

SP-300 Series Programmable AC Power Supply & System

»» Application Guide



- High Efficiency
- High Precision
- High Stability

SP-300 Series Programmable AC Power Supply & System

SP-300 Series Single-phase Programmable AC Power Supply



(2U)600W~1500W



(3U)2000W



(4U)3000W~5000W

| Output | | | Model | Size | Standard Interface | Optional Information | Certificates |
|-----------|-------------|-------|---------------|-----------------|---------------------|----------------------|---------------|
| Voltage | Current | Power | | | | | |
| 150V/300V | 5.6A/2.8A | 600W | SP300VAC600W | 2U ¹ | RS232/RS485/USB | (1) (2) (3) | CE/UL/CSA/FCC |
| 150V/300V | 9.2A/4.6A | 1000W | SP300VAC1000W | 2U ¹ | RS232/RS485/USB | (1) (2) (3) | CE/UL/CSA/FCC |
| 150V/300V | 13.8A/6.9A | 1500W | SP300VAC1500W | 2U ¹ | RS232/RS485/USB | (1) (2) (3) | CE/UL/CSA/FCC |
| 150V/300V | 16A/8A | 2000W | SP300VAC2000W | 3U ² | RS232/RS485/USB/LAN | (4) (5) | CE/UL/CSA/FCC |
| 150V/300V | 27.6A/13.8A | 3000W | SP300VAC3000W | 4U ³ | RS232/RS485/USB/LAN | (4) (5) | CE/UL/CSA/FCC |
| 150V/300V | 32A/16A | 4000W | SP300VAC4000W | 4U ³ | RS232/RS485/USB/LAN | (4) (5) | CE/UL/CSA/FCC |
| 150V/300V | 46A/23A | 5000W | SP300VAC5000W | 4U ³ | RS232/RS485/USB/LAN | (4) (5) | CE/UL/CSA/FCC |

SPS-300 Series AC Power Supply System



(9U)1200W~4500W



(17U)6000W~15000W



(21U)12000W~2000W

| Output | | | Output Mode | Connection Type | Model | Size | Standard Communication Interface | Optional Information | Certificates |
|---------------|-------------|---------------|---------------------|---------------------|----------------------|---------------------|----------------------------------|----------------------|--------------|
| Rated Voltage | Rated Power | Rated Current | | | | | | | |
| 150V/300V | 1200W | 10.08A/5.04A | 1-Phase | 2 Parallel | SPS300VAC1200W-2-9 | 9U ⁴ | RS232/RS485/USB | (1) | CE |
| 150V/300V | 2000W | 15.56A/8.28A | | | SPS300VAC2000W-2-9 | | RS232/RS485/USB | | |
| 150V/300V | 3000W | 24.84A/12.42A | | | SPS300VAC3000W-2-9 | | RS232/RS485/USB | | |
| 150V/300V | 4000W | 28.8A/14.4A | | | SPS300VAC4000W-3-17 | 17U ⁵ | RS232/RS485/USB/LAN | | |
| 150V/300V | 6000W | 49.68A/24.84A | | | SPS300VAC6000W-4-17 | | RS232/RS485/USB/LAN | | |
| 150V/300V | 8000W | 57.6A/28.8A | | | SPS300VAC8000W-4-17 | | RS232/RS485/USB/LAN | | |
| 150V/300V | 10000W | 82.8A/41.4A | | | SPS300VAC10000W-4-17 | | RS232/RS485/USB/LAN | | |
| 150V/300V | 1800W | 15.12A/7.56A | | | SPS300VAC1800W-2-9 | | 9U ⁴ | | |
| 150V/300V | 3000W | 24.84A/12.42A | SPS300VAC3000W-2-9 | RS232/RS485/USB | | | | | |
| 150V/300V | 4500W | 37.26A/18.63A | SPS300VAC4500W-2-9 | RS232/RS485/USB | | | | | |
| 150V/300V | 6000W | 43.2A/21.6A | 1-Phase | 3 Parallel | SPS300VAC6000W-3-17 | 17U ⁵ | RS232/RS485/USB/LAN | (1) | CE |
| 150V/300V | 9000W | 74.52A/37.26A | | | SPS300VAC9000W-4-17 | | RS232/RS485/USB/LAN | | |
| 150V/300V | 12000W | 86.4A/43.2A | | | SPS300VAC12000W-4-17 | | RS232/RS485/USB/LAN | | |
| 150V/300V | 15000W | 124.2A/62.1A | | | SPS300VAC15000W-4-17 | RS232/RS485/USB/LAN | | | |
| 150V/300V | 2400W | 20.16A/10.08A | | | SPS300VAC2400W-2-17 | 17U ⁵ | RS232/RS485/USB | | |
| 150V/300V | 4000W | 33.12A/15.56A | SPS300VAC4000W-2-17 | RS232/RS485/USB | | | | | |
| 150V/300V | 6000W | 49.68A/24.84A | SPS300VAC6000W-2-17 | RS232/RS485/USB | | | | | |
| 150V/300V | 8000W | 57.6A/28.8A | SPS300VAC8000W-3-17 | RS232/RS485/USB/LAN | | | | | |
| 150V/300V | 12000W | 99.36A/49.68A | 1-Phase | 4 Parallel | SPS300VAC12000W-4-21 | 21U ⁶ | RS232/RS485/USB/LAN | (4) | CE |
| 150V/300V | 16000W | 115.2A/57.6A | | | SPS300VAC16000W-4-21 | | RS232/RS485/USB/LAN | | |
| 150V/300V | 20000W | 165.6A/82.8A | | | SPS300VAC20000W-4-21 | RS232/RS485/USB/LAN | | | |
| 150V/300V | 20000W | 165.6A/82.8A | | | SPS300VAC20000W-4-21 | RS232/RS485/USB/LAN | | | |

| Output | | | Connection Type | Model | Size | Standard Communication Interface | Optional Information | Certificates | |
|---------------|-------------|---------------|-----------------|----------|----------------------|----------------------------------|----------------------|--------------|-----------------|
| Rated Voltage | Rated Power | Rated Current | | | | | | | Output Mode |
| 300V/600V | 1200W | 5.04A/2.52A | 1-Phase | 2 Series | 9U ^④ | SPS600VAC1200W-2-9 | (1) | CE | |
| 300V/600V | 2000W | 8.28A/4.14A | | | | SPS600VAC2000W-2-9 | | | RS232/RS485/USB |
| 300V/600V | 3000W | 12.42A/6.21A | | | | SPS600VAC3000W-2-9 | | | RS232/RS485/USB |
| 300V/600V | 4000W | 14.4A/7.2A | | | SPS600VAC4000W-3-17 | 17U ^⑤ | RS232/RS485/USB/LAN | | (4) |
| 300V/600V | 6000W | 24.84A/12.42A | | | SPS600VAC6000W-4-17 | | RS232/RS485/USB/LAN | | |
| 300V/600V | 8000W | 28.8A/14.4A | | | SPS600VAC8000W-4-17 | | RS232/RS485/USB/LAN | | |
| 300V/600V | 10000W | 41.4A/20.7A | | | SPS600VAC10000W-4-17 | | RS232/RS485/USB/LAN | | |
| 300V/600V | 10000W | 41.4A/20.7A | | | SPS600VAC10000W-4-17 | | RS232/RS485/USB/LAN | | |

Dimensions & Weight



① 423.0x87.0x520.0 mm & 15.9kg



② 423.0x133.0x520.0 mm & 21.4kg



③ 423.0x177.0x520.0 mm & 29kg



④ 540.0x400.0x640.0 mm



⑤ 560.0x754.0x700.0 mm



⑥ 560.0x932.0x700.0mm

Optional Information

(1) LAN & GPIB interface card & cables



(2) Analog I/O interface card & cable



(3) Multiphase link card & cable



(4) GPIB interface card & cable



(5) Analog I/O & multiphase link card & cables



Features

- Large color touch screen with intuitive interface, easy to operate
- Features AC, DC, AC+DC output modes, AC+DC output mode for voltage DC offset simulation
- Turn on, turn off phase angle control, 0-359.9°
- Output frequency: 15-1200Hz, programmable slew rate setting for changing voltage and frequency
- High output current crest factor which is ideal for inrush current testing
- Built-in power meter function, can real-time measure 15 electrical parameters such as RMS voltage, current, power, apparent power and etc. This series AC source can measure up to 40 orders of the voltage or current harmonics. Support LIST/PULSE/STEP modes to simulate all kinds of power line disturbance conditions
- Triac Dimmer function for dimming/governor simulation function
- Sweep function for efficiency testing and shows voltage and frequency value at max power
- Multiple current range to make current measurement more accurate
- Front panel USB interface supports CSV format to import waveform
- OCP/OVP/OPP/OTP/reverse current protection/short circuit protection
- Programmable voltage and current limit, support CC mode
- Support up to 2 units in series, 4 units in parallel
- Support three phase power output, can simulate three phase unbalanced output
- Support external analog input control and TTL electrical level output
- Two versions to meet the cost performance and different applications

SP-300 Series Programmable AC Power Supply & System

Difference between Advanced Version and Professional Version

| Function description | Advanced Version | Professional Version |
|--|------------------|---|
| Output frequency range | 15~1000Hz | 15~1200Hz |
| Built-in IEC standards | IEC 61000-4-11 | IEC 61000-4-11; IEC 61000-4-13; IEC 61000-4-14; IEC 61000-4-28 |
| Programmable output impedance | Not supported | Support, meet IEC 61000-3-2/ IEC 61000-3-3 output impedance test requirements |
| Harmonic/inter-harmonic generation simulation and measurement function | Not supported | Support, the harmonic components can be up to 40 orders |

Panel Introduction

0.6 - 1.5kVA

① Power Switch (Up), USB Interface (Down)

② Color Touch Screen

③ Multifunctional Keys

④ Numeric and Functional Keys

⑤ Output Terminal

⑥ AC Input Terminal

⑦ RS485/RS232/USB Communication Interface (LAN & GPIB Interface Card is Optional)

⑧ Analog I/O Interface Card (Optional)

Front Panel Introduction



Rear Panel Introduction



Note: If the LAN&GPIB communication card is selected, it will replace RS485/RS232/USB to be installed in the same position.

If parallel/multiphase interface card is selected, it will replace remote I/O interface card to be installed in the same position.

2 - 5kVA

① Power Switch (Up), USB Interface (Down)

② Color Touch Screen

③ Multifunctional Keys

④ Numeric and Functional Keys

⑤ Output Terminal

⑥ AC Input Terminal

⑦ RS485/RS232/USB/LAN Communication Interface

⑧ GPIB Communication Interface (optional)

⑨ Analog I/O & multiphase link card (optional)

Front Panel Introduction



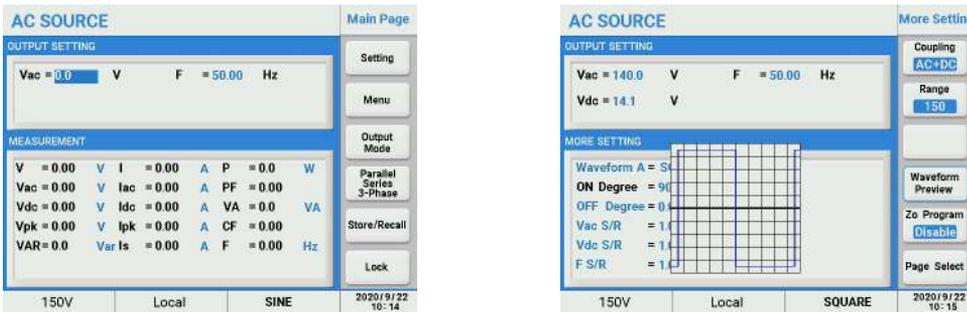
Rear Panel Introduction



Function Introduction

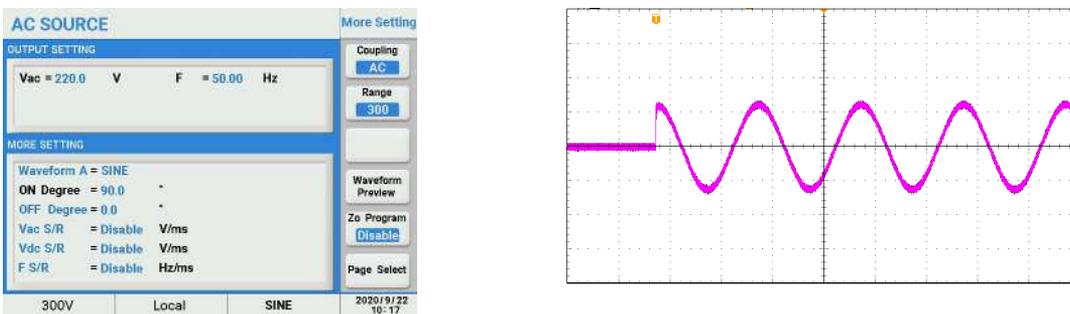
Graphical User Interface

The large color touch screen provides simple and fast operation for customers, real-time update of display output data and power status, and graphical display makes it more intuitive.



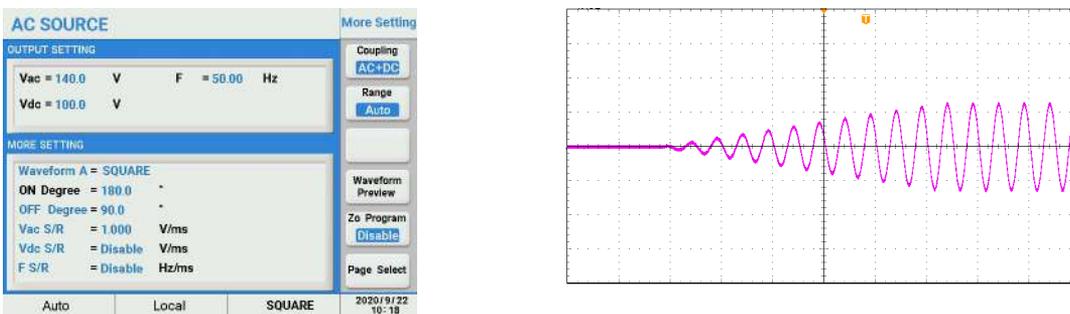
Settable ON/OFF Phase Angle of Output Waveform

This series of AC power supply can set the ON phase and OFF phase of sinusoidal output waveform, suitable for the output test of switching power supply. Set the ON angle to 90 degrees for surge current testing, the power supply will show the measured value of surge current. Users can set when start to measure the surge current and the duration of the measurement.



Slew Rate Setting for Voltage and Frequency

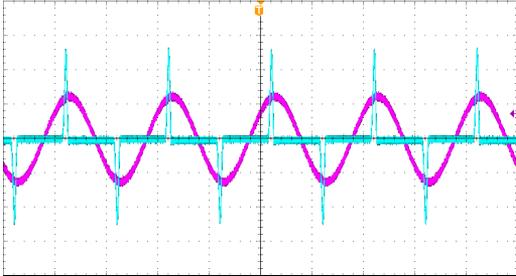
This series AC power supply let users set the slew rate of voltage and frequency, in such application in order to reduce the inrush current during motor or compressor startup.



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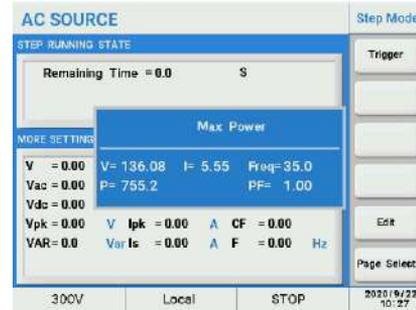
High Output Crest Factor

This series AC power supply deliver up to 5~6 times of peak current from its RMS current, so it is suitable for testing switching power supplies and motor with high inrush current issue.



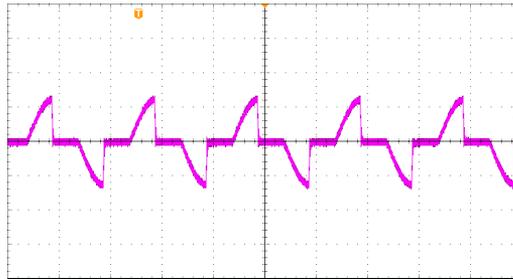
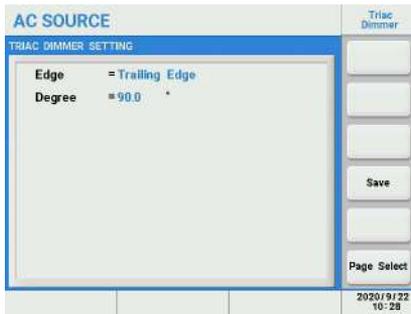
Power Sweep Function

This series AC power supply can test the efficiency of switching power supply and capturing the voltage, current, power and frequency at the maximum power operating point, the measurements will be displayed at the end of the sweep.



Triac Dimmer Function

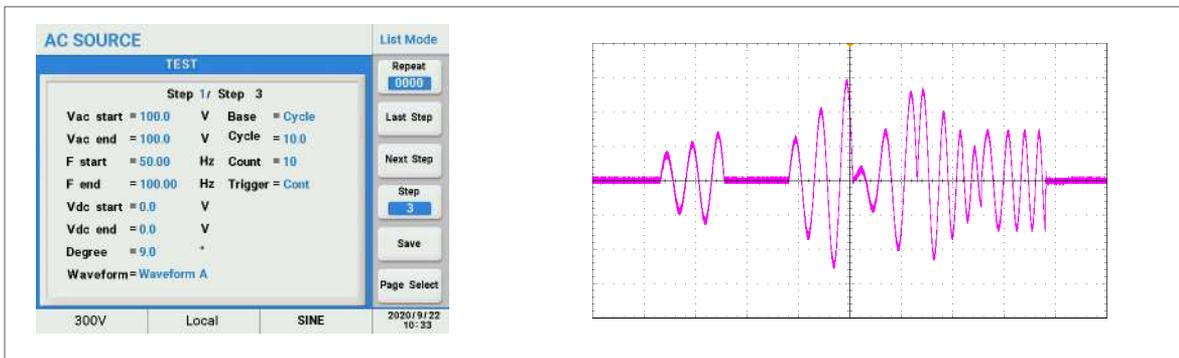
This series AC power supply built-in triac dimmer function, which is used to do dimming and speed regulating test for lamp or electric motor to ensure the products work well both in R&D and production testing.



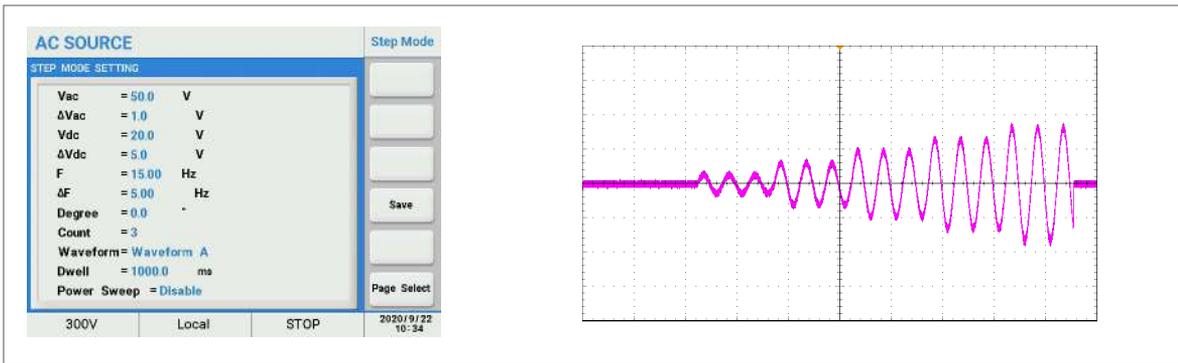
Power Line Disturbance Simulation

This series AC power supply provides powerful function to simulate all kinds of power line disturbance conditions such as cycle dropout, transient spike, brown out and etc. This feature make this series AC power supply ideal for R&D labs, universities and certification labs.

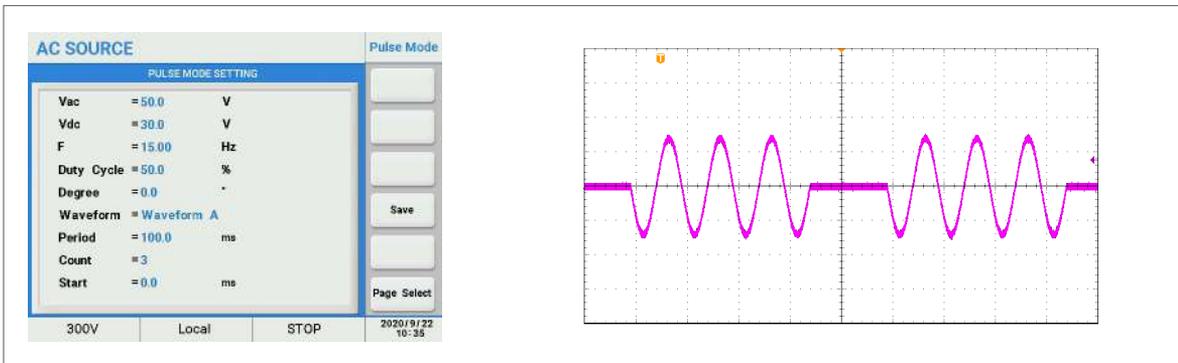
LIST Mode



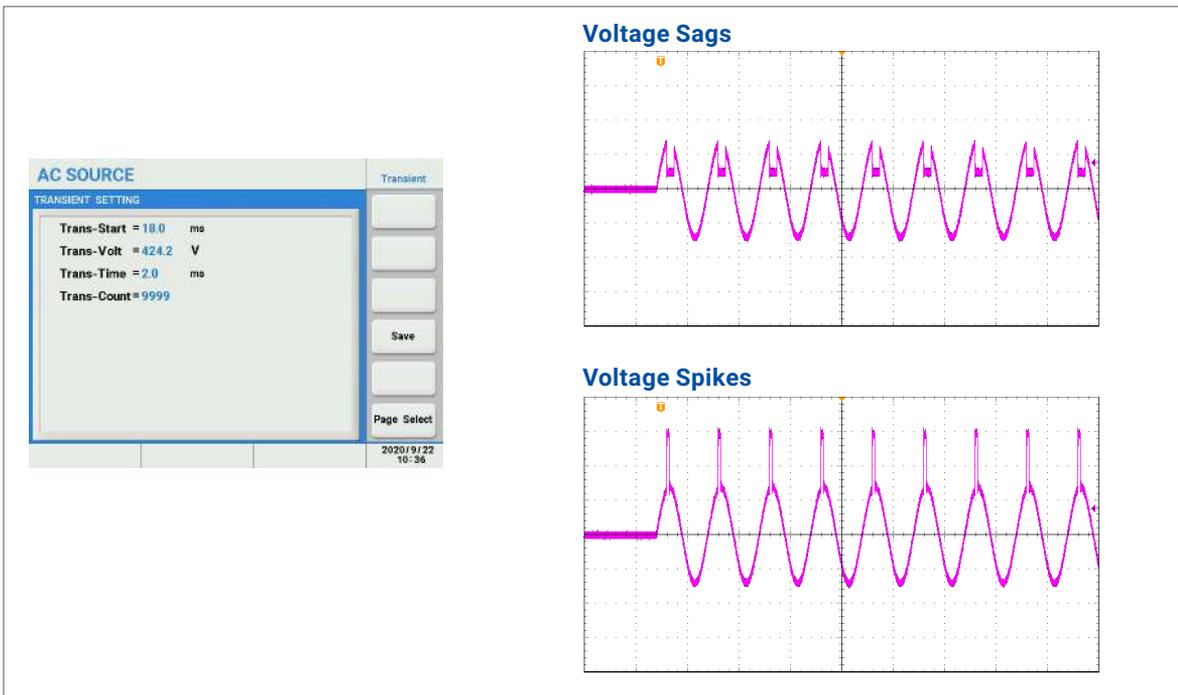
STEP Mode



PULSE Mode



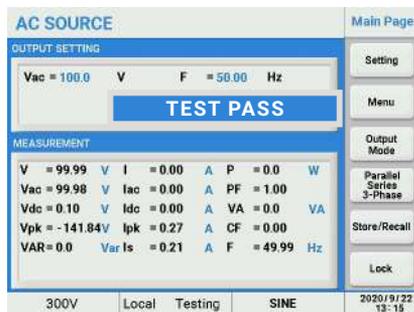
Voltage Sags/Voltage Spikes



SP-300 Series Programmable AC Power Supply & System

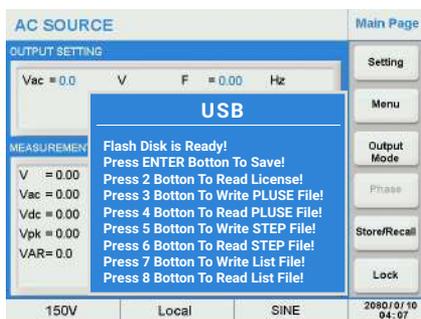
Test Mode

The test mode compares measurement values against a user defined set of measurement limits and shows a PASS or FAIL result in one or more measurement are out of range. The user can set when start of the measurement and duration of the test.



File Save and Recall Via The USB Interface

The user can save the screenshot via the USB interface in the front panel. The user can import a CSV file via the USB interface to generate waveform output.



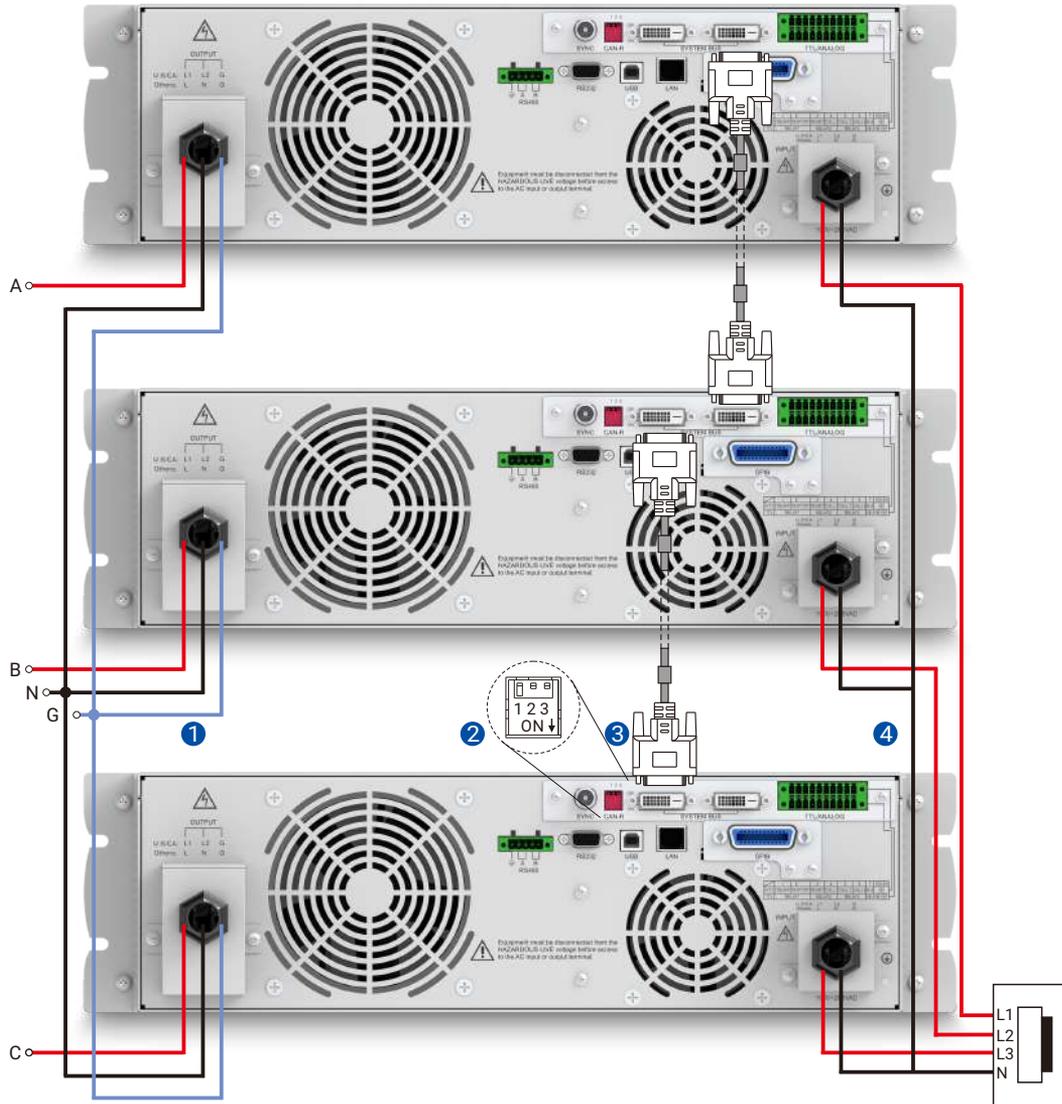
| 1 | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | | |
|----|------|-------|--------|-------|------|------|------|------|--------|--------|----------|--------|--------|--------|-----------|-----------|--------|--------|--------|--------|----------------|
| 1 | List | Start | Repeat | Total | Step | Step | Mode | Step | Repeat | Depend | Waveform | Vac(V) | Vac(V) | Vac(V) | Frequency | Frequency | Vdc(V) | Vdc(V) | Vdc(V) | asBase | Cycle/Time(ms) |
| 2 | 24 | 23 | 9 | 1 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 24 | 23 | 9 | 2 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 24 | 23 | 9 | 3 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 24 | 23 | 9 | 4 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 24 | 23 | 9 | 5 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 24 | 23 | 9 | 6 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 24 | 23 | 9 | 7 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 24 | 23 | 9 | 8 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 24 | 23 | 9 | 9 | Coat | 10 | 9.A | 100 | 100 | 50 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | |

Parallel/Series/3-Phase Mode

This series AC power source can be used in parallel or series to provide more power, the maximum current up to 184A and the voltage up to 600V. In 3-phase mode, the Master unit is always phase A, Slave 1 is always phase B and Slave 2 is always phase C. The phase difference between phase A and B is always 120° and between phase A and C is always 240°. The output voltage of phase B and C will be set to the same setting as that for phase A (Master) if the Voltage Mode is set to COM. Or if the Voltage Mode is set to Multi, phase B and C output voltage can be set individually to simulate 3-phase unbalance system. The output of 3-Phase system can be connected for three-phase, four wire (Delta configuration) loads or for three-phase, five wire (Wye configuration) according to the application requirement.



Three-phase five-wire connection (Wye type)

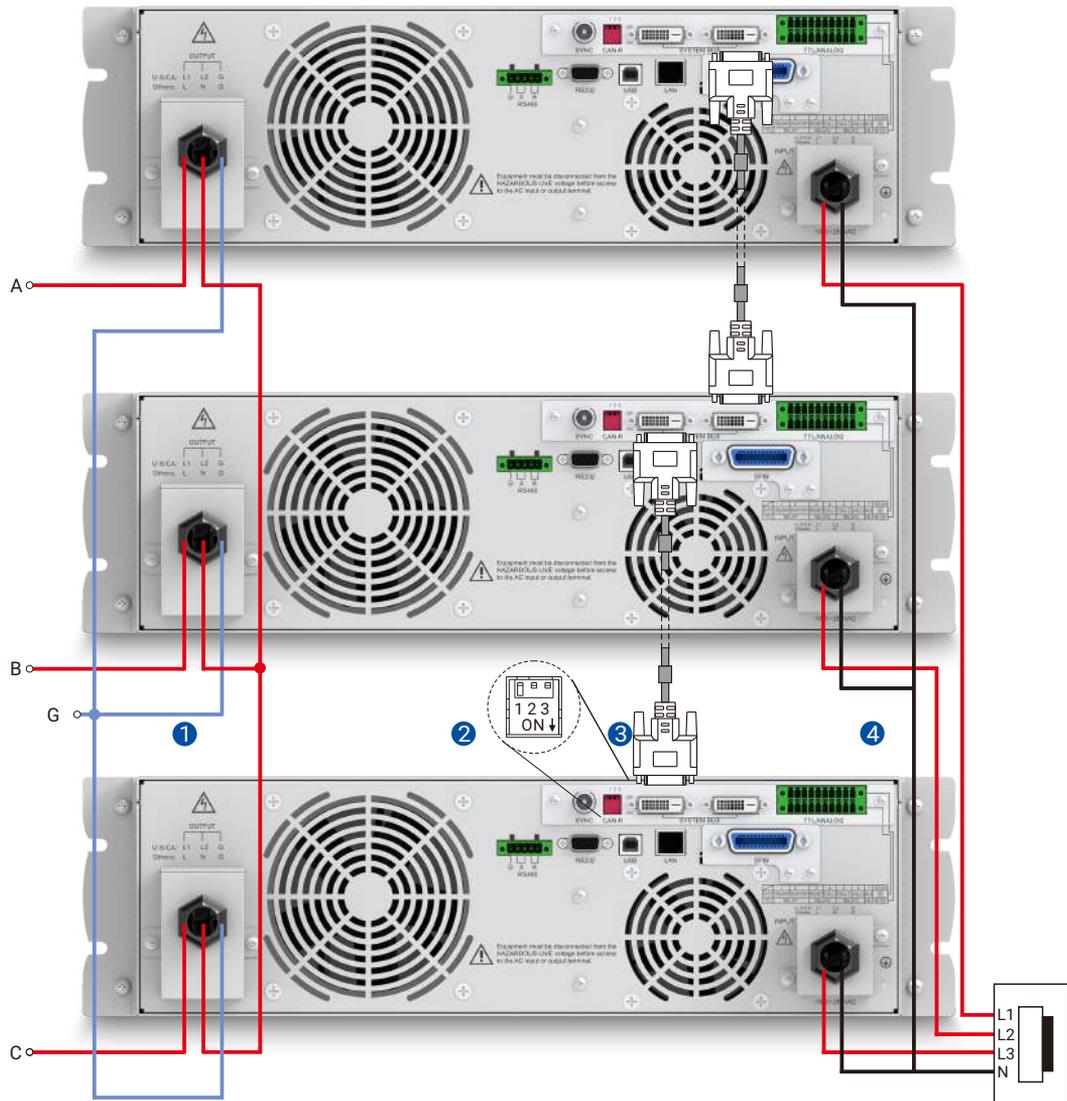


- 1 Output connections
- 2 Terminal resistance CAN-R, flip Dip switch 1 to ON position (Down)
- 3 System bus communication cable.
- 4 Only support three-phase five-wire connection

The output voltage range of three-phase five-wire (Wye type) connection is 0 ~ 300V.

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Three-phase four-wire connection (Delta type)



- 1 Output connections
- 2 Terminal resistance CAN-R, flip Dip switch 1 to ON position (Down)
- 3 System bus communication cable.
- 4 Only support three-phase five-wire connection

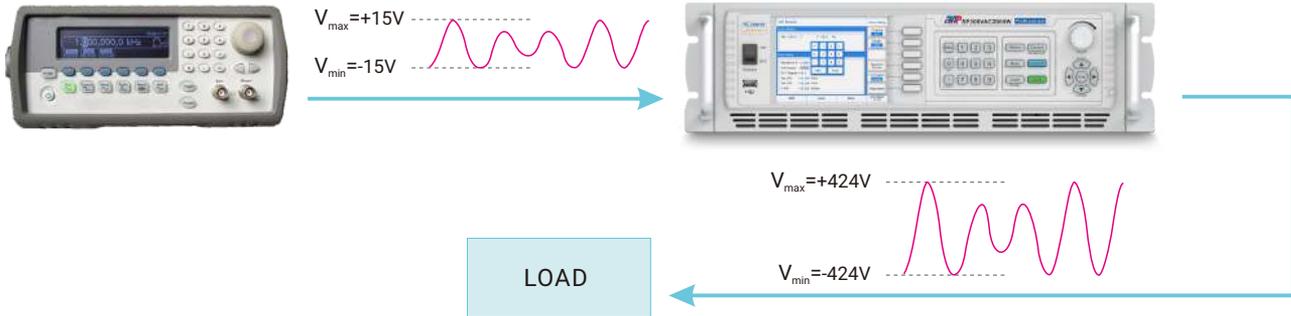
The output voltage range of three-phase four-wire (Delta type) connection is 0 ~ 519V

External Control Function

By selecting Analog I/O card to achieve below function:

1) Amplifier Mode

In Amplifier mode, the power source acts as a power amplifier, taking a low-level analog signal and amplifying it by a fixed amount of gain.



2) External Control Instruction

| Pin No. | Reference | Type | Description | Maximum |
|---------|-------------------------|-------|---|---------|
| Pin1 | ON/OFF | EXT.V | Control input for output on/off, low level (0~0.5V) disables the output, high level (4.5~5.5V) enables the output | 6Vdc |
| Pin2 | KEEP OFF ^[1] | EXT.V | Keep OFF function, low level (0-0.5V) disables the function, high level (4.5-5.5V) enables the function | |
| Pin3 | RESET | EXT.V | High level (4.5 ~ 5.5V) will enable alarm clear function | |
| Pin4 | CALL 1 | EXT.V | 0=low electrical level (0-0.5V), 1= high electrical level (4.5 ~ 5.5V) | |
| Pin5 | CALL 2 | EXT.V | 0=low electrical level (0-0.5V), 1= high electrical level (4.5 ~ 5.5V) | |
| Pin6 | CALL 3 | EXT.V | 0=low electrical level (0-0.5V), 1= high electrical level (4.5 ~ 5.5V) | |
| Pin7 | N/A | EXT.V | Not Used | - |
| Pin8-10 | ⊕ | EXT.V | GND | - |

^[1] If the KEEP OFF signal keeps high (enable) there will be always no output.

3) TTL Signal Instruction

| Pin No. | Reference | Type | Description | Maximum | Electrical Parameters |
|---------|-------------|------|---|----------------------------|---|
| Pin1-2 | RELAY1-PASS | TTL | These two pins will connected internally when the unit passed the test mode | 250VAC 3Amp/ 30VDC 3Amp | These pins without positive and negative polarity, do not share the ground neither. |
| Pin3-4 | RELAY2-FAIL | TTL | These two pins will connected internally when the unit failed the test mode | | |
| Pin5-6 | RELAY3-RUN | TTL | These two pins will connected internally when the unit is running | | |
| Pin7-8 | RELAY4 | TTL | Not Used | - | - |
| Pin9-10 | ⊕ | TTL | GND | - | - |

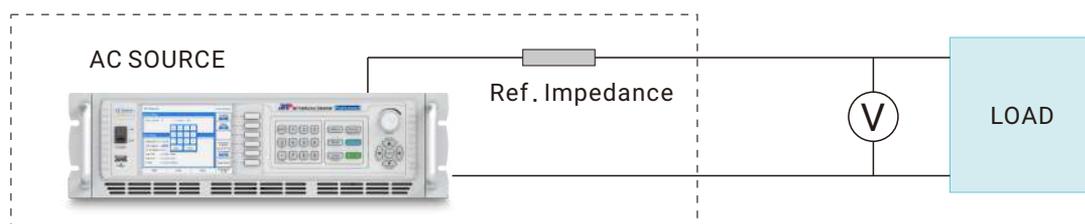
Firmware Upgrade

This series AC power source supports firmware upgrade. The DSP firmware can be upgraded via RS232 communication, the display and remote firmware can be upgraded via the USB interface in the front panel. The upgrade process is very easy to operate. The upgrade feature keeps the latest software function supported by the power supply.

Professional Version Power Supply Function

Programmable Output Impedance Function

The low output impedance and low voltage harmonics of this series power supply make it ideal for IEC61000-3-2 standard testing. A current feedback control circuit makes the output voltage changed with load. This feature is suitable for IEC61000-3-3 Flicker tests. The user can set the resistance and inductance value according to the test requirement.



More Built-in IEC Standard Test Waveforms

Professional version supports more built-in IEC standard test waveforms

IEC 61000-4-11, Testing and measurement techniques-Voltage dips, short interruptions and voltage variations immunity tests (AC,<16A)

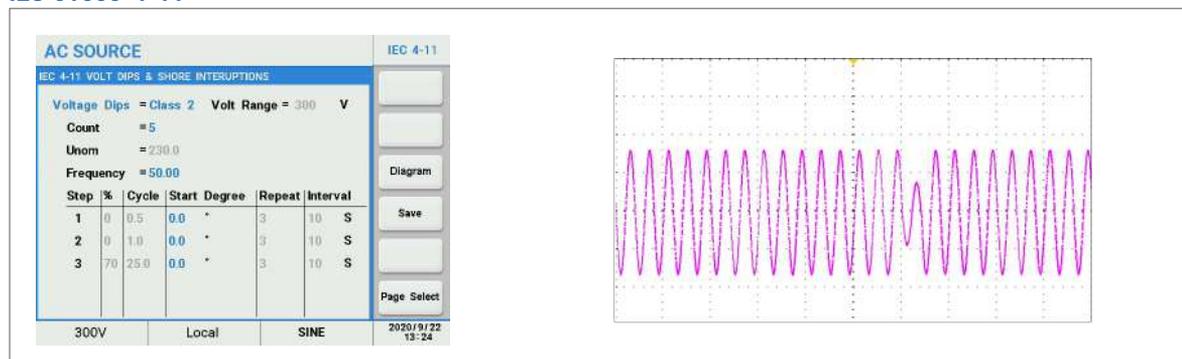
IEC 61000-4-13, Testing and measurement techniques-Harmonics and inter-harmonics including mains signaling at AC power port, low frequency immunity tests

IEC 61000-4-14, Testing and measurement techniques-Voltage fluctuation immunity test

IEC 61000-4-28, Testing and measurement techniques-Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase

The above standards can meet the power immunity test for products exported to Europe.

IEC 61000-4-11



IEC 61000-4-13

AC SOURCE

IEC 4-13 FLAT CURVE SETTING

Test Level = Class 1 | Class 1 | Voltage = 300 V

AMP = 95.0 | Class 2

Unom = 230.0 | Class 3

Frequency = 50.00 | User

Test Time = 10 S

300V | Local | SINE | 2020/9/22 13:26

IEC 61000-4-14

AC SOURCE

IEC 4-14 SETTING

Operation = Standard Volt Range = 300 V

Class = Class 2 | Class 2

Unom = 230.0 | Class 3

Frequency = 50.00 Hz

Cycle = 1

300V | Local | SINE | 2020/9/22 13:26

IEC 61000-4-28

AC SOURCE

IEC 4-28 SETTING

Operation = Standard Volt Range = 300 V

Test Level = Level 2 | Level 2

Unom = 230.0 | Level 3

Frequency = 50.00 | Level 4

tp = 10 S

Up Limit = 3 %

Down Limit = -3 %

300V | Local | SINE | 2020/9/22 13:27

Harmonic/inter-harmonic Generation Simulation and Measurement Function

Support creating waveforms made up of a series of harmonics frequencies, amplitudes and phase shifts, up to 40 orders harmonics of 50Hz or 60Hz. The harmonics measurement function measures total harmonic distortion (THD), DC voltage and current and fundamental voltage and current for output settings of 50Hz or 60Hz. The measurement of 2~40 orders can be displayed in absolute values or in percent of the fundamental, the harmonics measurement will be displayed with a graphical representation.

AC SOURCE

SYNTHESIS WAVEFORM FUNDAMENTAL SETTING

Vac_fund = 150.0 V | F_fund = 50 Hz

Vdc = 10.0 V | Degree = 0.0 °

| N | V | θ | N | V | θ |
|----|-----|-----|----|-----|-----|
| 2 | 0.0 | 0.0 | 12 | 0.0 | 0.0 |
| 3 | 2.0 | 0.0 | 13 | 4.0 | 0.0 |
| 4 | 0.0 | 0.0 | 14 | 0.0 | 0.0 |
| 5 | 4.0 | 0.0 | 15 | 5.0 | 0.0 |
| 6 | 0.0 | 0.0 | 16 | 0.0 | 0.0 |
| 7 | 6.0 | 0.0 | 17 | 3.0 | 0.0 |
| 8 | 0.0 | 0.0 | 18 | 0.0 | 0.0 |
| 9 | 5.0 | 0.0 | 19 | 4.0 | 0.0 |
| 10 | 0.0 | 0.0 | 20 | 0.0 | 0.0 |
| 11 | 5.0 | 0.0 | 21 | 5.0 | 0.0 |

300V | Local | STOP | 2018/12/27 08:49

AC SOURCE

HARMONIC MEASUREMENT SETTING

THD = 8.2 % | DC = 6.92 V

Fundamental = 149.85 V

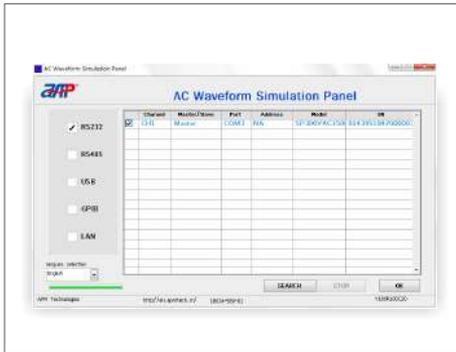
300V | Local | RUNNING | 2018/12/27 09:08

SP-300 Series Programmable AC Power Supply & System

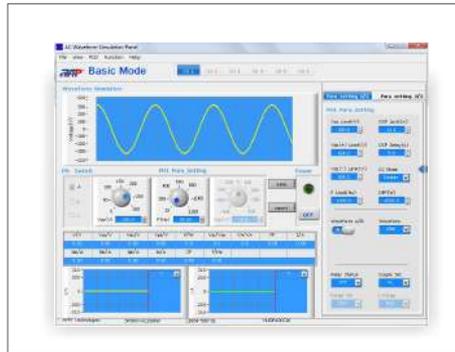
Monitoring Software

AC Waveform Simulation Panel is a graphical user interface that provides extraordinary capabilities and convenience by delivering control of the unit remotely, which covers all functions of panel operation.

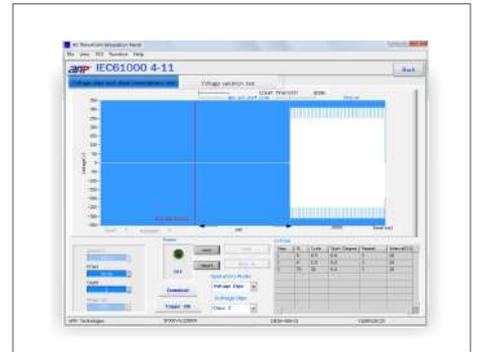
Login Interface



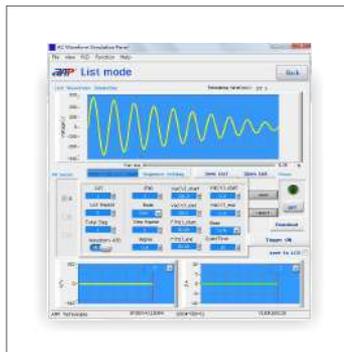
Basic mode(Main interface)



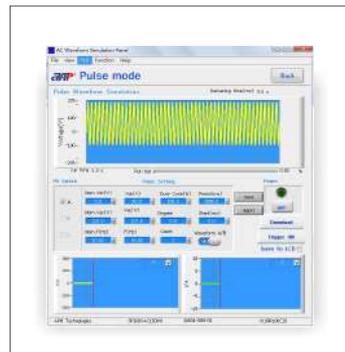
IEC61000 4-11 interface



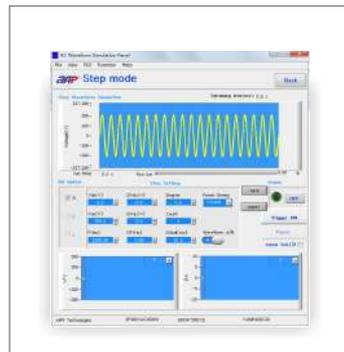
List mode interface



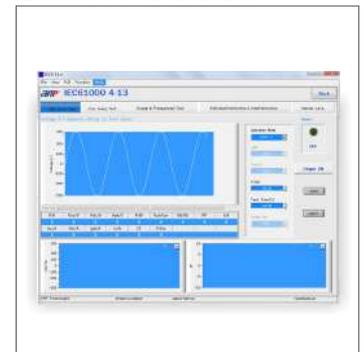
Pulse mode interface



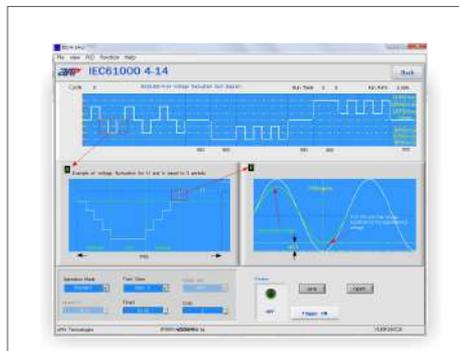
Step mode interface



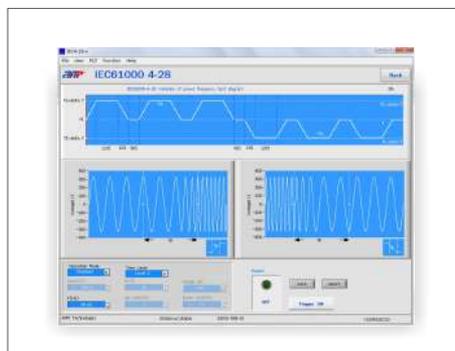
IEC61000 4-13 interface



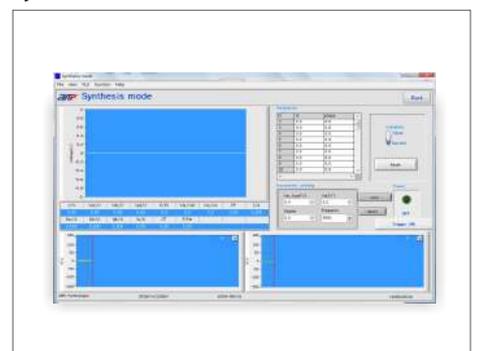
IEC61000 4-14 interface



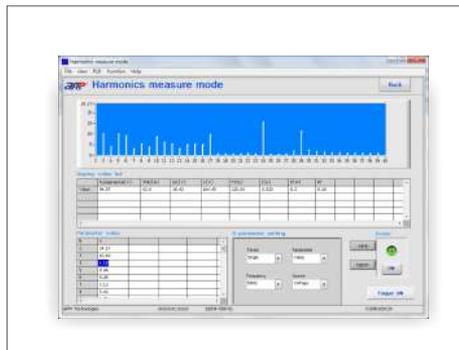
IEC61000 4-28 interface



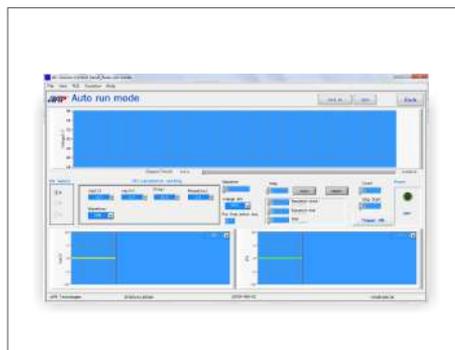
Synthesis mode interface



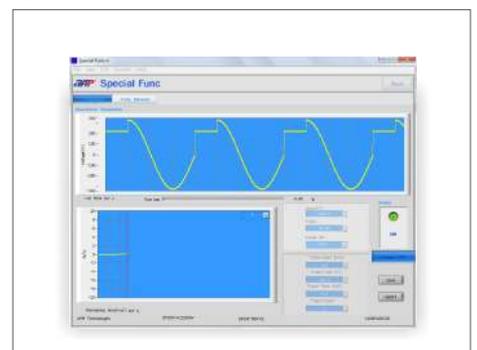
Harmonics Measure mode interface



Auto run mode interface



Special Func interface



Web Server Function

This series AC power supply provides a built-in web server interface, then the user can configure and monitor the settings from the PC's Web browser.

The screenshots illustrate the web server interface for the AC Source Control Panel. The interface includes a navigation menu with options like 'Welcome Page', 'Browse Web Control', 'View & Modify Configuration', and 'Help with this Page'.

AC Source Control Panel - Welcome to your AC Source

| | |
|-----------------------------|------------------------|
| Instrument: | AC Source Control |
| Model: | SP300VAC5000W |
| Serial Number: | 017844162090000 |
| Control Version: | V100R003C40 |
| Display Version: | V100R003C21 |
| Remote Version: | V100R003C21 |
| Description: | Programmable AC Source |
| Hostname: | SP300VAC5000W |
| IP Address: | 141.325.204.59 |
| VISA TCP/IP Connect String: | TCPIP::A-SP300V |
| Type: | Professional |

AC Source Control Panel - Current Setting

| Current Setting | New Setting |
|---|-------------------------------------|
| Obtain IP Address* Auto | Manual |
| Manual LAN Settings - Used when IP Address is obtained manually | |
| IP Address* 169.254.57.0 | 169.254.57.0 |
| Subnet Mask* 255.255.0.0 | 255.255.0.0 |
| Default Gateway* 0.0.0.0 | 0.0.0.0 |
| DNS* Auto | Manual |
| DNS Server - Used when DNS is manual | |
| DNS Server* 0.0.0.0 | 0.0.0.0 |
| Naming Service* NetBIOS, Dynamic DNS | NetBIOS |
| Host Name - Used when a Naming Service is selected | |
| Host Name* SP300VAC5000W | SP300VA |
| Domain* | |
| Description Programmable AC Source Power Supply | Programmable AC Source Power Supply |
| LAN Keepalive Timeout* (seconds) 1800, Enabled | 1800 |
| CPiB Address \$ | Front Panel |
| Change Password (Enter Old) | |
| Password Login <input checked="" type="checkbox"/> Enable | |

AC Source Control Panel - PH1 Para_Setting

| | | | | | | | |
|-----------------|---|--------------|---|-----------------|--|--------------|---|
| Vac(V) | 230.0 | F(Hz) | 50.00 | Vdc(V) | 0.0 | Power | ON |
| Relay Status | <input type="checkbox"/> ON <input checked="" type="checkbox"/> OFF | I Range | <input type="checkbox"/> High <input type="checkbox"/> Middle <input type="checkbox"/> Low <input type="checkbox"/> mA <input type="checkbox"/> Auto | Range Set | <input type="checkbox"/> 150V <input checked="" type="checkbox"/> 300V <input type="checkbox"/> Auto | Couple Set | <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> AC+DC |
| Waveform A/B | <input type="checkbox"/> A <input checked="" type="checkbox"/> B | Waveform | <input type="checkbox"/> Sine <input type="checkbox"/> Square <input checked="" type="checkbox"/> Cisine <input type="checkbox"/> Fixed <input type="checkbox"/> User | AMP/THD | AMP | AMP | 0.0 |
| Vac Limit(V) | 300.0 | DCP Limit(A) | 0.2 | Vdc(+) Limit(V) | 424.2 | DCP Delay(s) | 0.2 |
| Vdc(-) Limit(V) | 424.2 | CC Mode | <input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable | Vdc(0) Limit(V) | 424.2 | OPP(W) | 30.0 |
| F Limit(Hz) | 1200.0 | Is Delay(ms) | 1.0 | Is Interval(ms) | 1.5 | Fs(Hz/ms) | 0.001 <input checked="" type="checkbox"/> Enable |
| OFF Degree | <input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable | OFF Degree | 0.0 | ON degree | 90.0 | DCs(W/ms) | 1.000 <input checked="" type="checkbox"/> Enable |
| Program Zo | <input type="checkbox"/> Disable <input checked="" type="checkbox"/> Enable | L(rH) | 0.84 | R(ohm) | 0.40 | | |

| Measurement | | | | | |
|-------------|------|-------|------|---------|------|
| V/V | 0.00 | Vac/V | 0.00 | Vdc/V | 0.00 |
| Vpk/V | 0.00 | P/W | 0.00 | Var/Var | 0.00 |
| VA/VA | 0.00 | FF | 0.00 | I/A | 0.00 |
| Iac/A | 0.00 | Icc/A | 0.00 | Ipk/A | 0.00 |
| Ia/A | 0.00 | CF | 0.00 | F/Hz | 0.00 |

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 Tel: +86-769-2202-8588

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| SP300VAC4000W | 19 |
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Selection List:

| Model | Voltage | Current | Power | Corresponding page |
|---------------|-----------|-------------|-------|--------------------|
| SP300VAC600W | 150V/300V | 5.6A/2.8A | 600W | P17 |
| SP300VAC1000W | 150V/300V | 9.2A/4.6A | 1000W | P17 |
| SP300VAC1500W | 150V/300V | 13.8A/6.9A | 1500W | P17 |
| SP300VAC2000W | 150V/300V | 16A/8A | 2000W | P19 |
| SP300VAC3000W | 150V/300V | 27.6A/13.8A | 3000W | P19 |
| SP300VAC4000W | 150V/300V | 32A/16A | 4000W | P19 |
| SP300VAC5000W | 150V/300V | 46A/23A | 5000W | P19 |

SP-300 Series Single-phase Programmable AC Power Supply

| Model | SP300VAC600W | | SP300VAC1000W | SP300VAC1500W |
|---|--|---|---|---|
| Input | | | | |
| Voltage | 90~265VAC | | 90~265VAC | 100~265VAC |
| Frequency | 47~63Hz | | | |
| Phase | 1 Phase, 2Wire+Groud | | | |
| Max. Current | 10A | | 15A | 19A |
| Power Factor at 220VAC Input, Full Load | ≥ 0.91 Active PFC | | ≥ 0.95 Active PFC | ≥ 0.97 Active PFC |
| Efficiency | > 82%(Peak) > 80% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load | | > 86%(Peak) > 84% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load | > 87%(Peak) > 86% at 220VAC, 50Hz input/230VAC, 50Hz output, Full Load |
| Output | | | | |
| AC Power | 600VA | | 1000VA | 1500VA |
| Max. Current (r.m.s) | 0~150V(L) | 5.6A | 9.2A | 13.8A |
| | 0~300V(H) | 2.8A | 4.6A | 6.9A |
| Max. Current (Peak) | 0~150V(L) | 32.4A | 55.2A | 82.8A |
| | 0~300V(H) | 16.2A | 27.6A | 41.4A |
| Phase | 1 Phase | | | |
| Total Harmonic Distortion (THD) | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 70.1~500Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 501~1000Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. <2% (Resistive Load) at 1001~1200Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. Note: 1001~1200Hz only available to Professional Version Models. | | | |
| Crest Factor (CF) | < 6 | | | |
| Load Regulation | ± 0.1%F.S. @15~70Hz (Resistive Load) ± 0.5%F.S. @Others Freq. (Resistive Load) | | | |
| Line Regulation | ± 0.1V | | | |
| Rise/Fall Time (DC) | < 250us | | | |
| Voltage (AC) | Range | 0~300VAC , 150V/300V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.2% of setting + 0.2%F.S. | | |
| Phase Angle (Starting / Ending) | Range | 0~359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ± 1°@45~65Hz | | |
| Voltage (DC) | Range | 0~424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.2% of setting + 0.2%F.S. | | |
| | Max. Power | 600W | 1000W | 1500W |
| | Max. Current (L/H Range) | L 3.96A H 1.89A | L 6.5A H 3.3A | L 9.76A H 4.88A |
| | Ripple & Noise (r.m.s) | L <700mVrms @Bandwidth 20Hz to 1MHz H <1100mVrms @Bandwidth 20Hz to 1MHz | | |
| | Ripple & Noise (Peak) | <4000mVp-p @Bandwidth 20Hz to 1MHz | | |
| Current CC Fold Mode | Resolution | 0.01A | | |
| | Accuracy | 0.5% of setting + 1.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range ^[1] | 15~1200Hz Full Range ADJ | | |
| | Resolution | 0.1Hz (15.0~99.9Hz), 1Hz(100~1000Hz), 5Hz(1001~1200Hz) | | |
| | Accuracy | 0.03% of setting | | |
| Programmable Output Impedance ^[2] | 0Ω+0mH~1Ω+1mH | | | |
| Harmonics & Inter-harmonics Simulation ^[3] | 2400Hz | | | |
| Measurement | | | | |
| Voltage | Range | AC 0~300VAC DC 0~424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.2% of setting + 0.2%F.S. | | |
| Frequency | Range ^[1] | 15~1200Hz | | |
| | Resolution | 0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz), 5Hz(1001~1200Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current (r.m.s) | Range | H 0.15A~5.6A | H 0.15A~9.2A | H 0.15A~13.8A |
| | | M - | M - | M - |
| | | L 0.1A~3A | L 0.1A~3A | L 0.1A~3A |
| | mA - | mA - | mA - | |
| | Resolution | 0.01A | | |
| Accuracy | 0.4%+1.0%F.S. | | | |
| Current (Peak) | Range | 0~32.4A | 0~55.2A | 0~82.8A |
| | Resolution | 0.01A | | |
| | Accuracy | H 0.4%+1.0%F.S. L 0.4%+1.5%F.S. | | |

SP-300 Series Single-phase Programmable AC Power Supply

| Model | | SP300VAC600W | SP300VAC1000W | SP300VAC1500W |
|--|----------------------|--|---------------|---------------|
| Power | Range | 0~600W | 0~1000W | 0~1500W |
| | Resolution | 0.1W | | |
| | Accuracy | 0.4% of setting + 1.0% F.S. at PF>0.2, Voltage>5V | | |
| Power Apparent (VA) | Range | 0~612VA | 0~1020VA | 0~1530VA |
| | Resolution | 0.1VA | | |
| | Accuracy | Voltage*Irms, Calculated value | | |
| Power Resistive (VAR) | Range | 0~612VAR | 0~1020VAR | 0~1530VAR |
| | Resolution | 0.1VAR | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | |
| Power Factor (PF) | Range | 0.00~1.00 | | |
| | Resolution | 0.01 | | |
| | Accuracy | W/VA, Calculated value | | |
| Harmonic | Range ^[4] | 2~40 orders | | |
| Extra Function | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power. | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | |
| Transient Generator (only for 15~70Hz) | Range | Trans-Start: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms | | |
| | | Trans-Volt: -212V~+212V(L), -424V~+424V(H), Resolution: 0.1V | | |
| | | Trans-Time: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms | | |
| | | Trans-Count: 0~9999, Constant | | |
| Calibration | | Firmware-based calibration through the digital interface or front panel | | |
| Test Function | | Yes | | |
| Parallel Output for 1 Phase | | Yes, 4 Units Max. (Option: Multiphase Link Card) | | |
| Series Output for 1 Phase | | Yes, 2 Units Max. (Option: Multiphase Link Card) | | |
| Link Output for 3 Phase | | Yes, (Option: Multiphase Link Card) | | |
| General | | | | |
| Graphic Display | | 4.3" Color touch LCD | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | |
| Rack mount Handles | | Yes | | |
| FAN | | Temperature Control | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | |
| Interface | | Standard USB, RS-485, RS-232, GPIB & LAN is Optional | | |
| Remote Control Input/Output Signal Characteristics (Option) | | | | |
| Remote Input Signal | | Signal input for external trigger for execution of programmed value Signal: ON/OFF, RESET, KEEP OFF, Recall program memory 1 through 7 | | |
| Remote Output Signal | | Signal output indicating that a test mode is present Signal: PASS, FAIL, TEST-IN-PROCESS | | |
| External Signal Waveform Input | | Signal input for output voltage waveform programming by external analog reference via BNC type. Between the sync signal and the output wave will be 0.5ms time difference | | |
| Environment | | | | |
| Operating Temperature | | 0°C ~ 40°C | | |
| Storage Temperature | | -40°C ~ 85°C | | |
| Fan Noise | | 73dBA Max. | | |
| Altitude | | 2000m | | |
| Relative Humidity | | 5%~95%, non-condensing | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | |
| Mechanical | | | | |
| Dimensions (W*H*D) | | 423.0x87.0x520.0 mm | | |
| Package Dimensions (W*H*D) | | 594.0x241.0x744.0 mm | | |
| Unit Weight | | 15.9kg | | |
| Shipping Weight | | 19kg | | |
| Regulatory Compliance | | | | |
| EMC | | CE marked for EMC Directive 2014/30/EU/EN61326-1: 2013 Class A for emissions and immunity standard as required for EU CE Mark. FCC Verification of conformity for CFR 47 Part 15 of the FCC Rules. | | |
| Safety | | CE marked for LVD Directive 2014/35/EU/EN61010-1-third edition as required for EU CE Mark. | | |
| CE Mark | | Installation Overvoltage Category II; Pollution Degree 2; Class II equipment; indoor use only. | | |
| Isolation Voltage | | 3000VAC, input to output; 1500VAC, input to chassis. | | |
| RoHS | | Meet to EU Directive 2011/65/EU for restriction of hazardous substances in Electrical and Electronic Equipment. | | |

[1] Only Professional Version units support 15.00~1200.00Hz.

[2] Only Professional Version units support Programmable Output Impedance function.

[3] Only Professional Version units support Harmonics & Inter-harmonics Simulation function.

[4] Only Professional Version units support Harmonics function.

All specifications are subject to change without notice.

SP-300 Series Single-phase Programmable AC Power Supply

| Model | SP300VAC2000W | | SP300VAC3000W | | SP300VAC4000W | | SP300VAC5000W | | |
|---|--|---|---|-------------------|---|--------------------|---|--------------------|----------|
| Input | | | | | | | | | |
| Voltage | 190~265VAC | | | | | | | | |
| Frequency | 47~63Hz | | | | | | | | |
| Phase | 1 Phase, 2Wire+Groud | | | | | | | | |
| Max. Current | 14A | | 20A | | 25A | | 30A | | |
| Power Factor at 220VAC Input, Full Load | ≥ 0.99, ActivePFC | | ≥ 0.98, ActivePFC | | ≥ 0.99, ActivePFC | | ≥ 0.99, ActivePFC | | |
| Efficiency | > 87%(Peak) > 86% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load | | > 86%(Peak) > 85% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load | | > 87%(Peak) > 86% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load | | > 87%(Peak) > 86% at 220VAC, 50Hz input 230VAC,50Hz output, Full Load | | |
| Output | | | | | | | | | |
| AC Power | 2000VA | | 3000VA | | 4000VA | | 5000VA | | |
| Max. Current (r.m.s) | 0~150V(L) | 16A | | 27.6A | | 32A | | 46A | |
| | 0~300V(H) | 8A | | 13.8A | | 16A | | 23A | |
| Max. Current (Peak) | 0~150V(L) | 80A | | 165.6A | | 160A | | 184A | |
| | 0~300V(H) | 40A | | 82.8A | | 80A | | 92A | |
| Phase | 1 Phase | | | | | | | | |
| Total Harmonic Distortion (THD) | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 70.1~500Hz and output voltage within 80~140VAC at Low Range or 160~280VAC at High Range. <1% (Resistive Load) at 501~1000Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. <2% (Resistive Load) at 1001~1200Hz and output voltage within 100~140VAC at Low Range or 160~280VAC at High Range. Note: 1001~1200Hz only available to Professional Version Models. | | | | | | | | |
| Crest Factor (CF) | ≤ 5 | | ≤ 6 | | ≤ 5 | | ≤ 4 | | |
| Load Regulation | ± 0.1%F.S. @15~70Hz (Resistive Load) ± 0.5%F.S. @Others Freq. (Resistive Load) | | | | | | | | |
| Line Regulation | ± 0.1V | | | | | | | | |
| Rise/Fall Time (DC) | <180us | | | | | | | | |
| Voltage (AC) | Range | 0~300VAC, 150V/300V/Auto | | | | | | | |
| | Resolution | 0.1V | | | | | | | |
| | Accuracy | 0.2% of setting + 0.2%F.S. | | | | | | | |
| Phase Angle (Starting / Ending) | Range | 0~359.9° | | | | | | | |
| | Resolution | 0.1° | | | | | | | |
| | Accuracy | ±1°@45~65Hz | | | | | | | |
| Voltage (DC) | Range | 0~424VDC | | | | | | | |
| | Resolution | 0.1V | | | | | | | |
| | Accuracy | 0.2% of setting + 0.2%F.S. | | | | | | | |
| | Max. Power | 2000W | | 3000W | | 4000W | | 5000W | |
| | Max. Current (L/H Range) | L 11.3A H 5.65A | | L 19.6A H 9.8A | | L 22.6A H 11.3A | | L 32.6A H 16.3A | |
| | Ripple & Noise (r.m.s) | L <700mVrms @Bandwidth 20Hz to 1MHz H <1100mVrms @Bandwidth 20Hz to 1MHz | | | | | | | |
| | Ripple & Noise (Peak) | <4000mVp-p @Bandwidth 20Hz to 1MHz | | | | | | | |
| Current CC Fold Mode | Resolution | 0.01A | | | | | | | |
| | Accuracy | 0.5% of setting + 1.0%F.S. | | | | | | | |
| | Response Time | <1400ms | | | | | | | |
| Frequency | Range ^[1] | 15~1200Hz Full Range ADJ | | | | | | | |
| | Resolution | 0.1Hz (15.0~99.9Hz), 1Hz (100~1000Hz), 5Hz (1001~1200Hz) | | | | | | | |
| | Accuracy | 0.03% of setting | | | | | | | |
| Programmable Output Impedance ^[2] | 0Ω+0mH~1Ω+1mH | | | | | | | | |
| Harmonics & Inter-harmonics Simulation ^[3] | 2400Hz | | | | | | | | |
| Measurement | | | | | | | | | |
| Voltage | Range | AC 0~300VAC DC 0~424VDC | | | | | | | |
| | Resolution | 0.1V | | | | | | | |
| | Accuracy | 0.2% of setting + 0.2%F.S. | | | | | | | |
| Frequency | Range ^[1] | 15~1200Hz | | | | | | | |
| | Resolution | 0.1Hz (15.0~99.9Hz), 1Hz (100~1000Hz), 5Hz (1001~1200Hz) | | | | | | | |
| | Accuracy | 0.1% of setting | | | | | | | |
| Current (r.m.s) | Range | H | 0.15A~20A | H | 0.3A~27.6A | H | 0.3A~32A | H | 0.3A~46A |
| | | M | - | M | 0.2A~20A | M | 0.2A~20A | M | 0.2A~20A |
| | | L | 0.1A~5A | L | 0.1A~5A | L | 0.1A~5A | L | 0.1A~5A |
| | mA | 0.02A~1.5A | mA | 0.02A~1.5A | mA | 0.02A~1.5A | mA | 0.02A~1.5A | |
| | Resolution | 0.01A | | | | | | | |
| Accuracy | H/M 0.4%+1.0%F.S. L/mA 0.4%+1.0%F.S. | | H/M 0.4%+0.6%F.S. L/mA 0.4%+1.0%F.S. | | | | | | |
| Current(Peak) | Range | 0~81.5A | | 0~168.6A | | 0.05~163A | | 0.05~188A | |
| | Resolution | 0.01A | | | | | | | |
| | Accuracy | H/M 0.4%+1.5%F.S. L/mA 0.4%+1.5%F.S. | | | | | | | |

SP-300 Series Single-phase Programmable AC Power Supply

| Model | | SP300VAC2000W | SP300VAC3000W | SP300VAC4000W | SP300VAC5000W |
|--|--|--|---------------|---------------|---------------|
| Power | Range | 0~2040W | 0~3060W | 0~4080W | 0~5100W |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting + 1.0% F.S. at PF>0.2, Voltage>5V | | | |
| Power Apparent (VA) | Range | 0~2040VA | 0~3060VA | 0~4080VA | 0~5100VA |
| | Resolution | 0.1VA | | | |
| | Accuracy | Voltage*Irms, Calculated value | | | |
| Power Resistive (VAR) | Range | 0~2040VAR | 0~3060VAR | 0~4080VAR | 0~5100VAR |
| | Resolution | 0.1VAR | | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | | |
| Power Factor (PF) | Range | 0.00~1.00 | | | |
| | Resolution | 0.01 | | | |
| | Accuracy | W/VA, Calculated value | | | |
| Harmonic | Range ^[4] | 2~40 orders | | | |
| Extra Function | | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power. | | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | | |
| Transient Generator (only for 15~70Hz) | Range | Trans-Start: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms | | | |
| | | Trans-Volt: -212V~-+212V(L), -424V~-+424V(H), Resolution: 0.1V | | | |
| | | Trans-Time: 0.0~66.5ms @ 15Hz, Resolution: 0.1ms | | | |
| | | Trans-Count: 0~9999, Constant | | | |
| Calibration | Firmware-based calibration through the digital interface or front panel | | | | |
| Test Function | Yes | | | | |
| Parallel Output for 1 Phase | Yes, 4 Units Max. (Option: Remote I/O & Parallel, Multiphase Link Card) | | | | |
| Series Output for 1 Phase | Yes, 2 Units Max. (Option: Remote I/O & Parallel, Multiphase Link Card) | | | | |
| Link Output for 3 Phase | Yes, (Option: Remote I/O & Parallel, Multiphase Link Card) | | | | |
| General | | | | | |
| Graphic Display | 5.6" Color touch LCD | | | | |
| Operation Key Feature | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | | | |
| Rack mount Handles | Yes | | | | |
| FAN | Temperature Control | | | | |
| Protection Circuits | OCP,OVP,OPP,OTP,RCP,PRI_UVP,PRI_OVP,PRI_OTP,PRI_OCP,USB_OCP | | | | |
| Interface | Standard USB, RS-485, RS-232, LAN, GPIB is Optional | | | | |
| Remote Control Input/Output Signal Characteristics (Option) | | | | | |
| Remote Input Signal | Signal input for external trigger for execution of programmed value Signal: ON/OFF, RESET, KEEP OFF, Recall program memory 1 through 7 | | | | |
| Remote Output Signal | Signal output indicating that a test mode is present Signal: PASS, FAIL, TEST-IN-PROCESS | | | | |
| External Signal Waveform Input | Signal input for output voltage waveform programming by external analog reference via BNC type. Between the sync signal and the output wave will be 0.5ms time difference | | | | |
| Environment | | | | | |
| Operating Temperature | 0°C ~ 40°C | | | | |
| Storage Temperature | -40°C ~ 85°C | | | | |
| Fan Noise | 73dBA Max. | | | | |
| Altitude | 2000m | | | | |
| Relative Humidity | 5%~95%, non-condensing | | | | |
| Temperature Coefficient | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | | | |
| Mechanical | | | | | |
| Dimensions (W*H*D) | 423.0x133.0x520.0 mm | 423.0x177.0x520.0 mm | | | |
| Package Dimensions (W*H*D) | 643.0x278.5x802.0 mm | 643.0x323.0x802.0 mm | | | |
| Unit Weight | 21.4kg | 29.0kg | | | |
| Shipping Weight | 24.4kg | 32.0kg | | | |
| Regulatory Compliance | | | | | |
| EMC | CE marked for EMC Directive 2014/30/EU/EN61326-1: 2013 Class A for emissions and immunity standard as required for EU CE Mark. FCC Verification of conformity for CFR 47 Part 15 of the FCC Rules. | | | | |
| Safety | CE marked for LVD Directive 2014/35/EU/EN61010-1-third edition as required for EU CE Mark. | | | | |
| CE Mark | Installation Overvoltage Category II; Pollution Degree 2; Class II equipment; indoor use only. | | | | |
| Isolation Voltage | 3000VAC,input to output; 1500VAC,input to chassis. | | | | |
| RoHS | Meet to EU Directive 2011/65/EU for restriction of hazardous substances in Electrical and Electronic Equipment. | | | | |

[1] Only Professional Version units support 15.00~1200.00Hz.

[2] Only Professional Version units support Programmable Output Impedance function.

[3] Only Professional Version units support Harmonics & Inter-harmonics Simulation function.

[4] Only Professional Version units support Harmonics function.

All specifications are subject to change without notice.

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SPS-300 Series AC Power Supply System

Selection List :

| Model | Voltage | Current | Power | Connection type | Size | Corresponding page |
|----------------------|---------|---------------|--------|-----------------|------|--------------------|
| SPS300VAC1200W-2-9 | 300V | 10.08A/5.04A | 1200W | 2Parallel | 9U | P23 |
| SPS300VAC1800W-2-9 | 300V | 15.12A/7.56A | 1800W | 3Parallel | 9U | P23 |
| SPS300VAC2400W-2-17 | 300V | 20.16A/10.08A | 2400W | 4Parallel | 17U | P23 |
| SPS300VAC2000W-2-9 | 300V | 15.56A/8.28A | 2000W | 2Parallel | 9U | P25 |
| SPS300VAC3000W-2-9 | 300V | 24.84A/12.42A | 3000W | 3Parallel | 9U | P25 |
| SPS300VAC4000W-2-17 | 300V | 33.12A/15.56A | 4000W | 4Parallel | 17U | P25 |
| SPS300VAC3000W-2-9 | 300V | 24.84A/12.42A | 3000W | 2Parallel | 9U | P27 |
| SPS300VAC4500W-2-9 | 300V | 37.26A/18.63A | 4500W | 3Parallel | 9U | P27 |
| SPS300VAC6000W-2-17 | 300V | 49.68A/24.84A | 6000W | 4Parallel | 17U | P27 |
| SPS300VAC4000W-3-17 | 300V | 28.8A/14.4A | 4000W | 2Parallel | 17U | P29 |
| SPS300VAC6000W-3-17 | 300V | 43.2A/21.6A | 6000W | 3Parallel | 17U | P29 |
| SPS300VAC8000W-3-17 | 300V | 57.6A/28.8A | 8000W | 4Parallel | 17U | P29 |
| SPS300VAC6000W-4-17 | 300V | 49.68A/24.84A | 6000W | 2Parallel | 17U | P31 |
| SPS300VAC9000W-4-17 | 300V | 74.52A/37.26A | 9000W | 3Parallel | 17U | P31 |
| SPS300VAC12000W-4-21 | 300V | 99.36A/49.68A | 12000W | 4Parallel | 21U | P31 |
| SPS300VAC8000W-4-17 | 300V | 57.6A/28.8A | 8000W | 2Parallel | 17U | P33 |
| SPS300VAC12000W-4-17 | 300V | 86.4A/43.2A | 12000W | 3Parallel | 17U | P33 |
| SPS300VAC16000W-4-21 | 300V | 115.2A/57.6A | 16000W | 4Parallel | 21U | P33 |
| SPS300VAC10000W-4-17 | 300V | 82.8A/41.4A | 10000W | 2Parallel | 17U | P35 |
| SPS300VAC15000W-4-17 | 300V | 124.2A/62.1A | 15000W | 3Parallel | 17U | P35 |
| SPS300VAC20000W-4-21 | 300V | 165.6A/82.8A | 20000W | 4Parallel | 21U | P35 |

*This formula is the standard cabinet for SP-300 series 2U/3U/4U model. It is available to select cabinet with different specification according to exact situation. Detail please consults our area manager.

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC1200W-2-9 | SPS300VAC1800W-2-9 | SPS300VAC2400W-2-17 |
|--------------------------------------|---------------|--|--------------------|---------------------|
| Input | | | | |
| Voltage | | 90~265VAC | | |
| Frequency | | 47~63Hz | | |
| Phase | | 3 Phase, 4Wire+Groud/Y Connect | | |
| Max.Current | | 20A | 30A | 40A |
| Power Factor at 220VAC Input, Full | | ≥0.91, Active PFC | | |
| Efficiency | | >82% (Peak) >80% at 220VAC, 50Hz input/230VAC, 50Hz output) | | |
| Output | | | | |
| AC Power(Total) ⁽¹⁾ | | 1080VA | 1620VA | 2160VA |
| Max.Current (r.m.s) ⁽¹⁾ | 0~150V(L) | 10.08A | 15.12A | 20.16A |
| | 0~300V(H) | 5.04A | 7.56A | 10.08A |
| Max.Current (Peak) ⁽¹⁾ | 0~150V(L) | 58.32A | 87.48A | 116.64A |
| | 0~300V(H) | 29.16A | 43.74A | 58.32A |
| Voltage(AC) | Range | 0~300VAC,150V/300V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.2% of setting+0.8%F.S, at Voltage >3V | | |
| Phase Angle (Starting /Ending) | Range | 0~359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ±1° @45~65HZ | | |
| Current OC Fold Mode | Range | 0.1A | | |
| | Resolution | 2.0% of setting+2.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range | 15~1000HZ Full Range Adjust | | |
| | Resolution | 0.1Hz at 15.0~99.9Hz,1Hz at 100~1000Hz | | |
| | Accuracy | 0.03% of setting | | |
| Voltage(DC) | Range | 0~424Vdc,212V/424V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.3% of setting+0.8%F.S, at Voltage >3V | | |
| Max.Current(L/H Range)(Total) | 0~150V(L) | L 7.128A | L 10.692A | L 14.256A |
| | 0~300V(H) | H 3.402A | H 5.103A | H 6.804A |
| Ripple & Noise(r.m.s) | | L <1000mVrms @ Bandwidth 20HZ to 1MHZ H <1500mVrms @ Bandwidth 20HZ to 1MHZ | | |
| Ripple & Noise(Peak) | | <4000mVp-p @ Bandwidth 20HZ to 1MHZ | | |
| Other Parameters | | | | |
| Total Harmonic Distortion(THD) | | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1.5% (Resistive Load) at 501~1000Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range | | |
| Crest Factor(CF) | | ≤6 | | |
| Load Regulation | | ±0.5%F.S. @15~100HZ (Resistive Load) ±0.8%F.S. @ Others Freq (Resistive Load) | | |
| Line Regulation | | ±0.1V | | |
| Programmable Output Impedance | | Not Support | | |
| Harmonic & Interharmonics Simulation | | Not Support | | |
| Measurent(Master) | | | | |
| Voltage | Range | AC 0~300VAC DC 0~424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | AC 0.2% of setting + 0.4%F.S. (Notes: Vpeak: 0.6% of setting+1%F.S.) DC 0.3% of setting+0.4%F.S. | | |
| Frequency | Range | 15~1000HZ | | |
| | Resolution | 0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current(r.m.s) | Range | H 0.15A~5.6A | | |
| | | M - | | |
| | | L 0.1A~3A | | |
| | Resolution | mA - | | |
| Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S | | | |

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC1200W-2-9 | SPS300VAC1800W-2-9 | SPS300VAC2400W-2-17 | |
|---------------------------------------|----------------------|--|-------------------------|-----------------------|----------------|
| Current(Peak) | Range | 0A~32.4A | | | |
| | Resolution | 0.01A | | | |
| | Accuracy | 0.4%+1.5%F.S. | | | |
| Power | Range | 0~600W | | | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +1%F.S. at PF>0.2, Voltage >5V | | | |
| Power Apparent (VA) | Range | 0~612VA | | | |
| | Resolution | 0.1VA | | | |
| | Accuracy | Voltage * I _{rms} , Calculated value | | | |
| Power Resistive (VAR) | Range | 0~612VAR | | | |
| | Resolution | 0.1VAR | | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | | |
| Power Factor (PF) | Range | 0.00~1.00 | | | |
| | Resolution | 0.01 | | | |
| | Accuracy | W/VA, Calculated value | | | |
| Harmonic | | Not Support | | | |
| Σ Current | Range ^[1] | H | 0.15A~10.08A | H 0.15A~15.12A | H 0.15A~20.16A |
| | | M | - | | |
| | | L | 0.1A~5.4A | L 0.1A~8.1A | L 0.1A~10.8A |
| | | mA | - | | |
| | Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S. | | | | |
| Σ Current | Range ^[1] | 0~1080W | 0~1620W | 0~2160W | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +0.3%F.S at PF >0.2, Voltage > 5V | | | |
| Extra Function | | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power | | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | | |
| Transient Generator(only for 15-70HZ) | Range | Trans-Start : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Volt : -212V~+212V(L), -424V~+424V(H), Resolution : 0.1V | | | |
| | | Trans-Time : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Cycle : 0~9999, Constant | | | |
| Calibration ^[2] | | Firmware-based calibration through the digital interface or front panel | | | |
| Graphic Display | | 4.3" Color touch LCD | | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | | |
| Rack mount Handles | | Yes | | | |
| FAN | | Temperature Control | | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | | |
| Interface | | Standard USB, RS-485, RS-232, GPIB & LAN is Optional | | | |
| Environment | | | | | |
| Operating Temperature | | 0°C~40°C | | | |
| Storage Temperature | | -40°C~85°C | | | |
| Fan Noise | | 55dB Min; 76dB Max. | 56.8dB Min; 77.8dB Max. | 58dB Min; 79dB Max. | |
| Altitude | | 2000m | | | |
| Relative Humidity | | 5%~95%, non-condensing | | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | | |
| Mechanical | | | | | |
| Dimensions(WxHxD) | | 540.0x400.0x640.0 mm | 540.0x400.0x640.0 mm | 560.0x754.0x700.0 mm | |
| Package Dimensions(WxHxD) | | 660.0x710.0x760.0 mm | 660.0x710.0x760.0 mm | 680.0x1120.0x860.0 mm | |
| Unit Weight | | 72.8kg | 88.7kg | 133.6kg | |
| Shipping Weight | | 89.7kg | 108.7kg | 172.0kg | |
| Regulatory Compliance | | | | | |
| CE Mark | | Installation Overvoltage Category II; Class II equipment; indoor use only. | | | |

[1] In parallel mode, the amount needed to be reduced to 90 %

[2] Calibration function only available for single unit.

All specifications are subject to change without notice.

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC2000W-2-9 | SPS300VAC3000W-2-9 | SPS300VAC4000W-2-17 |
|--------------------------------------|---------------|--|--------------------|---------------------|
| Input | | | | |
| Voltage | | 90~265VAC | | |
| Frequency | | 47~63Hz | | |
| Phase | | 3 Phase, 4Wire+Groud/Y Connect | | |
| Max.Current | | 30A | 45A | 60A |
| Power Factor at 220VAC Input, Full | | ≥0.95, Active PFC | | |
| Efficiency | | >86% (Peak) >84% at 220VAC, 50Hz input/230VAC, 50Hz output) | | |
| Output | | | | |
| AC Power(Total) ⁽¹⁾ | | 1800VA | 2700VA | 3600VA |
| Max.Current (r.m.s) ⁽¹⁾ | 0~150V(L) | 16.56A | 24.84A | 33.12A |
| | 0~300V(H) | 8.28A | 12.42A | 16.56A |
| Max.Current (Peak) ⁽¹⁾ | 0~150V(L) | 99.36A | 149.04A | 198.72A |
| | 0~300V(H) | 49.68A | 74.52A | 99.36A |
| Voltage(AC) | Range | 0~300VAC,150V/300V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.2% of setting + 0.8%F.S, at Voltage >3V | | |
| Phase Angle (Starting /Ending) | Range | 0~359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ±1° @45~65HZ | | |
| Current OC Fold Mode | Range | 0.1A | | |
| | Resolution | 2.0% of setting + 2.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range | 15~1000HZ Full Range Adjust | | |
| | Resolution | 0.1Hz at 15.0~99.9Hz,1Hz at 100~1000Hz | | |
| | Accuracy | 0.03% of setting | | |
| Voltage(DC) | Range | 0~424Vdc, 212V/424V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.3% of setting + 0.8%F.S, at Voltage >3V | | |
| Max.Current(L/H Range)(Total) | 0~150V(L) | L 11.7A | L 17.55A | L 23.4A |
| | 0~300V(H) | H 5.94A | H 8.91A | H 11.88A |
| Ripple & Noise(r.m.s) | | L <1000mVrms @ Bandwidth 20HZ to 1MHZ H <1500mVrms @ Bandwidth 20HZ to 1MHZ | | |
| Ripple & Noise(Peak) | | <4000mVp-p @ Bandwidth 20HZ to 1MHZ | | |
| Other Parameters | | | | |
| Total Harmonic Distortion(THD) | | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1.5% (Resistive Load) at 501~1000Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range | | |
| Crest Factor(CF) | | ≤6 | | |
| Load Regulation | | ± 0.5%F.S. @15~100HZ (Resistive Load) ± 0.8%F.S. @ Others Freq (Resistive Load) | | |
| Line Regulation | | ± 0.1V | | |
| Programmable Output Impedance | | Not Support | | |
| Harmonic & Interharmonics Simulation | | Not Support | | |
| Measurent(Master) | | | | |
| Voltage | Range | AC 0~300VAC DC 0~424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | AC 0.2% of setting + 0.4%F.S. (Notes: Vpeak: 0.6% of setting+1%F.S.) DC 0.3% of setting+ 0.4%F.S. | | |
| Frequency | Range | 15~1000HZ | | |
| | Resolution | 0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current(r.m.s) | Range | H 0.15A~ 9.2A | | |
| | | M - | | |
| | | L 0.1A~ 3A | | |
| | Resolution | mA - | | |
| Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S | | | |

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC2000W-2-9 | SPS300VAC3000W-2-9 | SPS300VAC4000W-2-17 | |
|---------------------------------------|----------------------|--|-------------------------|-----------------------|----------------|
| Current(Peak) | Range | 0A~55.2A | | | |
| | Resolution | 0.01A | | | |
| | Accuracy | 0.4%+1.5%F.S. | | | |
| Power | Range | 0~1000W | | | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +1%F.S. at PF>0.2, Voltage >5V | | | |
| Power Apparent (VA) | Range | 0~1020VA | | | |
| | Resolution | 0.1VA | | | |
| | Accuracy | Voltage * I _{rms} , Calculated value | | | |
| Power Resistive (VAR) | Range | 0~1020VAR | | | |
| | Resolution | 0.1VAR | | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | | |
| Power Factor (PF) | Range | 0.00~1.00 | | | |
| | Resolution | 0.01 | | | |
| | Accuracy | W/VA, Calculated value | | | |
| Harmonic | | Not Support | | | |
| Σ Current | Range ^[1] | H | 0.15A~16.56A | H 0.15A~24.84A | H 0.15A~33.12A |
| | | M | - | | |
| | | L | 0.1A~5.4A | L 0.1A~8.1A | L 0.1A~10.8A |
| | | mA | - | | |
| | Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S. | | | | |
| Σ Current | Range ^[1] | 0~1800W | 0~2700W | 0~3600W | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +0.3%F.S at PF >0.2, Voltage > 5V | | | |
| Extra Function | | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power | | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | | |
| Transient Generator(only for 15-70HZ) | Range | Trans-Start : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Volt : -212V~+212V(L), -424V~+424V(H), Resolution : 0.1V | | | |
| | | Trans-Time : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Cycle : 0~9999, Constant | | | |
| Calibration ^[2] | | Firmware-based calibration through the digital interface or front panel | | | |
| Graphic Display | | 4.3" Color touch LCD | | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | | |
| Rack mount Handles | | Yes | | | |
| FAN | | Temperature Control | | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | | |
| Interface | | Standard USB, RS-485, RS-232, GPIB & LAN is Optional | | | |
| Environment | | | | | |
| Operating Temperature | | 0°C~40°C | | | |
| Storage Temperature | | -40°C~85°C | | | |
| Fan Noise | | 55dB Min; 76dB Max. | 56.8dB Min; 77.8dB Max. | 58dB Min; 79dB Max. | |
| Altitude | | 2000m | | | |
| Relative Humidity | | 5%~95%, non-condensing | | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | | |
| Mechanical | | | | | |
| Dimensions(WxHxD) | | 540.0x400.0x640.0 mm | 540.0x400.0x640.0 mm | 560.0x754.0x700.0 mm | |
| Package Dimensions(W xHxD) | | 660.0x710.0x760.0 mm | 680.0x710.0x760.0 mm | 680.0x1120.0x860.0 mm | |
| Unit Weight | | 72.8kg | 88.7kg | 133.6kg | |
| Shipping Weight | | 89.7kg | 108.7kg | 172.0kg | |
| Regulatory Compliance | | | | | |
| CE Mark | | Installation Overvoltage Category II; Class II equipment; indoor use only. | | | |

[1] In parallel mode, the amount needed to be reduced to 90 %

[2] Calibration function only available for single unit.

All specifications are subject to change without notice.

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC3000W-2-9 | SPS300VAC4500W-2-9 | SPS300VAC6000W-2-17 |
|--------------------------------------|---------------|--|--------------------|---------------------|
| Input | | | | |
| Voltage | | 100~265VAC | | |
| Frequency | | 47~63Hz | | |
| Phase | | 3 Phase, 4Wire+Groud/Y Connect | | |
| Max.Current | | 38A | 57A | 76A |
| Power Factor at 220VAC Input, Full | | ≥0.97, Active PFC | | |
| Efficiency | | >87% (Peak) >86% at 220VAC, 50Hz input/230VAC, 50Hz output) | | |
| Output | | | | |
| AC Power(Total) ⁽¹⁾ | | 2700VA | 4050VA | 5400VA |
| Max.Current (r.m.s) ⁽¹⁾ | 0~150V(L) | 24.84A | 37.26A | 49.68A |
| | 0~300V(H) | 12.42A | 18.63A | 24.84A |
| Max.Current (Peak) ⁽¹⁾ | 0~150V(L) | 149.04A | 223.56A | 298.08A |
| | 0~300V(H) | 74.52A | 111.78A | 149.04A |
| Voltage(AC) | Range | 0~300VAC,150V/300V/Auto | | |
| | Resolution | 0.1 V | | |
| | Accuracy | 0.2% of setting+0.8%F.S, at Voltage >3V | | |
| Phase Angle (Starting /Ending) | Range | 0~359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ±1° @45~65HZ | | |
| Current OC Fold Mode | Range | 0.1 A | | |
| | Resolution | 2.0% of setting+2.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range | 15~1000HZ Full Range Adjust | | |
| | Resolution | 0.1Hz at 15.0~99.9Hz,1Hz at 100~1000Hz | | |
| | Accuracy | 0.03% of setting | | |
| Voltage(DC) | Range | 0~424Vdc,212V/424V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.3% of setting+0.8%F.S, at Voltage >3V | | |
| Max.Current(L/H Range)(Total) | 0~150V(L) | L 17.568A | L 26.352A | L 35.136A |
| | 0~300V(H) | H 8.784A | H 13.176A | H 17.568A |
| Ripple & Noise(r.m.s) | | L <1000mVrms @ Bandwidth 20HZ to 1MHZ H <1500mVrms @ Bandwidth 20HZ to 1MHZ | | |
| Ripple & Noise(Peak) | | <4000mVp-p @ Bandwidth 20HZ to 1MHZ | | |
| Other Parameters | | | | |
| Total Harmonic Distortion(THD) | | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1.5% (Resistive Load) at 501~1000Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range | | |
| Crest Factor(CF) | | ≤6 | | |
| Load Regulation | | ±0.5%F.S. @15~100HZ (Resistive Load) ±0.8%F.S. @ Others Freq (Resistive Load) | | |
| Line Regulation | | ±0.1V | | |
| Programmable Output Impedance | | Not Support | | |
| Harmonic & Interharmonics Simulation | | Not Support | | |
| Measurent(Master) | | | | |
| Voltage | Range | AC 0~300VAC DC 0~424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | AC 0.2% of setting + 0.4%F.S. (Notes: Vpeak: 0.6% of setting+1%F.S.) DC 0.3% of setting+0.4%F.S. | | |
| Frequency | Range | 15~1000HZ | | |
| | Resolution | 0.1Hz(15.0~99.9Hz),1Hz(100~1000Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current(r.m.s) | Range | H 0.15A~13.8A | | |
| | | M - | | |
| | | L 0.1A~3A | | |
| | | mA - | | |
| | Resolution | 0.01A | | |
| Accuracy | 0.4%+1.0%F.S | | | |

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC3000W-2-9 | SPS300VAC4500W-2-9 | SPS300VAC6000W-2-17 | |
|---------------------------------------|----------------------|--|-------------------------|-----------------------|----------------|
| Current(Peak) | Range | 0A~82.8A | | | |
| | Resolution | 0.01A | | | |
| | Accuracy | 0.4%+1.5%F.S. | | | |
| Power | Range | 0~1500W | | | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +1%F.S. at PF>0.2, Voltage >5V | | | |
| Power Apparent (VA) | Range | 0~1530VA | | | |
| | Resolution | 0.1VA | | | |
| | Accuracy | Voltage * Irms, Calculated value | | | |
| Power Resistive (VAR) | Range | 0~1530VAR | | | |
| | Resolution | 0.1VAR | | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | | |
| Power Factor (PF) | Range | 0.00~1.00 | | | |
| | Resolution | 0.01 | | | |
| | Accuracy | W/VA, Calculated value | | | |
| Harmonic | | Not Support | | | |
| Σ Current | Range ^[1] | H | 0.15A~24.84A | H 0.15A~37.26A | H 0.15A~49.68A |
| | | M | - | | |
| | | L | 0.1A~5.4A | L 0.1A~8.1A | L 0.1A~10.8A |
| | | mA | - | | |
| | Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S. | | | | |
| Σ Current | Range ^[1] | 0~2700W | 0~4050W | 0~5400W | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +0.3%F.S at PF >0.2, Voltage > 5V | | | |
| Extra Function | | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power | | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | | |
| Transient Generator(only for 15-70HZ) | Range | Trans-Start : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Volt : -212V~+212V(L), -424V~+424V(H), Resolution : 0.1V | | | |
| | | Trans-Time : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Cycle : 0~9999, Constant | | | |
| Calibration ^[2] | | Firmware-based calibration through the digital interface or front panel | | | |
| Graphic Display | | 4.3" Color touch LCD | | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | | |
| Rack mount Handles | | Yes | | | |
| FAN | | Temperature Control | | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | | |
| Interface | | Standard USB, RS-485, RS-232, GPIB & LAN is Optional | | | |
| Environment | | | | | |
| Operating Temperature | | 0°C~40°C | | | |
| Storage Temperature | | -40°C~85°C | | | |
| Fan Noise | | 55dB Min; 76dB Max. | 56.8dB Min; 77.8dB Max. | 58dB Min; 79dB Max. | |
| Altitude | | 2000m | | | |
| Relative Humidity | | 5%~95%, non-condensing | | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | | |
| Mechanical | | | | | |
| Dimensions(WxHxD) | | 540.0x400.0x640.0 mm | 540.0x400.0x640.0 mm | 560.0x754.0x700.0 mm | |
| Package Dimensions(W xHxD) | | 660.0x710.0x760.0 mm | 660.0x710.0x760.0 mm | 680.0x1120.0x860.0 mm | |
| Unit Weight | | 72.8kg | 88.7kg | 133.6kg | |
| Shipping Weight | | 89.7kg | 108.7kg | 172.0kg | |
| Regulatory Compliance | | | | | |
| CE Mark | | Installation Overvoltage Category II; Class II equipment; indoor use only. | | | |

[1]In parallel mode, the amount needed to be reduced to 90 %

[2]Calibration function only available for single unit.

All specifications are subject to change without notice.

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC4000W-3-17 | SPS300VAC6000W-3-17 | SPS300VAC8000W-3-17 |
|--------------------------------------|---------------|--|---------------------|---------------------|
| Input | | | | |
| Voltage | | 190~265VAC | | |
| Frequency | | 47~63Hz | | |
| Phase | | 3 Phase, 4Wire+Groud/Y Connect | | |
| Max.Current | | 28A | 42A | 56A |
| Power Factor at 220VAC Input, Full | | ≥0.99, Active PFC | | |
| Efficiency | | >87% (Peak) >86% at 220VAC, 50Hz input/230VAC, 50Hz output) | | |
| Output | | | | |
| AC Power(Total) ⁽¹⁾ | | 3600VA | 5400VA | 7200VA |
| Max.Current (r.m.s) ⁽¹⁾ | 0~150V(L) | 28.8A | 43.2A | 57.6A |
| | 0~300V(H) | 14.4A | 21.6A | 28.8A |
| Max.Current (Peak) ⁽¹⁾ | 0~150V(L) | 144A | 216A | 288A |
| | 0~300V(H) | 72A | 108A | 144A |
| Voltage(AC) | Range | 0 ~ 300VAC, 150V/300V/Auto | | |
| | Resolution | 0.1 V | | |
| | Accuracy | 0.2% of setting + 0.8%F.S, at Voltage >3V | | |
| Phase Angle (Starting /Ending) | Range | 0 ~ 359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ±1° @45 ~ 65HZ | | |
| Current OC Fold Mode | Range | 0.1 A | | |
| | Resolution | 2.0% of setting + 2.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range | 15 ~ 1000HZ Full Range Adjust | | |
| | Resolution | 0.1Hz at 15.0~99.9Hz, 1Hz at 100~1000Hz | | |
| | Accuracy | 0.03% of setting | | |
| Voltage(DC) | Range | 0 ~ 424Vdc, 212V/424V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.3% of setting + 0.8%F.S, at Voltage >3V | | |
| Max.Current(L/H Range)(Total) | 0 ~ 150V(L) | L 20.34A | L 30.51A | L 40.68A |
| | 0 ~ 300V(H) | H 10.17A | H 15.255A | H 20.34A |
| Ripple & Noise(r.m.s) | | L <1000mVrms @ Bandwidth 20HZ to 1MHZ H <1500mVrms @ Bandwidth 20HZ to 1MHZ | | |
| Ripple & Noise(Peak) | | <4000mVp-p @ Bandwidth 20HZ to 1MHZ | | |
| Other Parameters | | | | |
| Total Harmonic Distortion(THD) | | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1.5% (Resistive Load) at 501~1000Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range | | |
| Crest Factor(CF) | | ≤ 5 | | |
| Load Regulation | | ± 0.5%F.S. @15 ~ 100HZ (Resistive Load) ± 0.8%F.S. @ Others Freq (Resistive Load) | | |
| Line Regulation | | ± 0.1V | | |
| Programmable Output Impedance | | Not Support | | |
| Harmonic & Interharmonics Simulation | | Not Support | | |
| Measurent(Master) | | | | |
| Voltage | Range | AC 0 ~ 300VAC DC 0 ~ 424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | AC 0.2% of setting + 0.4%F.S. (Notes: Vpeak: 0.6% of setting+1%F.S.) DC 0.3% of setting + 0.4%F.S. | | |
| Frequency | Range | 15 ~ 1000HZ | | |
| | Resolution | 0.1Hz(15.0~99.9Hz), 1Hz(100~1000Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current(r.m.s) | Range | H 0.15A ~ 20A | | |
| | | M - | | |
| | | L 0.1A ~ 5A | | |
| | mA 0.02~1.5A | | | |
| Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S | | | |

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC4000W-3-17 | SPS300VAC6000W-3-17 | SPS300VAC8000W-3-17 | |
|---------------------------------------|----------------------|--|-------------------------|-----------------------|---------------|
| Current(Peak) | Range | 0A~81.5A | | | |
| | Resolution | 0.01A | | | |
| | Accuracy | 0.4%+1.5%F.S. | | | |
| Power | Range | 0~2040W | | | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +1%F.S. at PF>0.2, Voltage >5V | | | |
| Power Apparent (VA) | Range | 0~2040VA | | | |
| | Resolution | 0.1VA | | | |
| | Accuracy | Voltage * I _{rms} , Calculated value | | | |
| Power Resistive (VAR) | Range | 0~2040VAR | | | |
| | Resolution | 0.1VAR | | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | | |
| Power Factor (PF) | Range | 0.00~1.00 | | | |
| | Resolution | 0.01 | | | |
| | Accuracy | W/VA, Calculated value | | | |
| Harmonic | | Not Support | | | |
| Σ Current | Range ^[1] | H | 0.15A~28.8A | H 0.15A~43.2A | H 0.15A~57.6A |
| | | M | - | | |
| | | L | 0.1A~9A | L 0.1A~13.5A | L 0.1A~18A |
| | | mA | 0.02~2.7A | mA 0.02~4.05A | mA 0.02~5.4A |
| | Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S. | | | | |
| Σ Current | Range ^[1] | 0~3762W | 0~5508W | 0~7344W | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +0.3%F.S at PF >0.2, Voltage > 5V | | | |
| Extra Function | | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power | | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | | |
| Transient Generator(only for 15-70HZ) | Range | Trans-Start : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Volt : -212V~+212V(L), -424V~+424V(H), Resolution : 0.1V | | | |
| | | Trans-Time : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Cycle : 0~9999, Constant | | | |
| Calibration ^[2] | | Firmware-based calibration through the digital interface or front panel | | | |
| Graphic Display | | 4.3" Color touch LCD | | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | | |
| Rack mount Handles | | Yes | | | |
| FAN | | Temperature Control | | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | | |
| Interface | | Standard USB, RS-485, RS-232, LAN, GPIB is Optional | | | |
| Environment | | | | | |
| Operating Temperature | | 0°C~40°C | | | |
| Storage Temperature | | -40°C~85°C | | | |
| Fan Noise | | 55dB Min; 76dB Max. | 56.8dB Min; 77.8dB Max. | 58dB Min; 79dB Max. | |
| Altitude | | 2000m | | | |
| Relative Humidity | | 5%~95%, non-condensing | | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | | |
| Mechanical | | | | | |
| Dimensions(WxHxD) | | 560.0x754.0x700.0 mm | 560.0x754.0x700.0 mm | 560.0x754.0x700.0 mm | |
| Package Dimensions(W xH xD) | | 680.0x1146.0x820.0 mm | 680.0x1146.0x820.0 mm | 680.0x1120.0x860.0 mm | |
| Unit Weight | | 112.6kg | 134.0kg | 155.6kg | |
| Shipping Weight | | 148.6kg | 173.0kg | 194.0kg | |
| Regulatory Compliance | | | | | |
| CE Mark | | Installation Overvoltage Category II; Class II equipment; indoor use only. | | | |

[1]In parallel mode, the amount needed to be reduced to 90 %

[2]Calibration function only available for single unit.

All specifications are subject to change without notice.

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC6000W-4-17 | SPS300VAC9000W-4-17 | SPS300VAC12000W-4-21 |
|--------------------------------------|---------------|--|---------------------|----------------------|
| Input | | | | |
| Voltage | | 190~265VAC | | |
| Frequency | | 47~63Hz | | |
| Phase | | 3 Phase, 4Wire+Groud/Y Connect | | |
| Max.Current | | 40A | 60A | 80A |
| Power Factor at 220VAC Input, Full | | ≥0.98, Active PFC | | |
| Efficiency | | >86% (Peak) >85% at 220VAC, 50Hz input/230VAC, 50Hz output) | | |
| Output | | | | |
| AC Power(Total) ¹⁾ | | 5400VA | 8100VA | 10800VA |
| Max.Current (r.m.s) ¹⁾ | 0~150V(L) | 49.68A | 74.52A | 99.36A |
| | 0~300V(H) | 24.84A | 37.26A | 49.68A |
| Max.Current (Peak) ¹⁾ | 0~150V(L) | 298.08A | 447.12A | 596.16A |
| | 0~300V(H) | 149.04A | 223.56A | 298.08A |
| Voltage(AC) | Range | 0~300VAC, 150V/300V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.2% of setting + 0.8%F.S, at Voltage >3V | | |
| Phase Angle (Starting /Ending) | Range | 0~359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ±1° @45~65HZ | | |
| Current OC Fold Mode | Range | 0.1A | | |
| | Resolution | 2.0% of setting + 2.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range | 15~1000HZ Full Range Adjust | | |
| | Resolution | 0.1Hz at 15.0~99.9Hz, 1Hz at 100~1000Hz | | |
| | Accuracy | 0.03% of setting | | |
| Voltage(DC) | Range | 0~424Vdc, 212V/424V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.3% of setting + 0.8%F.S, at Voltage >3V | | |
| Max.Current(L/H Range)(Total) | 0~150V(L) | L 35.28A | L 52.92A | L 70.56A |
| | 0~300V(H) | H 17.64A | H 26.46A | H 35.28A |
| Ripple & Noise(r.m.s) | | L <1000mVrms @ Bandwidth 20HZ to 1MHZ H <1500mVrms @ Bandwidth 20HZ to 1MHZ | | |
| Ripple & Noise(Peak) | | <4000mVp-p @ Bandwidth 20HZ to 1MHZ | | |
| Other Parameters | | | | |
| Total Harmonic Distortion(THD) | | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1.5% (Resistive Load) at 501~1000Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range | | |
| Crest Factor(CF) | | ≤6 | | |
| Load Regulation | | ± 0.5%F.S. @15~100HZ (Resistive Load) ± 0.8%F.S. @Others Freq (Resistive Load) | | |
| Line Regulation | | ± 0.1V | | |
| Programmable Output Impedance | | Not Support | | |
| Harmonic & Interharmonics Simulation | | Not Support | | |
| Measurent(Master) | | | | |
| Voltage | Range | AC 0~300VAC DC 0~424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | AC 0.2% of setting + 0.4%F.S. (Notes: Vpeak: 0.6% of setting+1%F.S.) DC 0.3% of setting + 0.4%F.S. | | |
| Frequency | Range | 15~1000HZ | | |
| | Resolution | 0.1Hz(15.0~99.9Hz), 1Hz(100~1000Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current(r.m.s) | Range | H 0.3A~27.6A | | |
| | | M 0.2A~20A | | |
| | | L 0.1A~5A | | |
| | Resolution | mA 0.02~1.5A | | |
| | Accuracy | 0.01A 0.4%+1.0%F.S | | |

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC6000W-4-17 | SPS300VAC9000W-4-17 | SPS300VAC12000W-4-21 |
|---------------------------------------|----------------------|--|-------------------------|-----------------------|
| Current(Peak) | Range | 0A~168.6A | | |
| | Resolution | 0.01A | | |
| | Accuracy | 0.4%+1.5%F.S. | | |
| Power | Range | 0~3060W | | |
| | Resolution | 0.1W | | |
| | Accuracy | 0.4% of setting +1%F.S. at PF>0.2, Voltage >5V | | |
| Power Apparent (VA) | Range | 0~3060VA | | |
| | Resolution | 0.1VA | | |
| | Accuracy | Voltage * I rms, Calculated value | | |
| Power Resistive (VAR) | Range | 0~3060VAR | | |
| | Resolution | 0.1VAR | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | |
| Power Factor (PF) | Range | 0.00~1.00 | | |
| | Resolution | 0.01 | | |
| | Accuracy | W/VA, Calculated value | | |
| Harmonic | | Not Support | | |
| Σ Current | Range ^[1] | H 0.3A~49.68A | H 0.3A~74.52A | H 0.3A~99.36A |
| | | M 0.2A~36A | M 0.2A~54A | M 0.2A~72A |
| | | L 0.1A~9A | L 0.1A~13.5A | L 0.1A~18A |
| | | mA 0.02~2.7A | mA 0.02~4.05A | mA 0.02~5.4A |
| | Resolution | 0.01A | | |
| Accuracy | 0.4%+1.0%F.S. | | | |
| Σ Current | Range ^[1] | 0~5508W | 0~8262W | 0~11016W |
| | Resolution | 0.1W | | |
| | Accuracy | 0.4% of setting +0.3%F.S at PF >0.2, Voltage > 5V | | |
| Extra Function | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | |
| Transient Generator(only for 15-70HZ) | Range | Trans-Start : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | |
| | | Trans-Volt : -212V~+212V(L), -424V~+424V(H), Resolution : 0.1V | | |
| | | Trans-Time : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | |
| | | Trans-Cycle : 0~9999, Constant | | |
| Calibration ^[2] | | Firmware-based calibration through the digital interface or front panel | | |
| Graphic Display | | 4.3" Color touch LCD | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | |
| Rack mount Handles | | Yes | | |
| FAN | | Temperature Control | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | |
| Interface | | Standard USB, RS-485, RS-232, LAN, GPIB is Optional | | |
| Environment | | | | |
| Operating Temperature | | 0°C~40°C | | |
| Storage Temperature | | -40°C~85°C | | |
| Fan Noise | | 55dB Min; 76dB Max. | 56.8dB Min; 77.8dB Max. | 58dB Min; 79dB Max. |
| Altitude | | 2000m | | |
| Relative Humidity | | 5%~95%, non-condensing | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | |
| Mechanical | | | | |
| Dimensions(WxHxD) | | 560.0x754.0x700.0 mm | 560.0x754.0x700.0 mm | 560.0x932.0x700.0 mm |
| Package Dimensions(W xH xD) | | 680.0x1146.0x820.0 mm | 680.0x1146.0x820.0 mm | 680.0x1297.0x820.0 mm |
| Unit Weight | | 128.0kg | 157.0kg | 224kg |
| Shipping Weight | | 163.0kg | 195.0kg | 265kg |
| Regulatory Compliance | | | | |
| CE Mark | | Installation Overvoltage Category II; Class II equipment; indoor use only. | | |

[1]In parallel mode, the amount needed to be reduced to 90 %

[2]Calibration function only available for single unit.

All specifications are subject to change without notice.

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC8000W-4-17 | SPS300VAC12000W-4-17 | SPS300VAC16000W-4-21 |
|--------------------------------------|----------------|--|----------------------|----------------------|
| Input | | | | |
| Voltage | | 190~265VAC | | |
| Frequency | | 47~63Hz | | |
| Phase | | 3 Phase, 4Wire+Groud/Y Connect | | |
| Max.Current | | 50A | 70A | 100A |
| Power Factor at 220VAC Input, Full | | ≥0.99, Active PFC | | |
| Efficiency | | >87% (Peak) >86% at 220VAC, 50Hz input/230VAC, 50Hz output) | | |
| Output | | | | |
| AC Power(Total) ⁽¹⁾ | | 7200VA | 10800VA | 14400VA |
| Max.Current (r.m.s) ⁽¹⁾ | 0~150V(L) | 57.6A | 86.4A | 115.2A |
| | 0~300V(H) | 28.8A | 43.2A | 57.6A |
| Max.Current (Peak) ⁽¹⁾ | 0~150V(L) | 288A | 432A | 576A |
| | 0~300V(H) | 144A | 216A | 288A |
| Voltage(AC) | Range | 0 ~ 300VAC, 150V/300V/Auto | | |
| | Resolution | 0.1 V | | |
| | Accuracy | 0.2% of setting + 0.8%F.S, at Voltage >3V | | |
| Phase Angle (Starting /Ending) | Range | 0 ~ 359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ±1° @45 ~ 65HZ | | |
| Current OC Fold Mode | Range | 0.1 A | | |
| | Resolution | 2.0% of setting + 2.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range | 15 ~ 1000HZ Full Range Adjust | | |
| | Resolution | 0.1Hz at 15.0~99.9Hz, 1Hz at 100~1000Hz | | |
| | Accuracy | 0.03% of setting | | |
| Voltage(DC) | Range | 0 ~ 424Vdc, 212V/424V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.3% of setting + 0.8%F.S, at Voltage >3V | | |
| Max.Current(L/H Range)(Total) | 0 ~ 150V(L) | L 40.68A | L 61.02A | L 81.36A |
| | 0 ~ 300V(H) | H 20.34A | H 30.51A | H 40.68A |
| Ripple & Noise(r.m.s) | | L <1000mVrms @ Bandwidth 20HZ to 1MHZ H <1500mVrms @ Bandwidth 20HZ to 1MHZ | | |
| Ripple & Noise(Peak) | | <4000mVp-p @ Bandwidth 20HZ to 1MHZ | | |
| Other Parameters | | | | |
| Total Harmonic Distortion(THD) | | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1.5% (Resistive Load) at 501~1000Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range | | |
| Crest Factor(CF) | | ≤ 5 | | |
| Load Regulation | | ± 0.5%F.S. @15 ~ 100HZ (Resistive Load) ± 0.8%F.S. @ Others Freq (Resistive Load) | | |
| Line Regulation | | ± 0.1V | | |
| Programmable Output Impedance | | Not Support | | |
| Harmonic & Interharmonics Simulation | | Not Support | | |
| Measurent(Master) | | | | |
| Voltage | Range | AC 0 ~ 300VAC DC 0 ~ 424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | AC 0.2% of setting + 0.4%F.S. (Notes: Vpeak: 0.6% of setting+1%F.S.) DC 0.3% of setting + 0.4%F.S. | | |
| Frequency | Range | 15 ~ 1000HZ | | |
| | Resolution | 0.1Hz(15.0~99.9Hz), 1Hz(100~1000Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current(r.m.s) | Range | H 0.3A ~ 32A | | |
| | | M 0.2A ~ 20A | | |
| | | L 0.1A ~ 5A | | |
| | mA 0.02 ~ 1.5A | | | |
| Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S | | | |

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC8000W-4-17 | SPS300VAC12000W-4-17 | SPS300VAC16000W-4-21 | |
|---------------------------------------|----------------------|--|-------------------------|-----------------------|---------------|
| Current(Peak) | Range | 0.05A~163A | | | |
| | Resolution | 0.01A | | | |
| | Accuracy | 0.4%+1.5%F.S. | | | |
| Power | Range | 0~4080W | | | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +1%F.S. at PF>0.2, Voltage >5V | | | |
| Power Apparent (VA) | Range | 0~4080VA | | | |
| | Resolution | 0.1VA | | | |
| | Accuracy | Voltage * Irms, Calculated value | | | |
| Power Resistive (VAR) | Range | 0~4080VAR | | | |
| | Resolution | 0.1VAR | | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | | |
| Power Factor (PF) | Range | 0.00~1.00 | | | |
| | Resolution | 0.01 | | | |
| | Accuracy | W/VA, Calculated value | | | |
| Harmonic | | Not Support | | | |
| Σ Current | Range ^[1] | H | 0.3A~57.6A | H 0.3A~86.4A | H 0.3A~115.2A |
| | | M | 0.2A~36A | M 0.2A~54A | M 0.2A~72A |
| | | L | 0.1A~9A | L 0.1A~13.5A | L 0.1A~18A |
| | | mA | 0.02~2.7A | mA 0.02~4.05A | mA 0.02~5.4A |
| | Resolution | 0.01A | | | |
| Accuracy | 0.4%+1.0%F.S. | | | | |
| Σ Current | Range ^[1] | 0~7344W | 0~11016W | 0~14688W | |
| | Resolution | 0.1W | | | |
| | Accuracy | 0.4% of setting +0.3%F.S at PF >0.2, Voltage > 5V | | | |
| Extra Function | | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power | | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | | |
| Transient Generator(only for 15-70HZ) | Range | Trans-Start : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Volt : -212V~+212V(L), -424V~+424V(H), Resolution : 0.1V | | | |
| | | Trans-Time : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | | |
| | | Trans-Cycle : 0~9999, Constant | | | |
| Calibration ^[2] | | Firmware-based calibration through the digital interface or front panel | | | |
| Graphic Display | | 4.3" Color touch LCD | | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | | |
| Rack mount Handles | | Yes | | | |
| FAN | | Temperature Control | | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | | |
| Interface | | Standard USB, RS-485, RS-232, LAN, GPIB is Optional | | | |
| Environment | | | | | |
| Operating Temperature | | 0°C~40°C | | | |
| Storage Temperature | | -40°C~85°C | | | |
| Fan Noise | | 55dB Min; 76dB Max. | 56.8dB Min; 77.8dB Max. | 58dB Min; 79dB Max. | |
| Altitude | | 2000m | | | |
| Relative Humidity | | 5%~95%, non-condensing | | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | | |
| Mechanical | | | | | |
| Dimensions(WxHxD) | | 560.0x754.0x700.0 mm | 560.0x754.0x700.0 mm | 560.0x932.0x700.0 mm | |
| Package Dimensions(W xH xD) | | 680.0x1146.0x820.0 mm | 680.0x1146.0x820.0 mm | 680.0x1297.0x820.0 mm | |
| Unit Weight | | 128.0kg | 157.0kg | 224kg | |
| Shipping Weight | | 163.0kg | 195.0kg | 265.0kg | |
| Regulatory Compliance | | | | | |
| CE Mark | | Installation Overvoltage Category II; Class II equipment; indoor use only. | | | |

[1]In parallel mode, the amount needed to be reduced to 90 %

[2]Calibration function only available for single unit.

All specifications are subject to change without notice.

SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC10000W-4-17 | SPS300VAC15000W-4-17 | SPS300VAC20000W-4-21 |
|--------------------------------------|---------------|--|----------------------|----------------------|
| Input | | | | |
| Voltage | | 190~265VAC | | |
| Frequency | | 47~63Hz | | |
| Phase | | 3 Phase, 4Wire+Groud/Y Connect | | |
| Max.Current | | 60A | 90A | 120A |
| Power Factor at 220VAC Input, Full | | ≥0.99, Active PFC | | |
| Efficiency | | >87% (Peak) >86% at 220VAC, 50Hz input/230VAC, 50Hz output) | | |
| Output | | | | |
| AC Power(Total) ¹⁾ | | 9000VA | 13500VA | 18000VA |
| Max.Current (r.m.s) ¹⁾ | 0~150V(L) | 82.8A | 124.2A | 165.6A |
| | 0~300V(H) | 41.4A | 62.1A | 82.8A |
| Max.Current (Peak) ¹⁾ | 0~150V(L) | 331.2A | 496.8A | 662.4A |
| | 0~300V(H) | 165.6A | 248.4A | 331.2A |
| Voltage(AC) | Range | 0~300VAC, 150V/300V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.2% of setting + 0.8%F.S, at Voltage >3V | | |
| Phase Angle (Starting /Ending) | Range | 0~359.9° | | |
| | Resolution | 0.1° | | |
| | Accuracy | ±1° @45~65HZ | | |
| Current OC Fold Mode | Range | 0.1A | | |
| | Resolution | 2.0% of setting + 2.0%F.S. | | |
| | Response Time | <1400ms | | |
| Frequency | Range | 15~1000HZ Full Range Adjust | | |
| | Resolution | 0.1Hz at 15.0~99.9Hz, 1Hz at 100~1000Hz | | |
| | Accuracy | 0.03% of setting | | |
| Voltage(DC) | Range | 0~424Vdc, 212V/424V/Auto | | |
| | Resolution | 0.1V | | |
| | Accuracy | 0.3% of setting + 0.8%F.S, at Voltage >3V | | |
| Max.Current(L/H Range)(Total) | 0~150V(L) | L 58.68A | L 88.02A | L 117.36A |
| | 0~300V(H) | H 29.34A | H 44.01A | H 58.68A |
| Ripple & Noise(r.m.s) | | L <1000mVrms @ Bandwidth 20HZ to 1MHZ H <1500mVrms @ Bandwidth 20HZ to 1MHZ | | |
| Ripple & Noise(Peak) | | <4000mVp-p @ Bandwidth 20HZ to 1MHZ | | |
| Other Parameters | | | | |
| Total Harmonic Distortion(THD) | | <0.5% (Resistive Load) at 15.0~70.0Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1% (Resistive Load) at 70.1~500Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range <1.5% (Resistive Load) at 501~1000Hz and output voltage within the 80~140VAC at Low Range or the 160~280VAC at High Range | | |
| Crest Factor(CF) | | ≤4 | | |
| Load Regulation | | ± 0.5%F.S. @15~100HZ (Resistive Load) ± 0.8%F.S. @ Others Freq (Resistive Load) | | |
| Line Regulation | | ± 0.1V | | |
| Programmable Output Impedance | | Not Support | | |
| Harmonic & Interharmonics Simulation | | Not Support | | |
| Measurent(Master) | | | | |
| Voltage | Range | AC 0~300VAC DC 0~424VDC | | |
| | Resolution | 0.1V | | |
| | Accuracy | AC 0.2% of setting + 0.4%F.S. (Notes: Vpeak: 0.6% of setting+1%F.S.) DC 0.3% of setting + 0.4%F.S. | | |
| Frequency | Range | 15~1000HZ | | |
| | Resolution | 0.1Hz(15.0~99.9Hz), 1Hz(100~1000Hz) | | |
| | Accuracy | 0.1% of setting | | |
| Current(r.m.s) | Range | H 0.3A~46A | | |
| | | M 0.2A~20A | | |
| | | L 0.1A~5A | | |
| | | mA 0.02~1.5A | | |
| | Resolution | 0.01A | | |
| Accuracy | 0.4%+1.0%F.S | | | |

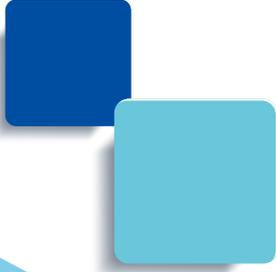
SPS-300 Series AC Power Supply System

| MODEL | | SPS300VAC10000W-4-17 | SPS300VAC15000W-4-17 | SPS300VAC20000W-4-21 |
|---------------------------------------|----------------------|--|-------------------------|-----------------------|
| Current(Peak) | Range | 0.05A~188A | | |
| | Resolution | 0.01A | | |
| | Accuracy | 0.4%+1.5%F.S. | | |
| Power | Range | 0~5100W | | |
| | Resolution | 0.1W | | |
| | Accuracy | 0.4% of setting +1%F.S. at PF>0.2, Voltage >5V | | |
| Power Apparent (VA) | Range | 0~5100VA | | |
| | Resolution | 0.1VA | | |
| | Accuracy | Voltage * I _{rms} , Calculated value | | |
| Power Resistive (VAR) | Range | 0~5100VAR | | |
| | Resolution | 0.1VAR | | |
| | Accuracy | $\sqrt{(VA)^2 - (W)^2}$, Calculated value | | |
| Power Factor (PF) | Range | 0.00~1.00 | | |
| | Resolution | 0.01 | | |
| | Accuracy | W/VA, Calculated value | | |
| Harmonic | | Not Support | | |
| Σ Current | Range ^[1] | H 0.3A~82.8A | H 0.3A~124.2A | H 0.3A~165.6A |
| | | M 0.2A~36A | M 0.2A~54A | M 0.2A~72A |
| | | L 0.1A~9A | L 0.1A~13.5A | L 0.1A~18A |
| | | mA 0.02~2.7A | mA 0.02~4.05A | mA 0.02~5.4A |
| | Resolution | 0.01A | | |
| Accuracy | 0.4%+1.0%F.S. | | | |
| Σ Current | Range ^[1] | 0~9180W | 0~13770W | 0~18360W |
| | Resolution | 0.1W | | |
| | Accuracy | 0.4% of setting +0.3%F.S at PF >0.2, Voltage > 5V | | |
| Extra Function | | | | |
| Remote Sense | Range | 5V(rms), Max. Total power less than rated power | | |
| Slew Rate | Range | AC Voltage 0.001~1200.000V/ms and Disable | | |
| | | DC Voltage 0.001~1000.000V/ms and Disable | | |
| | | Frequency 0.001~1600.000Hz/ms and Disable | | |
| Transient Generator(only for 15-70HZ) | Range | Trans-Start : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | |
| | | Trans-Volt : -212V~+212V(L), -424V~+424V(H), Resolution : 0.1V | | |
| | | Trans-Time : 0.0~66.5ms@15Hz , Resolution : 0.1ms | | |
| | | Trans-Cycle : 0~9999, Constant | | |
| Calibration ^[2] | | Firmware-based calibration through the digital interface or front panel | | |
| Graphic Display | | 4.3" Color touch LCD | | |
| Operation Key Feature | | Soft key, Numeric key, Rotary Knob, USB port for transfer and upgrading firmware | | |
| Rack mount Handles | | Yes | | |
| FAN | | Temperature Control | | |
| Protection Circuits | | OCP, OVP, OPP, OTP, RCP, PRI_UVP, PRI_OVP, PRI_OTP, PRI_OCP, USB_OCP | | |
| Interface | | Standard USB, RS-485, RS-232, LAN, GPIB is Optional | | |
| Environment | | | | |
| Operating Temperature | | 0°C~40°C | | |
| Storage Temperature | | -40°C~85°C | | |
| Fan Noise | | 55dB Min; 76dB Max. | 56.8dB Min; 77.8dB Max. | 58dB Min; 79dB Max. |
| Altitude | | 2000m | | |
| Relative Humidity | | 5%~95%, non-condensing | | |
| Temperature Coefficient | | 100ppm/°C at Voltage, 300ppm/°C at Current, 100ppm/°C at Frequency | | |
| Mechanical | | | | |
| Dimensions(WxHxD) | | 560.0x754.0x700.0 mm | 560.0x754.0x700.0 mm | 560.0x932.0x700.0 mm |
| Package Dimensions(W xH xD) | | 680.0x1146.0x820.0 mm | 680.0x1146.0x820.0 mm | 680.0x1297.0x820.0 mm |
| Unit Weight | | 128.0kg | 157.0kg | 224.0kg |
| Shipping Weight | | 163.0kg | 195.0kg | 265kg |
| Regulatory Compliance | | | | |
| CE Mark | | Installation Overvoltage Category II; Class II equipment; indoor use only. | | |

[1]In parallel mode, the amount needed to be reduced to 90 %

[2]Calibration function only available for single unit.

All specifications are subject to change without notice.



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