ITECH ELECTRONICS
Your Power Testing Solution

IT7321

IT7321 AC Power Supply

IT7321 sets up the new standard for high performance AC power source. It equips with all powerful features such as power line disturbance (PLD) simulation, Dimmer and comprehensive measurement functions. IT7321 has built-in LAN / RS232 / USB communication interface.

They can be applied to commercial, power electronics and military test applications from bench-top testing to mass production.

■ Features

- ■ High accuracy and resolution
- ■ Programmable frequency:45Hz-500Hz
- ■ Display Vrms,Irms,Ipeak,frequency,PF,apparent power and active power simultaneously
- ■ IEC61000-4-11,IEC 61000-4-14,IEC 61000-4-28 voltage dips and frequency variation simulation
- ■ Power line disturbance simulation capability
- ■ Programmable voltage and current limit settings
- ■ Dimmer function
- ■ Turn on,turn off phase angle control(0-360°)
- ■ TTL signal which indicates output transient
- ■ Support front and rear panel output
- ■ List mode to generate surge,sag and other line disturbance simulations
- ■ Over-voltage,over-power,over-current,over-temperature protection features
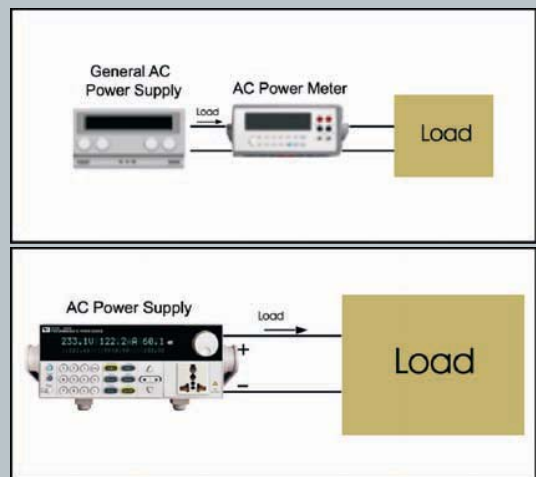- ■ Built-in LAN,RS-232/USB interface programming with SCPI command language

Model	Specification
IT7321	300V/3A/300VA

"AC power supply" + "Power meter"

Normally, when test AC products, a power meter is needed to connect between AC power supply and DUT in series. Since power meter is built-in in IT7321, users don't need to connect an extra power meter. It is not only easy for test, but also save cost.

Linear Amplifier Technology

IT7321 AC source adopts latest linear technology which greatly reduce the output noise and ensure high working stability. Because of the lower ripple index, this series AC source can assist user to get a more precision measuring result.

Multi-function & High Precision Measurement

IT7321 AC source uses advanced DSP circuit to get higher precision and high-speed measurement for ture RMS voltage, true RMS current, true power, frequency, power factor and peak value. In addition, its high resolution 0.01W/0.1mA extends the application for Energy Star testing standard. IT7321 is not only a AC source, but also a powerful meter.

Adjustable Phase Angle

User can set the start and stop phase angle within range of 0~360°.This function is widely used for startup and shutdown current impact test or various rectifier performance test.


## Power Line Disturbance Simulation Function

IT7321 provides powerful functions to simulate all kinds of power line disturbance conditions. The STEP and PULSE modes offer a method to execute a single step or continuous output changes. The LIST Mode, up to 100 sequences, extends this function for more complex waveform generator needs. In this way, IT7321 is capable of simulating all sorts of voltage dips, surge or trapped wave. The IT7321 enables users to perform the pre - compliance tests against IEC 61000-4-11 and compliance test against IEC 61000-4-14/-4-28 immunity test regulations.
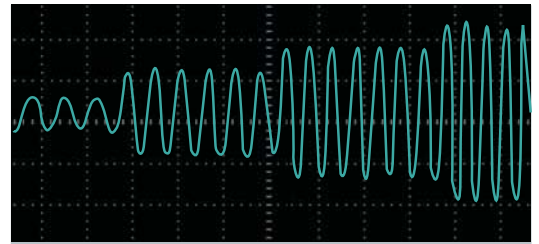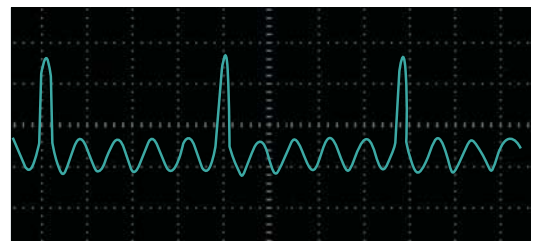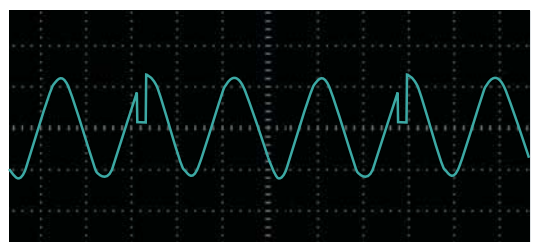

Step Mode
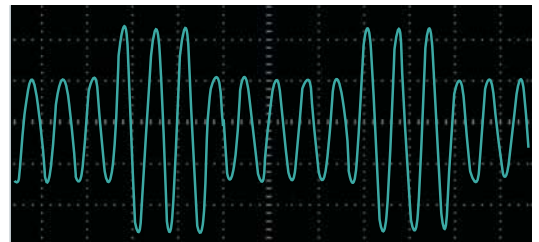
Pulse Mode
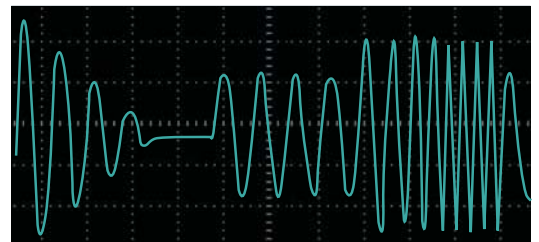
List Mode

Surge Waveform

Trap Wave

Built-in Communication Interface

An easy-to use rotary knob and self-guiding keypads allow you to set the output at your desired value without any effort. In addition, IT7321 AC source has built-in RS232/USB/GPIB/LAN interface, providing customer high speed and stable communication quality.

Built-in Communication Interface

IT7000 software offers sweep test, list test, quick setting, phase dimmer test, report and save the data.


High Stability

Based on professional high anti-environment disturbance technology, self-diagnosis design and OCP/OPP/OTP protections, this series power supply could work well even in bad environment. IT7321 AC power supply assists engineer to ensure quality for products.

TRIAC Dimmer Simulation Function

ITECH is the pioneer of TRIAC Dimmer function. This function is used to do dimming and speed regulating test for lamp or electric motor to ensure the products work well when controller of dimming and speed regulating is needed.
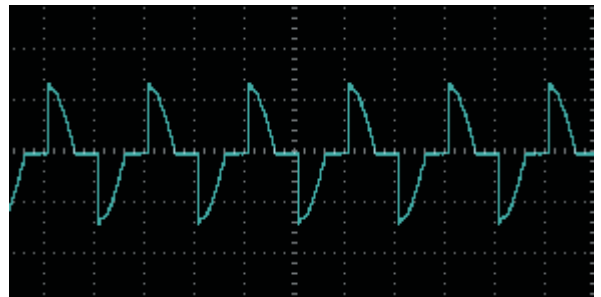
Front Phase Dimmer
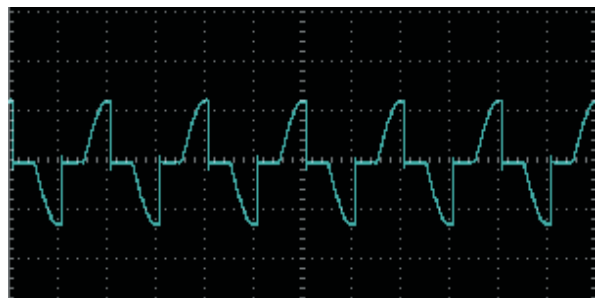
Back Phase Dimmer

SWEEP Function

This function tests efficiency of switch power supply and gets voltage and frequency value at max power. It could change voltage and frequency by setting start voltage value, end voltage value, stepping voltage value, start frequency, end frequency, stepping frequency and time of each step. Time unit of each step could be S, M, H. And it saves 10 files at most voltage, frequency and current of max power will be displayed when the test is over.

Specification

		Basic Products	High Performance Products		
		IT7321	**IT7322**	**IT7324**	**IT7326**
INPUT					
Phase		1	1	1	1
Voltage		220 Vac/110 Vac±10%	220 Vac/110 Vac±10%	220Vac/110Vac±10%	220 Vac±10%
Frequency		47-63 Hz	47-63 Hz	47-63 Hz	47-63 Hz
Max.Current		6.3 A(220Vac)/10 A(110Vac)	15 A (220 Vac) / 30 A (110 Vac)	30 A (220Vac) / 60 A (110Vac)	60A
Power Factor		0.5 (typical)	0.7 (typical)	0.7(typical)	0.7(typical)
AC OUTPUT					
Max.Power		300 VA	750 VA	1500 VA	3000 VA
Max Current(rms)	0-150 V	3.0 A	6 A (0-150 V)	12 A(0-150 V)	24 A (0-150 V)
	0-300 V	1.5 A	3 A (0-300 V)	6 A(0-300 V)	12 A(0-300 V)
Max Current(peak)	0-150 V	12 A	24 A (0-150 V)	48 A (0-150 V)	96 A (0-150 V)
	0-300 V	6 A	12 A (0-300 V)	24 A(0-300 V)	48 A(0-300 V)
Phase		1Φ/3 W	1Φ/ 3W	1Φ/3W	1Φ/3W
Total Harmonic Distortion(T.H.D)		≤0.5% at 45-500 Hz (Resistive Load)			
Crest Factor		≤4			
Line Regulation		0.1% max for a ±10% line change			
Load Regulation		≤0.5%FS (Resistive Load)			
Response Time		<100μS			
SETTING					
Voltage	Range	0-300V, 150/300V Auto			
	Resolution	0.1 V			
	Accuracy	±(0.2% +0.6 V)			
Frequency	Range	45-500 Hz			
	Resolution	0.1Hz at 45-99.9 Hz 1Hz at 100-500Hz			
	Accuracy	0.1 Hz			
Phase Angle	Range	0-360°			
	Resolution	0.1°			
	Accuracy	±1°(45-65 Hz)			
MEASUREMENT					
Voltage(rms)	Range	0-300 V			
	Resolution	0.1 V			
	Accuracy	±(0.2% + 0.6V)			
Current(rms)	Range	L:120.0mA/M:1.200A/H:3 A	L:1200 mA /M:1200 A /H:6 A	L:1200mA / M:1200A /H:12 A	L:1200mA /M:1200A / H:24A
	Resolution	L:0.1m A/ M: 1mA/ H:10 mA			
	Accuracy	L:±(0.2%+0.6mA) M:±(0.2%+6mA) H:±(0.2%+40mA)	L: ±(0.2%+0.6 mA) M: ±(0.2%+6 mA) H: ±(0.2%+60 mA)	L:±(0.2%+0.6 mA) M:±(0.2%+6 mA) H:±(0.2%+80 mA)	L:±(0.2%+0.6 mA) M:±(0.2%+6 mA) H:±(0.2%+0.1 A)
Current(peak)	Range	0-12A	0-24 A	0-48 A	0-96 A
	Resolution	0.01A	0.01 A	0.01 A	0.01 A
	Accuracy	±(1%+360mA)	±(1%+360 mA)	±(1%+360 mA)	±(1%+360 mA)
Power	Resolution	L:0.01W M:0.1W H:1W	L:0.01 W M:0.1 W H:1 W	L:0.01W M:0.1W H:1W	L:0.01W M:0.1W H:1W
	Accuracy	L:±(0.2%+0.2W) (47Hz -65 Hz) M:±(0.2%+2W) (47Hz -65 Hz) H:±(0.2%+ 4W) (47Hz -65H z)	L:±(0.2%+ 0.2W) (47Hz -65 Hz) M:±(0.2%+ 2W) (47Hz -65 Hz) H:±(0.2%+ 6W) (47Hz -65 Hz)	L:±(0.2%+0.2W) (47Hz -65 Hz) M:±(0.2%+2W) (47Hz -65 Hz) H:±(0.2%+ 10W) (47Hz -65 Hz)	L:±(0.2%+0.2 W) (47Hz -65 Hz) M:±(0.2%+2 W) (47Hz -65 Hz) H:±(0.2%+ 15W) (47Hz -65Hz)
GENERAL					
Memory		10 memories			
Sync Output Signal		Output Signal 5V,BNC type			
Operation Environment		0-40℃/20-80%RH			
Dimension		½ 19″ 2U	19″ 3U	19″ 3U	19″ 6U
Interface		LAN/USB/RS232	LAN/USB/RS232/GPIB	LAN/USB/RS232/GPIB	LAN/USB/RS232/GPIB

There are three levels of current, L-level, M-level and H-level. If Ipeak 300 Full rms , low level will change to high level if Ipeak 20   full rms , M-level will change to L-level if Ipeak 80   full rms , H-level will change to M-level.

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IT7321 Dimension

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IT7322/IT7324 Dimension
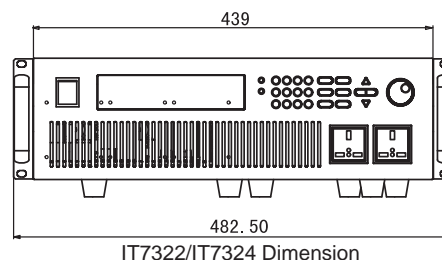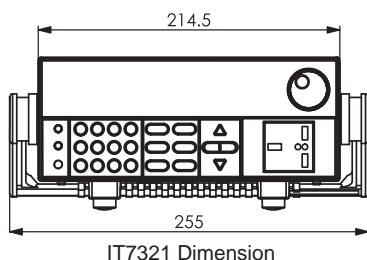
Unit mm

Specification

		High Performance Products		
		IT7322H	**IT7324H**	**IT7326H**
INPUT				
Phase		1	1	1
Voltage		220/110 Vac±10%	220/110 Vac±10%	220Vac±10%
Frequency		47-63 Hz	47-63 Hz	47-63 Hz
Max.Current		15A(220Vac)/30A(110Vac)	30A(220Vac)/60A(110Vac)	60 A
Power Factor		0.7(typical)	0.7(typical)	0.7(typical)
AC OUTPUT				
Max.Power		750 VA	1500 VA	3000 VA
Max Current(rms)	0-250V	3.0 A	6 A	12 A
	0-500V	1.5 A	3 A	6 A
Max Current(peak)	0-250V	12 A	24 A	48 A
	0-500V	6 A	12 A	24 A
Phase		1Φ/3W	1Φ/3W	1Φ/2W
Total Harmonic Distortion(T.H.D)		≤1% at 45-500 Hz (Resistive Load)		
Crest Factor		≤4		
Line Regulation		0.1% max for a ±10% line change		
Load Regulation		≤0.5% FS (Resistive Load)		
Response Time		<100 µS		
SETTING				
Voltage	Range	0-500V, 250/500V Auto		
	Resolution	0.1V		
	Accuracy	±(0.2%+1.2 V)	±(0.2% + 0.6V)	±(0.2% + 0.6V)
Frequency	Range	45-500Hz		
	Resolution	0.1Hz at 45-99.9Hz 1Hz at 100-500Hz		
	Accuracy	0.1Hz		
Phase Angle	Range	0-360°		
	Resolution	0.1°		
	Accuracy	±1°(45-65Hz)		
MEASUREMENT				
Voltage(rms)	Range	0-500 V	0-500V	0-500V
	Resolution	0.1 V	0.1V	0.1V
	Accuracy	±(0.2%+1.2 V)	±(0.2% + 0.6 V)	±(0.2% + 0.6V)
Current(rms)	Range	L:120.0mA * M:1.200A * H:3.00A *	L:120.0mA/ M:1.200A/ H:6.00A	L:240.0mA/ M:2.400A/ H:24.00A
	Resolution	L:0.1mA M:1mA H:10mA	L:0.1mA/ M:1mA/ H:10 mA	L:0.1mA/ M:1mA/ H:10 mA
	Accuracy	L:±(0.2%+0.6 mA) M:±(0.2%+6 mA) H:±(0.2%+40 mA)	L: ±(0.2%+0.4 mA) M: ±(0.2%+6 mA) H: ±(0.2%+60 mA)	L:±(0.2%+0.6 mA) M:±(0.2%+6 mA) H:±(0.2%+40 mA)
Current(peak)	Range	0-12 A	0-24 A	0-48 A
	Resolution	0.01 A	0.01 A	0.01 A
	Accuracy	±(1%+360 mA)	±(1%+360 mA)	±(1%+120 mA)
Power	Resolution	L:0.01W M:0.1W H:1W	L:0.01W M:0.1W H:1W	L:0.01W M:0.1W H:1W
	Accuracy	L: ±(0.2%+0.2W) (47Hz-65 Hz) M: ±(0.2%+2W) (47Hz-65 Hz) H: ±(0.2%+6W) (47Hz-65 Hz)	L: ±(0.2%+0.2W) (47Hz-65Hz) M: ±(0.2%+2W) (47Hz-65Hz) H: ±(0.2%+10W) (47Hz-65Hz)	L:±(0.2%+0.05W) (47Hz-65Hz) M:±(0.2%+0.5W) (47Hz-65Hz) H:±(0.2%+2W) (47Hz-65Hz)
GENERAL				
Memory		10 memories		
Sync Output Signal		Output Signal 5V,BNC type		
Operation Environment		0-40℃/20-80%RH		
Dimension		19″ 3U	19″ 3U	19″ 6U
Interface		LAN/USB/RS232/GPIB	LAN/USB/RS232/GPIB	LAN/USB/RS232/GPIB

There are three levels of current, L-level, M-level and H-level. If Ipeak 300 Full rms , low level will change to high level if Ipeak 20 full rms , M-level will change to L-level if Ipeak 80 full rms , H-level will change to M-level.

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Standard Accessories

Power Cord
Calibration Report
User Manual