
rotection VP CP sulation sistance eneral peration Environm	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V)	3.1A(USB port) C 500V) C 500V) ≤ 2000m E: 0 − 40°C ≤ 80% Ollution degree: 2 C ~ 70°C	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
CP Sulation sistance eneral peration Environmen	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mA 10mA 20MΩ or above (C 30MΩ or above (C Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE: -10 HUMIDITY: ≤	3.1A(USB port) C 500V) C 500V) ≤ 2000m e: 0 - 40°C ≤ 80% collution degree: 2 10 - 70°C 10 - 70°C	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
Orace Environmen	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) ±20mA 10mA 20MΩ or above (C Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE: -1C HUMIDITY: ≤ AC 100V/120V/220V/230V	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ≤ 2000m e: 0 - 40°C ≤ 80% Solution degree: 2 (C - 70°C 70% ±10%, 50/60Hz	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
rotection VP CP sulation sistance eneral peration Environm	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mA 10mA 20MΩ or above (C 30MΩ or above (I Indoor use, Altitude	3.1A(USB port) C 500V) C 500V) ≤ 2000m E: 0 − 40°C ≤ 80% Glution degree: 2 C − 70°C 70% (±10%, 50/60Hz W	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
VP CP sulation sistance eneral peration Environm orage Environmen over Input over Consumption	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mΩ or above (C 30MΩ or above (C Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE:-1C HUMIDITY:- AC 100V/120V/220V/230V 900VA, 680 CD User manual x1, Quick Start m	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ≤ 2000m e: 0 - 40°C ≤ 80% collution degree: 2 °C - 70°C 70% ½±10%, 50/60Hz W anual x1, Power Code x1	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
Orace Environmen	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) DOFF,ON(1.5V-65.0V) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mA 10mA 20MΩ or above (C 30MΩ or above (C Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE: -1(HUMIDITY: ≤ AC 100V/120V/220V/230 900VA, 680 CD User manual x1, Quick Start m Test lead: GTL-104	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ≤ 2000m E: 0 − 40°C ≤ 80% C − 70°C TOW #10%, 50/60Hz W anual x1, Power Code x1 A x 3	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
otection VP CP sulation sistance eneral peration Environm orage Environmen ower Input ower Consumption ccessories	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) ±100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mΩ or above (C 30MΩ or above (C 30MΩ or above (I Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE: -II HUMIDITY: ≤ AC 100V/120V/220V/230V 90VA, 680 CD User manual x1, Quick Start m Test lead: GTL-104 (Europe) Test lead: GTL-104	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ∴ ≤ 2000m ∴ 0 − 40°C ≤ 80% Ollution degree: 2 °C ~ 70°C 70% 1±10%, 50/60Hz W anual x1, Power Code x1 A x 3 A x 3, GTL-201A x1	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
peration Environmenter Input wer Consumption cessories mensions	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) 100mV 100mV OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mΩ or above (D 30MΩ or above (D Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE:-1C HUMIDITY:-2 AC 100V/120V/220V/230V 900VA, 680 CD User manual x1, Quick Start m Test lead: GTL-104 (Europe) Test lead: GTL-104 213 (W) x 145 (H) x3	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ≤ 2000m e: 0 - 40°C ≤ 580% collution degree: 2	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A)	-
ulation istance neral eration Environmen wer Input wer Consumption cessories	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) DFF,ON(0.5V-65.0V) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mΩ or above (C 30MΩ or above (C 30MΩ or above (C Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE: -1C HUMIDITY: ≤ AC 100V/120V/220V/230 900VA, 680 CD User manual x1, Quick Start m Test lead: GTL-104 (Europe) Test lead: GTL-104 (Europe) Test lead: GTL-104	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ≤ 2000m e: 0 − 40°C ≤ 80% Goldlution degree: 2 iC − 70°C iC − 70°C iW anual x1, Power Code x1 A x 3, GTL-201A x1 62 (D) mm g	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A) OFF,ON(0.05A-5.50A)	-
P P ulation istance eration Environm rage Environmen wer Input wer Consumption essories mensions	Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Power Mode Load Mode Setting Accuracy Resoltion Between chassis and terminal Between chassis and DC power cord	1Ω OFF,ON(0.5V-35.0V) OFF,ON(1.5V-35.0V) OFF,ON(0.05A-6.50A)	-	OFF,ON(0.5V-65.0V) OFF,ON(1.5V-65.0V) DFF,ON(0.5V-65.0V) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) OFF,ON(0.05A-3.50A) 20mΩ or above (C 30MΩ or above (C 30MΩ or above (C Indoor use, Altitude Ambient temperatur Relative humidity Installation category: II / P TEMPERATURE: -1C HUMIDITY: ≤ AC 100V/120V/220V/230 900VA, 680 CD User manual x1, Quick Start m Test lead: GTL-104 (Europe) Test lead: GTL-104 (Europe) Test lead: GTL-104	3.1A(USB port) 3.1A(USB port) C 500V) C 500V) ≤ 2000m e: 0 - 40°C ≤ 580% collution degree: 2	OFF,ON(0.5V-38.0V) OFF,ON(1.5V-38.0V) OFF,ON(0.05A-5.50A) OFF,ON(0.05A-5.50A)	-

ORDERING INFORMATION

GPP-3060 385W Triple-channel Programmable DC Power Supply GPP-6030 385W Triple-channel Programmable DC Power Supply GPP-3650 385W Triple-channel Programmable DC Power Supply

CD (User manual), Quick start manual, Power cord, Test lead: GTL-104A x 3, European test leads: GTL-204A x 3, GTL-201A x 1

GTL-246 USB Cable GRA-449-E Rack Mount Kit (EIA) GRA-449-J Rack Mount Kit (JIS)

Standard: RS-232, USB, LAN, Ext I/O Optional (manufacturer installed only): GPIB