

#### **Applications**

Motor industry, Illumination, Aviation, Lab testing, Production line test, etc.

# **Feature**

- Precise Linear amplification technology, low noise, high stability
- High power density design, 1500VA for 3U size, save installation space
- Adjustable frequency:45Hz-500Hz
- Adjustable phase angle: 0-360°
- Settable output slew rate of voltage and frequency
- High current crest factor for surge current testing
- TRIAC Dimmer dimming / governor simulation function
- Output the changed synchronous TTL signal
- LIST mode for testing power perturbation (PLD) simulation
- Simulate the surge, trap waveform
- Voltage dip, short interruption and voltage change simulation
- Measure various electrical parameters, including RMS voltage / current, actual power, power factor, VA (apparent power), peak current and other parameters
- Measurement resolution 0.01W / 0.1mA, meet Energy Star standard requirement
- Built-in RS-232, USB and LAN (support SCPI protocol)
- Support three devices connection through System Bus to achieve three-phase AC power function
- OCP,OVP,OTP,OPP

In order to meet the wider range of AC power supply and more complex change characteristics, engineers need more powerful and stable AC power supply to simulate the actual working environment. IT7300 series is the best solution in this area. IT7300 series can be widely applied in the electronics and electrical industry,lighting,R&D specification's verification, laboratory testing and factory production online test etc.

| Model    | Voltage | Current | Power | Phase | Size |
|----------|---------|---------|-------|-------|------|
| IT7322   | 150/300 | 6/3     | 750   | 1φ    | 3U   |
| IT7324   | 150/300 | 12/6    | 1500  | 1φ    | 3U   |
| IT7326   | 150/300 | 24/12   | 3000  | 1φ    | 6U   |
| IT7322H  | 250/500 | 3/1.5   | 750   | 1φ    | 3U   |
| IT7324H  | 250/500 | 6/3     | 1500  | 1φ    | 3U   |
| IT7326H  | 250/500 | 12/6    | 3000  | 1φ    | 6U   |
| IT7322T  | 150/300 | 6/3     | 2250  | 3φ    | 15U  |
| IT7324T  | 150/300 | 12/6    | 4500  | 3φ    | 15U  |
| IT7326T  | 150/300 | 24/12   | 9000  | 3φ    | 27U  |
| IT7322HT | 250/500 | 3/1.5   | 2250  | 3φ    | 15U  |
| IT7324HT | 250/500 | 6/3     | 4500  | 3φ    | 15U  |
| IT7326HT | 250/500 | 12/6    | 9000  | 3φ    | 27U  |

# Linear amplification technology

IT7300 Series AC Power Supply adopts advanced and high-precision linear amplification design to provide low noise and high stability output. This technology has high-speed response characteristics, stable low noise, it can simulate the abnormal power line, instantaneous voltage rise, drop and power off, and can be applied to ATE and so on.

# **Built-in AC power meter**

IT7300 series directly shows voltage RMS, current RMS, frequency, active power, power factor from panel without external power meter, saving the test cost and complex connection operation time.

<sup>\*</sup> For any GPIB interface option request, check with ITECH for availability

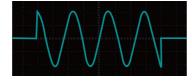


# No power frequency transformer power supply, low power consumption

IT7300 series AC source provide no power frequency transformer power supply with lower power consumption, it solves output problems of large volume, huge heat dissipation and low power output caused by using frequency transformer, IT7300 series also provide linear adaptation method between the current and AC voltage in AC source, which solves the problem of high energy consumption and low accuracy.

# Adjustable phase angle

Users can set the start and stop phase angle within range of 0-360°. This function is widely used for startup and shutdown



current inrush impact test or various rectifier performance tests.

# 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.





Leading Edge

Trailing Edge

# Sweep function

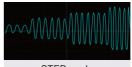
This function tests efficiency of switch power supply and gets voltage and frequency value at max power. It could change voltage and frequency by setting start voltage value, end frequency, stepping frequency and time of each step. It saves 10 files max. Voltage, frequency and current of max power will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

# Support Three-phase Parallel function

IT7300 series AC source can achieve three-phase without requiring external accessories, users can directly connect into three-phase through the back of the SYSTEM BUS, set one of them as master, the rest are slaves. The slave sends synchronous clock control signal according to each cycle of the DDS inside the device, so that the phase difference is always maintained at 120 ° and does not deviate greatly in long time running. It is flexible to meet the increase or decrease requirements of production line aging test machine numbers.

### List function

IT7300 series has built-in DDS waveform generator, very flexible waveform simulation function. Users can directly set the required power waveform through the panel keys, to simulate transient power off, surge, trap, specific phase angle on or off, AC sine wave amplitude and frequency range and other characteristics.



STEP mode Surge waveform



Trap waveform

LIST mode



#### **IT7300 Specifications**

| Model                                  |                            | IT7322                              | IT7322H                                 | IT7324H                             |  |
|--|----------------------------|-------------------------------------|---|-------------------------------------|--|
| INPUT                                  |                            |                                     | 11702211                                | 117324H                             |  |
| Phase                                  |                            | 1                                   | 1                                       | 1                                   |  |
| Voltage                                |                            | 220Vac±10% or 110Vac±10%            | 220Vac±10% or 110Vac±10%                | 220Vac±10% or 110Vac±10%            |  |
| Frequency                              |                            | 47~63Hz                             | 47~63Hz                                 | 47~63Hz                             |  |
| Max current                            |                            | 15A(220Vac) or 30A(110Vac)          | 20A(220Vac) or 40A(110Vac)              | 30A(220Vac) or 60A(110Vac)          |  |
| Power factor                           |                            | 0.7(typical)                        | 0.7(typical)                            | 0.7(typical)                        |  |
| AC OUTPUT                              |                            | 0.7 (typical)                       | U.7 (typical)                           | o.r(typical)                        |  |
|  |                            | 750VA                               | 750VA                                   | 1500VA                              |  |
| Max power                              |                            | 6A                                  | 0~250V 3A                               | 0~250V 6A                           |  |
| Max current (rms)                      |                            | 3A                                  |   |                                     |  |
| Max current (peak)                     |                            |                                     |   |                                     |  |
|  |                            | 18A                                 |   |                                     |  |
| Di                                     |                            | 9A                                  | 0~500V 4.5A                             |                                     |  |
| Phase                                  |                            | 1Φ/2W                               | 1Φ/2W                                   | 1Φ/2W                               |  |
| Total harmonic di                      | stortion(T.H.D)            | ≤0.5% at 45-500Hz (Resistive Load)  | ≤1% at 45-500Hz (Resistive Load)        | ≤1% at 45-500Hz (Resistive Load)    |  |
| Crest factor                           |                            | 3                                   | 3                                       | 3                                   |  |
| Power regulation                       |                            | 0.1% max for a ±10% line change     | 0.1% max for a ±10% line change         | 0.1% max for a ±10% line change     |  |
| Load regulation                        |                            | ≤0.5%FS(Resistive Load)             | ≤0.5%FS(Resistive Load)                 | ≤0.5%FS(Resistive Load)             |  |
| Response time                          |                            | <100uS                              | <100uS                                  | <100uS                              |  |
| SETTING                                |                            |                                     |   |                                     |  |
|  | Range                      | 0~300V High, 150/300V Auto          | 0-500V High, 250/500V Auto              | 0~500V High, 250/500V Auto          |  |
| Voltage                                | Resolution                 | 0.1V                                | 0.1V                                    | 0.1V                                |  |
| voitage                                | Accuracy                   | ±(0.2%+0.6V)                        | ±(0.2%+1.2V)                            | ±(0.2%+1.2V)                        |  |
|  | Temperature<br>Coefficient | ±(0.04% per degree from 25°C)       | ±(0.04% per degree from 25°C)           | ±(0.04% per degree from 25°C)       |  |
|  | Range                      | 45~500Hz                            | 45~500Hz                                | 45~500Hz                            |  |
| Frequency                              | Resolution                 | 0.1Hz at 45-99.9Hz 1Hz at 100-500Hz | 0.1Hz at 45-99.9Hz 1Hz at 100-500Hz     | 0.1Hz at 45-99.9Hz 1Hz at 100-500Hz |  |
| . roquonoy                             | Accuracy                   | 0.1Hz                               | 0.1Hz                                   | 0.1Hz                               |  |
|  | Range                      | 0~360°                              | 0~360°                                  | 0~360°                              |  |
| Phase angle                            | Resolution                 | 0.1°                                | 0.1°                                    | 0.1°                                |  |
| 3                                      | Accuracy                   | ±1°(45-65Hz)                        | ±1°(45-65Hz)                            | ±1°(45-65Hz)                        |  |
| MEASUREMENT                            |                            | _ : (10 001 12)                     | 2. (10 00.12)                           | 2. (10 001.12)                      |  |
| IND COLLINE VI                         | Range                      | 0~300V                              | 0~500V                                  | 0~500V                              |  |
| (oltago(rma)                           | Resolution                 | 0.1V                                | 0.1V                                    | 0.1V                                |  |
| Voltage(rms)                           | Accuracy                   | ±(0.2%+0.6V)                        | ±(0.2%+1.2V)                            | ±(0.2%+1.2V)                        |  |
|  | Temperature                | ±(0.04% per degree from 25°C)       | ±(0.04% per degree from 25°C)           | ±(0.04% per degree from 25°C)       |  |
|  | Coefficient                | L:120.0mA * M:1.200A * H:6.00A *    | L:120.0mA * M:1.200A * H:3.00A *        | , , , ,                             |  |
|  | Range<br>Resolution        |                                     |   | L:120.0mA * M:1.200A * H:6.00A *    |  |
| Current(rms)                           | 1 (esolutiof)              | L:0.1mA M:1mA H:10mA                | L:0.1mA M:1mA H:10mA                    | L:0.1mA M:1mA H:10mA                |  |
| (IIIIO)                                | Accuracy                   | L:±(0.2%+0.6mA) M:±(0.2%+6mA)       | L:±(0.2%+0.6mA) M:±(0.2%+6mA)           | L:±(0.2%+0.6mA) M:±(0.2%+6mA)       |  |
|  |                            | H:±(0.2%+60mA)                      | H:±(0.2%+40mA)                          | H:±(0.2%+60mA)                      |  |
|  | Temperature<br>Coefficient | ±(0.04% per degree from 25°C)       | ±(0.04% per degree from 25°C)           | ±(0.04% per degree from 25°C)       |  |
|  | Range                      | 0~18A                               | 0~9A                                    | 0~24A                               |  |
| Current (peak)                         | Resolution                 | 0.01A                               | 0.01A                                   | 0.01A                               |  |
| (1)                                    | Accuracy                   | ±(1%+0.36A)                         | ±(1%+0.36A)                             | ±(1%+0.36A)                         |  |
|  | Temperature<br>Coefficient | ±(0.05% per degree from 25°C)       | ±(0.05% per degree from 25°C)           | ±(0.05% per degree from 25°C)       |  |
| 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                 |  |
|  | L:±(0.2%+0.2W) (47HZ-65HZ) |                                     | L:±(0.2%+0.2W) (47HZ-65HZ)              | L:±(0.2%+0.2W) (47HZ-65HZ)          |  |
|  |                            | M:±(0.2%+2W) (47HZ-65HZ)            | M:±(0.2%+2W) (47HZ-65HZ)                | M:±(0.2%+2W) (47HZ-65HZ)            |  |
|  | Accuracy                   | H:±(0.2%+6W) (47HZ-65HZ)            | H:±(0.2%+6W) (47HZ-65HZ)                | H:±(0.2%+10W) (47HZ-65HZ)           |  |
|  | Temperature<br>Coefficient | ±(0.05% per degree from 25°C)       | ±(0.05% per degree from 25°C)           | ±(0.05% per degree from 25°C)       |  |
| GENERAL                                | Joennoon                   | , , ,                               | , | (                                   |  |
| Memory storage                         |                            | 10 memories                         | 10 memories                             | 10 memories                         |  |
|  |                            | Output Signal 5V,BNC type           | Output Signal 5V,BNC type               | Output Signal 5V,BNC type           |  |
| Synchronous output signal<br>Interface |                            | LAN,USB,RS232 *                     | LAN,USB,RS232 *                         | LAN,USB,RS232 *                     |  |
|  |                            | 0~40°C/20-80%RH                     | 0-40°C/20-80%RH                         |                                     |  |
| Operating environment                  |                            |                                     |   | 0~40°C/20-80%RH                     |  |
| Size                                   |                            |                                     |   | 19"3U                               |  |
| Weight                                 |                            | 37Kg                                | 37Kg                                    | 37Kg                                |  |
|  |                            |                                     |   |                                     |  |

<sup>\*</sup> This information is subject to change without notice

<sup>\*</sup> For any GPIB interface option request, check with ITECH for availability



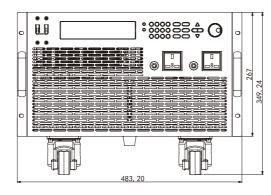
# **IT7300 Specifications**

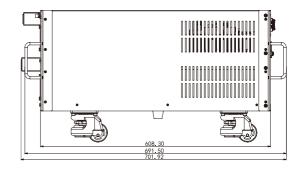
|                           | •                          |                                    |                               |                         |                                    |
|---------------------------|----------------------------|------------------------------------|-------------------------------|-------------------------|------------------------------------|
| Model                     |                            | IT7324                             | IT7326H                       |                         | IT7326                             |
| NPUT                      |                            |                                    |                               |                         |                                    |
| hase                      |                            | 1                                  | 1                             |                         | 1                                  |
| oltage                    |                            | 220Vac±10% or 110Vac±10%           | 220Vac±10                     | 0%                      | 220Vac±10%                         |
| requency                  |                            | 47~63Hz                            | 47~63Hz                       |                         | 47~63Hz                            |
| lax current               |                            | 30A(220Vac) or 60A(110Vac)         | 60A                           |                         | 60A                                |
| ower factor               |                            | 0.7(typical)                       | 0.7(typical)                  | )                       | 0.7(typical)                       |
| AC OUTPUT                 |                            | ,                                  | ,                             |                         | ,,,,,                              |
| Max power                 |                            | 1500VA                             | 3000VA                        |                         | 3000VA                             |
| Max current               |                            | 12A                                | 0~250V                        | 12A                     | 24A                                |
| rms)                      |                            | 6A                                 | 0~500V                        | 6A                      | 12A                                |
| /<br>Max current          |                            | 36A                                | 0~250V                        | 36A                     | 72A                                |
| peak)                     |                            | 18A                                | 0~500V                        | 18A                     | 36A                                |
| hase                      |                            | 1Φ/2W                              | 1Φ/2W                         | 10,1                    | 1Φ/2W                              |
| otal harmonic dis         | tortion(THD)               | ≤0.5% at 45-500Hz (Resistive Load) |                               | 0Hz (Resistive Load)    | ≤0.5% at 45-500Hz (Resistive Load) |
|                           | (כו.ו וו אוסווסא           | 3                                  | 3                             | or iz (i teasive Load)  | 3                                  |
| Crest factor              |                            | 0.1% max for a ±10% line change    |                               | or a ±10% line change   | 0.1% max for a ±10% line change    |
| ower regulation           | ı                          | •                                  |                               | · ·                     |                                    |
| oad regulation            |                            | ≤0.5%FS(Resistive Load)            |                               | esistive Load)          | ≤0.5%FS(Resistive Load)            |
| esponse time              |                            | <100us                             | <100us                        |                         | <100us                             |
| SETTING                   | _                          | 0.000/115-1- 450/000/14            | 0.500.11.                     | - 050/500\/ A. t        | 0.000/115-4-150/000/14             |
|                           | Range                      | 0~300V High, 150/300V Auto         |                               | h, 250/500V Auto        | 0~300V High, 150/300V Auto         |
| /oltage                   | Resolution                 | 0.1V                               | 0.1V                          |                         | 0.1V                               |
| ollage                    | Accuracy                   | ±(0.2%+0.6V)                       | ±(0.2%+1.2                    | V)                      | ±(0.2%+0.6V)                       |
|                           | Temperature<br>Coefficient | ±(0.04% per degree from 25°C)      | ±(0.04% pe                    | r degree from 25°C)     | ±(0.04% per degree from 25°C)      |
|                           | Range                      | 45-500Hz                           | 45-500Hz                      |                         | 45-500Hz                           |
| requency                  | Resolution                 | 0.1Hzat45-99.9Hz 1Hzat100-500Hz    | 0.1Hzat45-99                  | 9.9Hz 1Hzat100-500Hz    | 0.1Hzat45-99.9Hz 1Hzat100-500Hz    |
|                           | Accuracy                   | 0.1Hz                              | 0.1Hz                         |                         | 0.1Hz                              |
|                           | Range                      | 0~360°                             | 0~360°                        |                         | 0~360°                             |
| hase angle                | Resolution                 | 0.1°                               | 0.1°                          |                         | 0.1°                               |
| Accuracy                  |                            | ±1°(45-65Hz)                       | ±1°(45-65Hz)                  |                         | ±1°(45-65Hz)                       |
| MEASUREMEN                |                            |                                    |                               |                         |                                    |
|                           | Range                      | 0~300V                             | 0~500V                        |                         | 0~300V                             |
| oltage(rms)               | Resolution                 | 0.1V                               | 0.1V                          |                         | 0.1V                               |
| 3 ( )                     | Accuracy                   | ±(0.2%+0.6V)                       | ±(0.2%+1.2                    | V)                      | ±(0.2%+0.6V)                       |
|                           | Temperature                | ±(0.04% per degree from 25°C)      | ,                             | r degree from 25°C)     | ±(0.04% per degree from 25°C)      |
|                           | Coefficient                | L:120.0mA * M:1.200A * H:12.00A *  |                               | * M:1.200A * H:12.00A * | L:120.0mA * L:120.0mA * H:24.00A * |
|                           | Range                      |                                    |                               |                         | L:0.1mA M:1mA H:10mA               |
| Current(rms)              | Resolution                 | L:0.1mA M:1mA H:10mA               |                               | :1mA H:10mA             |                                    |
| ` /                       | Accuracy                   | L:±(0.2%+0.6mA) M:±(0.2%+6mA)      | ,                             | 6mA) M:±(0.2%+6mA)      | L:±(0.2%+0.6mA) M:±(0.2%+6mA)      |
|                           | Temperature                | H:±(0.2%+80mA)                     | H:±(0.2%+6                    | ,                       | H:±(0.2%+0.1A)                     |
|                           | Temperature<br>Coefficient | ±(0.04% per degree from 25°C)      | ±(0.04% per degree from 25°C) |                         | ±(0.04% per degree from 25°C)      |
|                           | Range                      | 0~48A                              | 0~48A                         |                         | 0~96A                              |
| Current(peak)             | Resolution                 | 0.01A                              | 0.01A                         |                         | 0.01A                              |
|                           | Accuracy                   | ±(1%+0.36A)                        | ±(1%+0.36A                    | ()                      | ±(1%+0.36A)                        |
|                           | Temperature<br>Coefficient | ±(0.05% per degree from 25°C)      | ±(0.05% per                   | degree from 25°C)       | ±(0.05% per degree from 25°C)      |
|                           | 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                |
| Power                     |                            | L:±(0.2%+0.2W) (47Hz-65Hz)         | L:±(0.2%+0.                   | 2W) (47Hz-65Hz)         | L:±(0.2%+0.2W) (47Hz-65Hz)         |
|                           | Accuracy                   | M:±(0.2%+2W) (47Hz-65Hz)           | M:±(0.2%+2                    | W) (47Hz-65Hz)          | M:±(0.2%+2W) (47Hz-65Hz)           |
|                           |                            | H:±(0.2%+10W) (47Hz-65Hz)          | H:±(0.2%+1                    | 0W) (47Hz-65Hz)         | H:±(0.2%+15W) (47Hz-65Hz)          |
|                           | Temperature<br>Coefficient | ±(0.05% per degree from 25°C)      | ±(0.05% per                   | degree from 25°C)       | ±(0.05% per degree from 25°C)      |
| SENERAL                   | COGINOGIA                  | , ,                                | , ,                           | ,                       |                                    |
| emory storage             | 9                          | 10 memories                        | 10 memorie                    | S                       | 10 memories                        |
| Synchronous output signal |                            | Output Signal 5V,BNC type          |                               | all 5V,BNC type         | Output Signal 5V,BNC type          |
| Interface                 |                            | LAN.USB.RS232 *                    | LAN.USB.R                     |                         | LAN.USB.RS232 *                    |
| Operating environment     |                            | 0~40°C/20-80%RH                    | 0~40°C/20-8                   |                         | 0~40°C/20-80%RH                    |
| Size                      |                            | 1/2 19" 3U                         | 19" 6U                        |                         | 19" 6U                             |
|                           |                            |                                    |                               |                         |                                    |
| Weight                    |                            | 48kg                               | 103kg                         |                         | 103kg                              |

<sup>\*</sup> This information is subject to change without notice

## **IT7326 Dimension figure**

Unit: mm





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THURLBY THANDAR instrument distribution

<sup>\*</sup> For any GPIB interface option request, check with ITECH for availability