## Programmable AC/DC Power Supply



## APS-1102A

CE USB PC Labriew Driver 1/0 RS-232

## FEATURES

- \* 5.7"Large LCD Display
- \* Output Capacity : 750VA (for AC 100V Input)/1kVA (for AC 200V Input)
- \* Output Modes : AC and AC+DC Combined With any of the Four Signal Sources
- \* Signal Sources : Internal (INT), External (EXT), Internal + External(ADD) and Synchronisation (SYNC)
- \* Arbitrary Waveform Power Output
- \* Power Amplifier of External Signal
- \* Measurement Functions : Voltage, Current, Power, Frequency, Power Factor, CF, and Harmonic Current
- \* Capacitor Input Load Supported
- \* Sequence Function Allows Programming of Output Patterns
- \* Limiter Function (Upper/Lower Limits Function)
- \* 30 Sets of SAVE/RECALL Memory
- \* Output On/Off Switch
- \* USB (USBTMC) and RS-232 Standard for Remote Control

APS-1102A is not only a precision AC/DC power supply, but also a powerful analyzer, containing abundant features for the testing and characteristic analysis of power supplies, electronic devices, components and modules. In addition to AC/DC power, APS-1102A is fully programmable to simulate different power outputs. Sequences can be created using arbitrary waveforms as well as voltage or frequency sweeps. Output is divided into two main operation modes: AC and AC+DC. Each mode can be combined with four signal source modes: internal (INT), external (EXT), internal + external (ADD) and external synchronization (SYNC) to provide flexible power settings. Voltage, current, power, frequency, load power factor, load crest factor and harmonic current output can be monitored in real-time. Even Inrush Current can easily be measured during the power-up of capacitive loads. All parameters and values as well as measurement results are displayed simultaneously on the 5.7 inch LCD screen. APS-1102A includes multi functional easy-to-use software that can be used with a USB or RS-232 interface. The software is used to remotely control panel settings, and to create and edit sequences and arbitrary waveforms. APS-1102A also has a universal power outlet on the front that is suitable for most countries as well as output terminal on the rear panel.

SPECIFICATIONS			
MAXIMUM OUTPUT CAPAC	TTY		
AC Input (100 ~ 180V)	750VA		
Input (180 ~ 250V)	1000VA		
DC Input (100 ~ 180V)	750W		
Input (180 ~ 250V)	1000W		
OUTPUT VOLTAGE			
AC 100V	0.0V ~ 155.0Vrms		
200V	0.0V ~ 310.0Vrms		
DC 100V	-220.0V~+220.0V		
200V	-440.0V~+440.0V		
OUTPUT MAX. CURRENT	Incaran		
AC 100V	10A		
200V	5A		
DC 100V	10A		
200V	5A		
OUTPUT MAXIMUM PEAK	CURRENTS		
100V	40Apk		
200V	20Apk		
FREQUENCY			
Setting Range	1.0Hz ~ 550.0Hz		
Setting Accuracy	±0.01% of set (1.0Hz~550.0Hz, 23±5°C)		
WAVEFORM			
SINE WAVE, SQUARE WAVE,	When signal source mode	is INT and AI	DD mode only
ARBITRARY WAVE			
(Up To 16 Types Can Be Saved)			
<b>Output Voltage Distortion</b>	0.5% MAX(50Hz/60Hz), $\pm$ 50% or higher of the rated output voltage,		
Rate	the maximum current or lo	ower ; THD+N	1
LINE VOLTAGE REGULATIO			
0.2% MAXIMUM	Power input voltage 100V/120V/230V, no load ,rated output		
	Power input voltage 100V/	120V/230V, n	o load ,rated output
LOAD VOLTAGE REGULATION	Power input voltage 100V/	120V/230V, n	o load ,rated output
LOAD VOLTAGE REGULATION 0.5% MAXIMUM	Power input voltage 100V/ At output terminal under r		
0.5% MAXIMUM			
0.5% MAXIMUM MEASUREMENT	At output terminal under r	no load and ra	ted resistance load
0.5% MAXIMUM MEASUREMENT Frequency Counter	At output terminal under r	no load and ra	ted resistance load
0.5% MAXIMUM MEASUREMENT	At output terminal under r RANGE 1.0 ~ 550.0 Hz	no load and ra	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C
0.5% MAXIMUM MEASUREMENT Frequency Counter	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz	RESOLUTION	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5℃ ±(0.5 % of rdg+0.3Vrms); at 23±5℃
0.5% MAXIMUM MEASUREMENT Frequency Counter	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At DC 40Hz~550Hz	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5℃ ±(0.5 % of rdg+0.3Vrms); at 23±5℃ ±(0.5 % of rdg+0.6Vrms); at 23±5℃
0.5% MAXIMUM MEASUREMENT Frequency Counter	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C ±(0.5 % of rdg+0.3Vrms); at 23±5°C ±(0.5 % of rdg+0.6Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC)	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C ±(0.5 % of rdg+0.3Vrms); at 23±5°C ±(0.5 % of rdg+0.6Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C
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0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC)	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At 45Hz~65Hz Full Scale 15.00Arms	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C ±(0.5 % of rdg+0.3Vrms); at 23±5°C ±(0.5 % of rdg+0.6Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C ±(0.7 % of rdg+1.8Vrms); at 23±5°C
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC)	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At 45Hz~65Hz Full Scale 15.00Arms At DC 40Hz~550Hz	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5° ±(0.5 % of rdg+0.3Vrms); at 23±5° ±(0.7 % of rdg+0.6Vrms); at 23±5° ±(0.7 % of rdg+0.9Vrms); at 23±5° ±(0.7 % of rdg+1.8Vrms); at 23±5° ±0.5% of rdg+0.04Arms; at 23±5°
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC) RMS Amp-Meter(AC+DC)	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms At DC 40Hz~550Hz Full Scale 100V:500.0Vrms At 45Hz~65Hz Full Scale 15.00Arms At DC 40Hz~550Hz Full Scale 15.00Arms	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C ±(0.5 % of rdg+0.3Vrms); at 23±5°C ±(0.7 % of rdg+0.6Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C ±(0.7 % of rdg+0.04Arms; at 23±5°C ±0.5% of rdg+0.04Arms; at 23±5°C
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC)	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms At DC 40Hz~550Hz Full Scale 100V:500.0Vrms At 45Hz~65Hz Full Scale 15.00Arms At DC 40Hz~550Hz	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5° ±(0.5 % of rdg+0.3Vrms); at 23±5° ±(0.7 % of rdg+0.6Vrms); at 23±5° ±(0.7 % of rdg+0.9Vrms); at 23±5° ±(0.7 % of rdg+0.04Vrms); at 23±5° ±0.5% of rdg+0.04Arms; at 23±5° ±0.7% of rdg+0.08Arms; at 23±5° Output Current is 5%~100% of the
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC) RMS Amp-Meter(AC+DC)	At output terminal under n RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms At 45Hz~65Hz Full Scale 15.00Arms At DC 40Hz~550Hz Full Scale 15.00Arms At 45Hz~65Hz	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.01Arms 0.01Arms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5° ±(0.5 % of rdg+0.3Vrms); at 23±5° ±(0.5 % of rdg+0.6Vrms); at 23±5° ±(0.7 % of rdg+0.9Vrms); at 23±5° ±(0.7 % of rdg+0.04Arms; at 23±5° ±0.5% of rdg+0.04Arms; at 23±5° ±0.7% of rdg+0.08Arms; at 23±5° Output Current is 5%~100% of the Maximum Current
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC) RMS Amp-Meter(AC+DC)	At output terminal under n RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms At 45Hz~65Hz Full Scale 15.00Arms At 45Hz~65Hz Full Scale 15.00Arms At 45Hz~65Hz Full Scale 1200W	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C ±(0.5 % of rdg+0.3Vrms); at 23±5°C ±(0.7 % of rdg+0.6Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C ±(0.7 % of rdg+0.04Arms; at 23±5°C ±0.5% of rdg+0.04Arms; at 23±5°C ±0.7% of rdg+0.08Arms; at 23±5°C Output Current is 5%~100% of the
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC) RMS Amp-Meter(AC+DC)	At output terminal under r RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms At 45Hz~65Hz Full Scale 15.00Arms At 45Hz~65Hz Full Scale 15.00Arms At 45Hz~65Hz Full Scale 1200W At DC	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.01Arms 0.01Arms 1W	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C ±(0.5 % of rdg+0.3Vrms); at 23±5°C ±(0.7 % of rdg+0.6Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C ±0.5% of rdg+0.04Arms; at 23±5°C ±0.7% of rdg+0.08Arms; at 23±5°C 0utput Current is 5%~100% of the Maximum Current ±2% of rdg+1W; at 23±5°C
0.5% MAXIMUM MEASUREMENT Frequency Counter RMS Volt-Meter(AC+DC) RMS Amp-Meter(AC+DC)	At output terminal under n RANGE 1.0 ~ 550.0 Hz At 45Hz~65Hz Full Scale 100V:250.0Vrms Full Scale 200V:500.0Vrms At DC 40Hz~550Hz Full Scale 100V:250.0Vrms At 45Hz~65Hz Full Scale 15.00Arms At 45Hz~65Hz Full Scale 15.00Arms At 45Hz~65Hz Full Scale 1200W	RESOLUTION 0.1Hz 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.1Vrms 0.01Arms 0.01Arms	ted resistance load ACCURACY 0.01 % of set (1.0Hz~550.0Hz,23±5°C ±(0.5 % of rdg+0.3Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C ±(0.7 % of rdg+0.9Vrms); at 23±5°C ±(0.7 % of rdg+0.04Arms; at 23±5°C ±0.5% of rdg+0.04Arms; at 23±5°C ±0.7% of rdg+0.08Arms; at 23±5°C Output Current is 5%~100% of the Maximum Current
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