

HT3050 Three Phase Program Control Precision Power Source



I. Introduction

HT3050 composed by DSP of 1.2G MAC, large FPGA, high precision DA and high fidelity power amplifier. Applies to test the electric test, heat engineering, tele-mechanical, dispatch and others electric department and enterprise which need test and inspect the high-accurate signal source of electric system.

HT3050 is a high-precision adjustable voltage and current standard source which can output power-frequency (40Hz ~ 65Hz), phase and adjustable high-precision voltage and current,. HT3050 can output pure sinusoidal voltage and current, the distortion does not exceed 0.1%. HT3050 with high-stability, the typical value is 0.03% RD.

II.Features

1. Can output pure, distortion 0.1% sine wave signal.
2. Can add each harmonic wave output based on fundamental wave.
3. Output frequency can be any among 40Hz~65Hz, resolution is 0.005Hz, accuracy is 0.005Hz.
4. Phase A & B is a frequency standard, phase C is a signal frequency standard, so it can frequency conversion in split-phase.
5. Phase can be any of 0~360.
6. Strong load capacity, can be with capacitive, inductive, resistive load or integrated load, and load regulation < 0.03%RG.
7. Good temperature stability, the temperature coefficient of its core components is 1PPM military grade product, ensure the output accuracy.
8. Adopts 32 bit MCU+DSP processor, functional and flexible.
- 9.The system can output high precision harmonic wave and with perfect harmonic distortion standard.
10. Connect with PC using RS232, develop other functions.
11. Perfect over-current, over-voltage, over-heat, short circuit, open circuit, over-load protection.
12. Hardware PID, fast respond, the change of the load no effect to output.
13. 320*240 LCD, menu control, easy to operate.
14. Communication protocol, convenient for secondary development.
15. Can with pure capacitive load.
16. Combined with PC software can calibrate the energy meters.

III. Parameters

AC voltage output		
Fine adjustment	0.05%RG	
Accuracy	Better than $\pm 0.1\%$ RG	
Stability	Better than $\pm 0.03\%$ RG/1min	
distortion	Better than 0.1%(Non-capacitive load)	
output power	rated 15VA each phase	
full load regulation	$<\pm 0.03\%$ RG	
full load adjust time	$<1\text{mS}$	
output range	0V~420V	
gear setting	0V~140V, 140V~280V, 280V~420V, auto shift the gears.	
temperature drift	$\pm 15\text{PPM}/^\circ\text{C}$	
long-term stability	$\pm 100\text{PPM}/\text{year}$	
AC current output		
Fine adjustment	0.05%RG	
Accuracy	Better than $\pm 0.1\%$ RG	
Stability	Better than $\pm 0.03\%$ RG/1min	
distortion	Better than 0.1%(Non-capacitive load)	
output power	15VA each phase	
full load regulation	$<\pm 0.03\%$ RG	
full load adjust time	$<1\text{ms}$	
output range	0A、1mA~10A(20A)	
gear setting	0A~0.2A、0.2A~1A、1A~5A、5A~10A, auto shift the gears	
customized	0~1A、1A~5A、5A~10A、10A~20A, auto shift the gears	
temperature drift	$\pm 15\text{PPM}/^\circ\text{C}$	
long-term stability	$\pm 100\text{PPM}/\text{year}$	
output power	Accuracy	Better than 0.1%RG
	stability	Better than 0.03%/1min
Phase	adjustment range	0~359.99
	Resolution	0.02
	accuracy	± 0.05
Frequency	adjustment range	40Hz~65Hz
	Resolution	0.005
	accuracy	± 0.005
	temperature drift	$\pm 1\text{PPM}/^\circ\text{C}$
	long-term stability	$\pm 4\text{PPM}/\text{year}$
Power factor	adjustment range	-1~0~+1
	Resolution	0.0005
	accuracy	0.001
Power supply	220 V, AC50Hz $\pm 5\%$	
Harmonic wave output	HT3050 can accurately output 2~22 times harmonic wave, each harmonic wave can combine with each other and output the same time.	
	The load capacity will reduce half when output the harmonic wave, please keep the load not exceeding half of the rated value to ensure the measurement accuracy, especially the voltage output, because the voltage output usually considered as the power source of the measured device, its consumption is very high.	
Dimension	480*330*680mm ³	
Weight	31.6kg	

