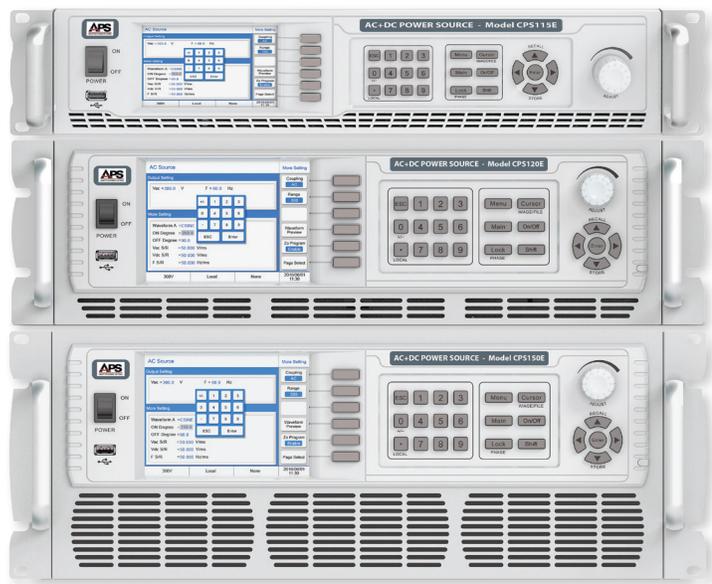




CPS 100 Series

Single-Phase AC & DC Power Source

600 VA/W to 5000 VA/W



CPS 100 Series: Designed for Advanced Testing of Low Power Applications

The CPS100 Series is a powerful yet cost effective single phase AC and DC power programmable power source.

Designed using state-of-the-art Digital Signal Processing, these power sources support a wide range of AC and DC tests with **excellent performance and reliability**, the CPS100 units are versatile with a wide range of capabilities.

Available in seven power levels from 600 VA to 5000 VA, a wide range of commercial, industrial and aviation test applications are covered.



- Models up to 1500VA can operate from 100V to 265V universal AC input power.
- Models of 2000VA and higher can operate from single phase 230V or split phase 208VAC.

Key Specifications

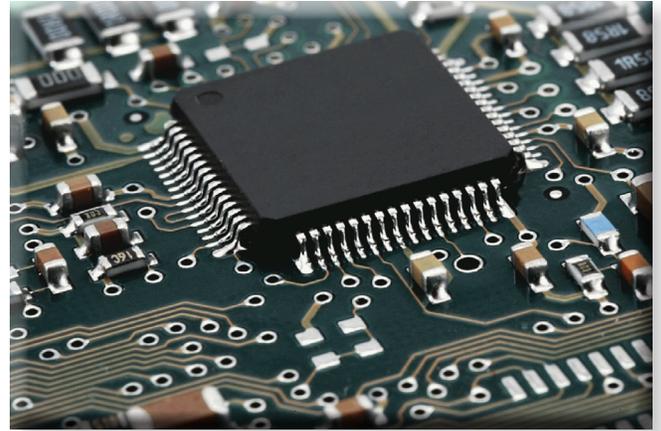
- 600VA/W TO 5000VA/W
- Dual Voltage Ranges (High/Low)
 - AC: 0 - 150 V / 0 - 320 V; DC: 0 - 212 V / 0 - 424 V
 - 15 - 1000 Hz (S); 15 - 1200 Hz (E)
- Programmable AC, DC or AC+DC
- Constant Power Voltage Range from 72% to F.S.
- Programmable Frequency & Start/Stop Phase Angle
- Programmable Current & Power Limit Protection
- Intuitive Color Touch Screen
- Total of 15 Measurement Functions in One Screen
- Low Voltage Distortion
- High Crest Factor and Peak Current Capability
- List, Pulse and Step Mode Transient Capability for Line Distortion Simulation
- Sine Wave, Harmonics Library, User Waveforms
- USB, RS232, RS485 Interfaces Standard
- LAN or GPIB Options
- CE Mark

Model:	CPS106	CPS110	CPS115	CPS120	CPS130	CPS140	CPS150
Power:	600W	1000W	1500W	2000W	3000W	4000W	5000W
0-150Vac	4.8 A	8 A	13.8 A	16 A	27.6 A	32 A	46 A
0- 300Vac	2.4 A	4 A	6.9 A				
0- 320Vac				8 A	13.8 A	16 A	23 A
Height	2U			3U	4U		

Value & Performance with Modern Technology

The **CPS100 Series** precision power source uses state of the art digital signal processing and programmable logic technology to implement a digital power conversion topology that combines high efficiency with a rich feature set and excellent specifications.

Packaged in a compact, standard 19" rack mount chassis powerful functions are easily accessible through an easy to use, color touch screen based user interface from the front panel or by sending industry standard SCPI commands over one of several standard digital control interfaces.



Test a Wide Range of Applications

With power levels from 600VA to 5000VA per unit and paralleling capability, a wide range of present and future power demands can be met. **Put the CPS100 Series to the test!**

Electric Vehicle Charging



Military Applications

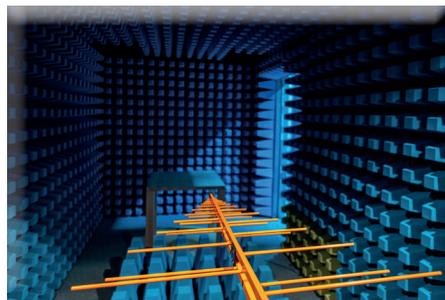
Automated Test Equipment



Commercial Aviation 400Hz - 800Hz

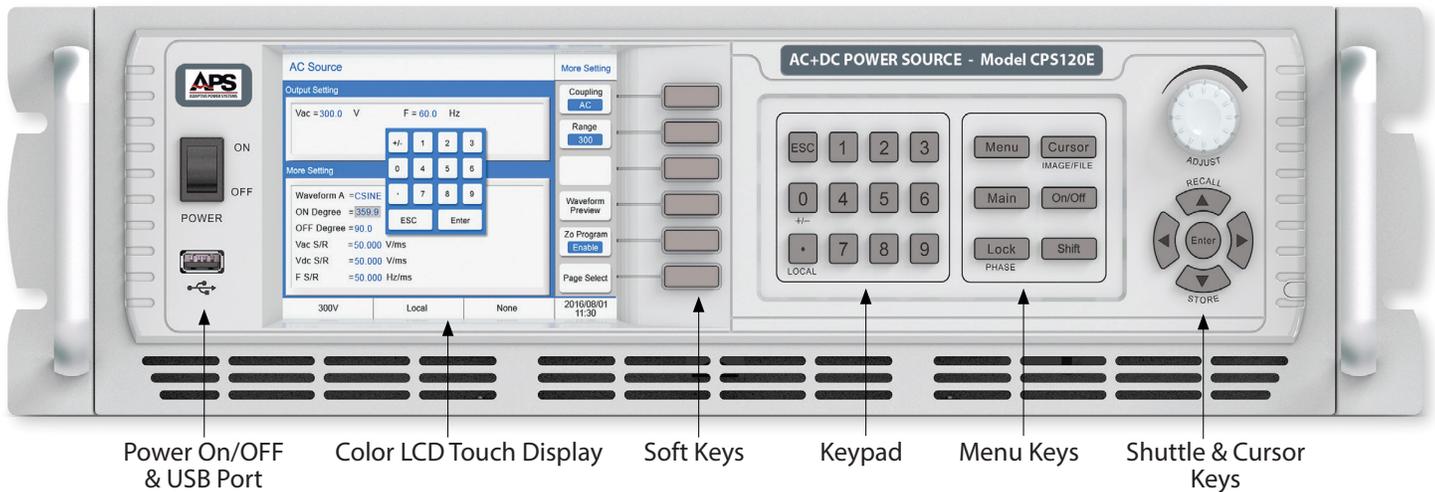


Research & Development



EMC Compliance Testing

Easy to Use Interface



All CPS100 Series models share an intuitive user interface using a combination of touch, soft keys, decimal entry pad and rotary shuttle knob. This results in an easy to use power source for novice and experienced users alike.

The large color LCD allows visualization of waveforms as well as a wide assortment of precision AC and DC measurements.

Mode and Voltage Range Selection

AC SOURCE			More Setting
OUTPUT SETTING Vac = 125.0 V F = 60.00 Hz			Coupling <input type="radio"/> AC
MORE SETTING Waveform A = SINE ON Degree = 90.0 ° OFF Degree = Disable ° Vac S/R = Disable V/ms Vdc S/R = Disable V/ms F S/R = Disable Hz/ms			Range <input type="radio"/> 150 <input type="radio"/> 300 <input type="radio"/> Auto
300V	Local	SINE	20160801 11:30

Select AC, DC or AC+DC Coupling and V Range 150, 300 or AUTO

AC MODE

AC SOURCE			Menu
OUTPUT SETTING Vac = 125.0 V F = 60.00 Hz			<input type="button" value="Config"/>
MEASUREMENT V = 124.99 V I = 15.97 A P = 1998.9 W Vac = 124.98 V Iac = 15.96 A PF = 1.00 Vdc = 0.00 V Idc = 0.02 A VA = 1997.2 VA Vpk = -177.30V Ipk = 23.10 A CF = 1.44 VAR = 0.0 Var Is = 0.30 A F = 59.99 Hz			<input type="button" value="LCD Setting"/> <input type="button" value="Calibration"/> <input type="button" value="Other"/> <input type="button" value="Page Select"/>
150V	Local	SINE	2017/10/31 17:19

AC Voltage & Frequency Setting and Measurements

DC MODE

AC SOURCE			Main Page
OUTPUT SETTING Vdc = 212.0 V			<input type="button" value="Setting"/> <input type="button" value="Menu"/>
MEASUREMENT V = 211.75 V I = 9.43 A P = 2001.3 W Vac = 0.00 V Iac = 1.03 A PF = 1.00 Vdc = 211.75 V Idc = 9.37 A VA = 1996.8 VA Vpk = 212.54 V Ipk = 0.43 A CF = 0.41 VAR = 0.0 Var Is = 0.32 A F = 0.00 Hz			<input type="button" value="Output Mode"/> <input type="button" value="Parallel Serial 3-Phase"/> <input type="button" value="Store/Recall"/> <input type="button" value="Lock"/>
150V	Local	SINE	2017/11/2 14:05

DC Voltage Setting and Measurements

AC+DC MODE

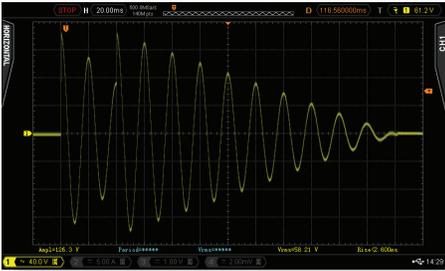
AC SOURCE			Menu
OUTPUT SETTING Vac = 10.0 V F = 50.00 Hz Vdc = 50.0 V			<input type="button" value="Config"/>
MEASUREMENT V = 50.92 V I = 2.03 A P = 104.5 W Vac = 9.98 V Iac = 0.47 A PF = 1.00 Vdc = 49.94 V Idc = 1.97 A VA = 103.3 VA Vpk = 64.48 V Ipk = 0.82 A CF = 1.59 VAR = 0.0 Var Is = 0.26 A F = 50.00 Hz			<input type="button" value="LCD Setting"/> <input type="button" value="Calibration"/> <input type="button" value="Other"/> <input type="button" value="Page Select"/>
150V	Local	SINE	2017/10/31 17:04

AC+DC Voltage, Frequency Setting and Measurements

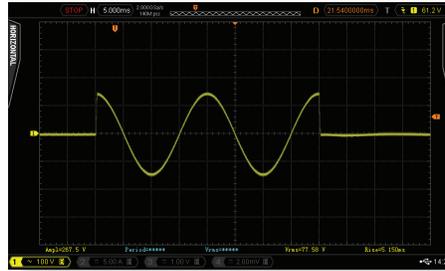
Transient Programming - Line Distortion Simulation

The powerful output transient programmability offers LIST, STEP and PULSE modes to change voltage and or frequency using precise ramp and dwell times. This allows a wide range of Line Distortion conditions to be

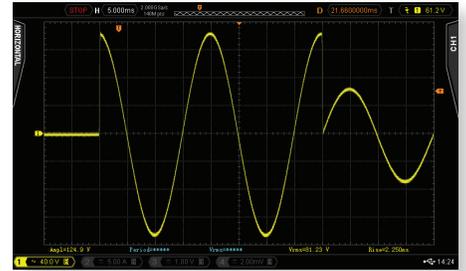
simulated with the CPS100 power sources for either AC or DC power applications. For AC applications, start and stop phase angles can be programmed for each transient step as needed. Below are some AC output samples for each of the three transient modes.



TRANSIENT LIST MODE



TRANSIENT PULSE MODE

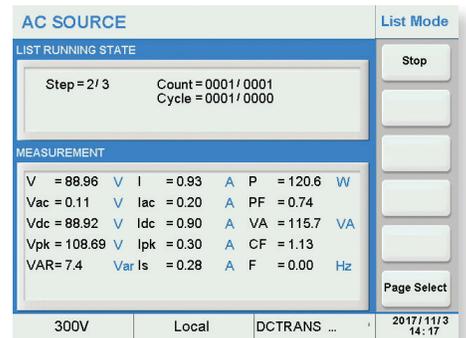


TRANSIENT STEP MODE

Transient programming is easily accomplished from the front panel. Multiple transient list can be saved to internal memory or external USB thumb drive. The LIST Selection screen and Transient RUN screen are shown to the left. During execution, the active step in each list and total steps is shown and counted down as the transient progresses.



TRANSIENT LIST MODE



TRANSIENT PULSE MODE

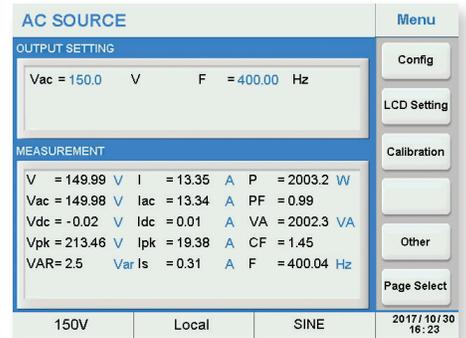
Voltage & Frequency Slew Rates

Voltage slew rates are fully programmable for both AC and DC settings. Expressed in Volts per msec, this allows controlled voltage ramps to limit inrush current or voltage when testing specific types of loads. The same is true for frequency changes where the slew rate can be set in Hz/ms.

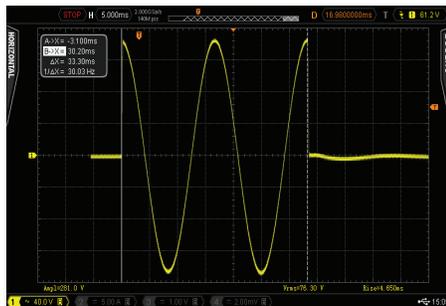


Integrated Power Meter

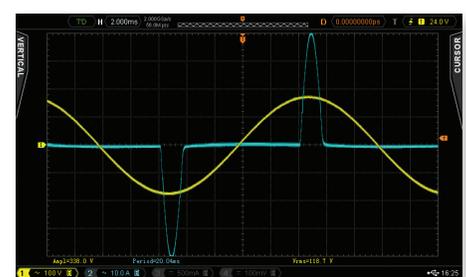
The bottom portion of each setting screen displays up to 15 measurements simultaneously. The order in which these are displayed can be rearranged if needed for best viewing. This eliminates the need for additional metering equipment saving both time and cost.



AC voltage changes can be set to occur at any specific phase angle from 0.0° through 359.9° for precise event occurrence. The example here shows a 100Vac two cycle event started at 90° and terminated at 90° after two cycles.



The CPS100 Series supports current crest factors up to 5 or 6 to 1. This allows proper evaluation of inrush current behavior for a wide range of real-world loads that don't have adequate inrush limiter design or non power factor corrected AC inputs.



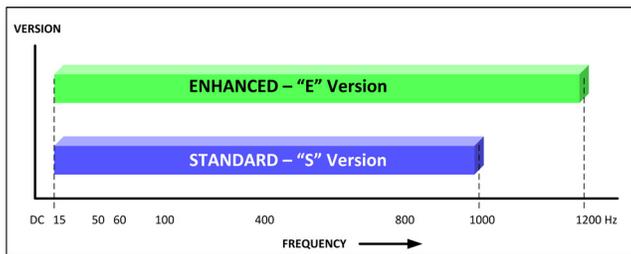
Enhanced Version CPS100E MODELS

The Enhanced (E Suffix) CPS100 models offer an extensive list of additional features and capabilities compared. For the most demanding AC or DC power R&D or test applications, the E models represent an excellent value proposition compared to more expensive offerings from premium brands.

- IEC 61000-4-11, 4-13, 4-14 and 4-28 Tests
- Programmable L and R output impedance
- Pass/Fail Test Mode
- Harmonic & THD Measurements for V and I
- TRIAC dimmer mode

Extended Frequency Range

The ENHANCED models (E suffix) offer an extended frequency range to 1200Hz and improved bandwidth for enhanced harmonic waveform synthesis.

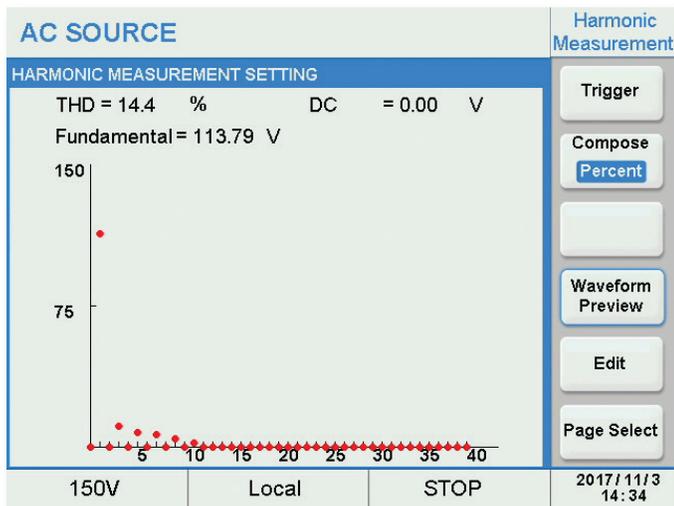


Harmonics & Distortion Measurements

For industrial and commercial application operating at 50Hz or 60Hz utility frequencies, the Enhanced versions of the CPS100 Series support harmonics measurements up to the 40th harmonic. Individual harmonic amplitudes and phase angles with respect to the fundamental

can be display in absolute or relative value as either a visual bar chart or a numeric table as shown below. Harmonic measurements apply to Voltage and Current and include calculation of total harmonic distortion (THD) in % of fundamental.

E VERSION



Harmonic Measurements Bar Chart

N	%	N	%	N	%
2	0.0	15	0.0	28	0.0
3	10.0	16	0.0	29	0.0
4	0.0	17	0.0	30	0.0
5	7.1	18	0.0	31	0.0
6	0.0	19	0.0	32	0.0
7	6.0	20	0.0	33	0.0
8	0.0	21	0.0	34	0.0
9	3.9	22	0.0	35	0.0
10	0.0	23	0.0	36	0.0
11	2.0	24	0.0	37	0.0
12	0.0	25	0.0	38	0.0
13	0.0	26	0.0	39	0.0
14	0.0	27	0.0	40	0.0

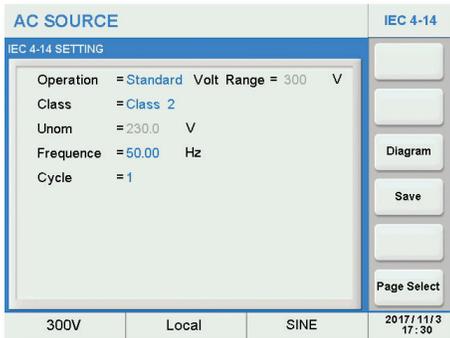
Harmonic Measurements Table Data

MODEL FEATURES COMPARISON

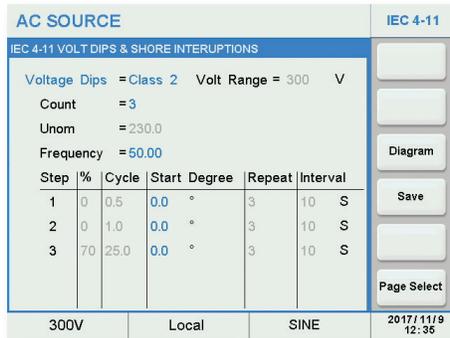
FEATURES	STANDARD (S)	ENHANCED (E)
AC Mode	●	●
DC Mode	●	●
AC+DC Mode	●	●
Frequency Range	15-1000Hz	15-1200Hz
Dual AC Voltage Ranges 150/300 Vac	●	●
Dual DC Voltage Ranges 212/425 Vdc	●	●
Harmonic Waveforms Library (fixed)	●	●
Waveform Synthesis from Front Panel	●	●
Transient List Mode	●	●
Measurements	●	●
Harmonic Waveform Synthesis		●
Harmonic Analysis & THD Measurements		●
Programmable Impedance		●
IEC411	●	●
IEC413		●
IEC414		●
IEC428		●
Triac Function		●
LAN	option	option
USB	●	●
GPIB	option	option
RS232	●	●
RS485	●	●

Feature Comparison Table Standard versus Enhanced version models

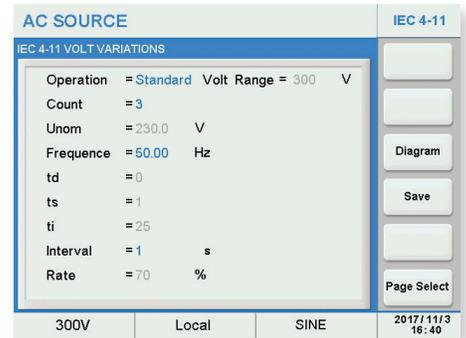
IEC 61000-4 Power Immunity Tests



IEC 61000-4-11 Voltage Dip Test Screen - Class 2



IEC 61000-4-11 Voltage Dips Sequence



IEC 61000-4-11 Voltage Variations Setup

The ENHANCED models (E suffix) in the CPS100 Series are equipped with a complete set of IEC 61000-4 power compliance test functions. These are all related to power line immunity requirements for conformance to EU regulations for CE marking of products. This allows the user run these tests from the front panel of the power source.

Included Test Standards are:

- IEC 61000-4-11 Voltage Dips, Interrupts and Variations¹
- IEC 61000-4-13 Harmonics and Inter harmonics
- IEC 61000-4-14 Voltage Fluctuations
- IEC 61000-4-28 Frequency Variations

Note 1: Pre-compliance only

E VERSION



IEC 61000-4-11 1/2 Cycle Voltage Dip @ 90°



IEC 61000-4-13 Flattop Curve Test

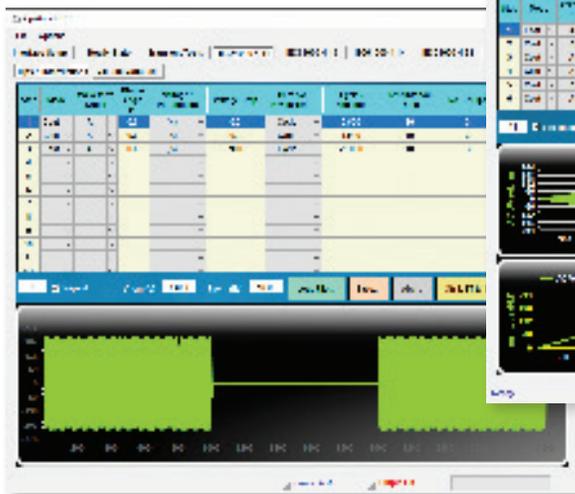


IEC 61000-4-14 Voltage Fluctuations Test

Graphical User Interface for Windows

A Windows 10 compatible GUI control program can be downloaded to control any CPS Series models using one of its communication interfaces. The CpsGui provides full control over all output settings and displays all available measurements in numeric form as well as in a set of strip charts. Transient programming is made easy using an Excel type data entry grid.

Also included are test screens for IEC 61000-4-11, IEC 61000-4-13, IEC 61000-4-14 and IEC 61000-4-28.



CpsGui IEC 61000-4-11 Voltage Dips & Interruptions



CpsGui Transient Programming



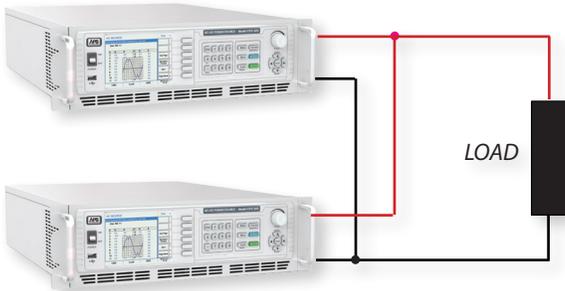
CpsGui Control & Measurements

Versatile Multi-Configurations¹

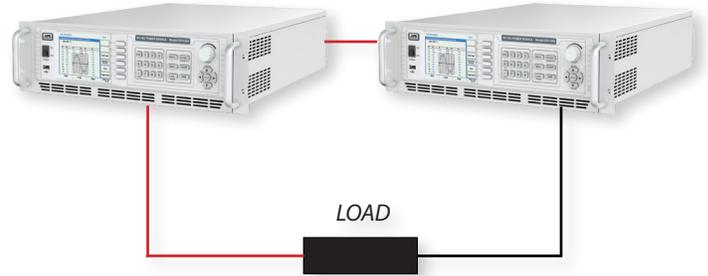
When the need for more power, higher voltage or three phase arises, configure two or more CPS100 Power Sources in either a parallel, series or multi-phase arrangement using the optional Master/Slave bus. This master/slave control mode is supported by all CPS100 models and broadens the use of these power sources to a wider spectrum of applications than just a single unit does.

The master/slave bus connects the master unit to two or more slaves and allows programming and read-back to be controlled from the master unit. The user can select the desired configuration mode on the master unit as Series, Parallel or Three Phase mode. All phase synchronization and scaling is accomplished transparently.

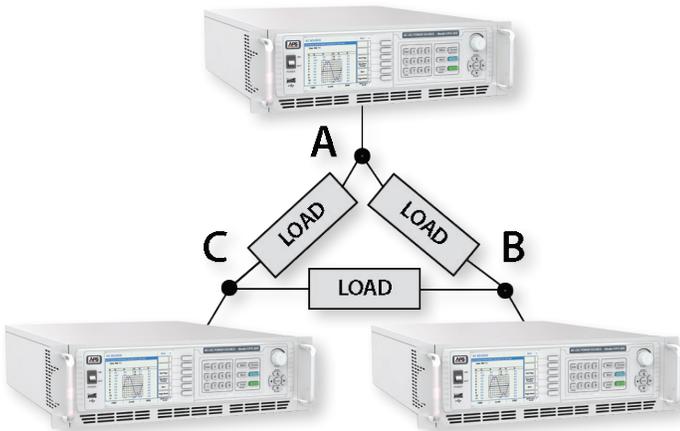
Parallel Mode: More Current



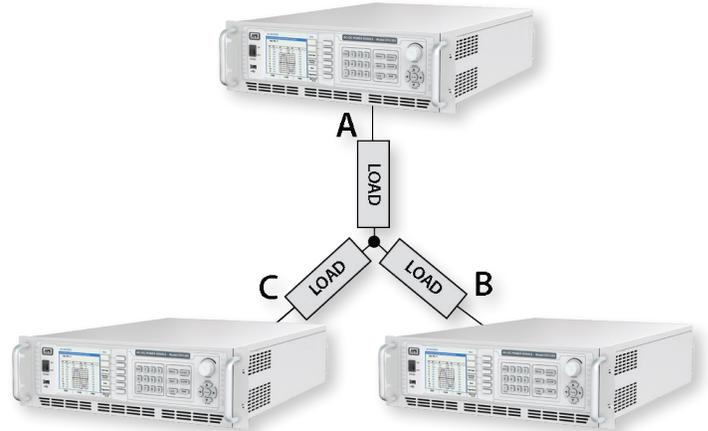
Series Mode: More Voltage



Three-Phase Delta (3-WIRE) Loads



Three-Phase WYE (4-WIRE) Loads



Note 1: Multi-unit operation requires the -AUX Option.

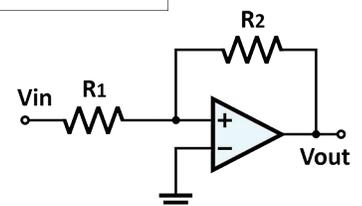
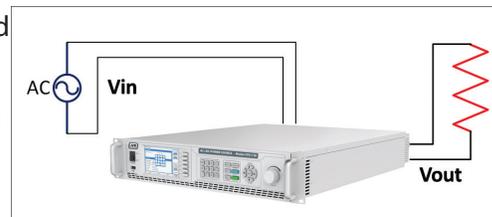
External Analog Input Option

When equipped with the -EXT (CPS106 ~CPS115) or -AUX (CPS120~CPS150) option, the power source can be controlled using an analog input signal or a DC voltage reference. This analog input BNC has three selectable modes of operation:

- **ANALOG:** External AC or DC input signal is amplified and summed with internal voltage setting.
- **RMS:** External DC voltage input is used to determine AC RMS output level.
- **SET:** Output voltage is linearly proportional to external AC or DC input voltage.

The external analog input must be Enabled for use. Input voltage range is $\pm 10\text{Vpk}$ or 0-10Vdc.

The BNC input can also be configured as a SYNC input to synchronize the power source to an external clock.



TECHNICAL SPECIFICATIONS

MODEL		CPS106	CPS110	CPS115	CPS120	CPS130	CPS140	CPS150
OUTPUT POWER & CURRENT SPECIFICATIONS								
Power Rating (VA/W)		600	1000	1500	2000	3000	4000	5000
AC Current (Aac)	150V Range	5.6	9.2	13.8	16.0	27.6	32.0	46.0
	300V Range	2.8	4.6	6.9	8.0	13.8	16.0	23.0
Crest Factor		5.8 to 1		6 to 1			5 to 1	4 to 1
DC Current (Adc)	212V Range	3.96	6.5	9.76	11.3	19.6	22.6	32.6
	424V Range	1.89	3.3	4.88	5.65	9.8	11.3	16.3

MODEL		CPS106	CPS110	CPS115	CPS120	CPS130	CPS140	CPS150
INPUT VOLTAGE & CURRENT SPECIFICATIONS								
AC Input Voltage		90 - 265 Vac		100 - 265 Vac	190 - 265 Vac, Single Phase (L, N, G)			
Phases		1 Phase, 2W+G			1 Phase, 2W+G / 2 Phase L-L + G			
Line Frequency		47 - 63 Hz			47 - 63 Hz			
Max. AC Current		10 A	15 A	19 A	14 A	20 A	25 A	30 A
Input Power Factor @ F.L.		> 0.91	> 0.95	> 0.98	> 0.98	> 0.99	> 0.99	> 0.99
Efficiency @ Full Load		80 %	84 %	86 %	86 %	85 %	86 %	86 %

MODEL		CPS106 ~ 115	CPS120 ~ 150
OUTPUT SPECIFICATIONS			
Voltage Ranges	AC Low / High	0 - 150 Vac / 0 - 300 Vac 320 Vac available below 200 Hz on 2kVA to 5kVA CPS Models	
	DC Low / High	0 - 212 Vdc / 0 - 424 Vdc	
	Resolution	0.1 V	
	Accuracy	± (0.3% setting + 0.3% F.S.)	
Waveforms		S version: Sine, Square, Clipped Sine, Harmonics library E version: adds User defined Harmonics	
Frequency	Range	S Version: 15 - 1000 Hz, E Version: 15 - 1200 Hz	
	Resolution	0.1 Hz 15.0 - 99.9 Hz / 1 Hz 100 Hz - 1000 Hz / 5Hz 1001 Hz - 1200 Hz	
	Accuracy	± 0.1% of setting	± 0.03% of setting
Start/Stop Phase	Range	0 - 359.9°	
	Resolution	± 1° @ 45 - 65 Hz	
	Accuracy	±1%, 45 - 65 Hz	
Load Regulation		± 0.1% F.S. RL, DC, 15-100 Hz ± 0.5% F.S. RL, 100.1-1200 Hz	
External Voltage Sense		Remote sense, Max Vdrop 5.0V	
Line Regulation		± 0.1 V	
Harmonic Distortion (THD) (Full Resistive Load)		15-70Hz: < 0.3% @ 80-140Vac in Low Range, @ 160-280Vac in High Range	
		70.1-500Hz: < 1% @ 80-140Vac in Low Range, @ 160-280Vac in High Range	
		501-1000Hz: < 1% @ 100-140Vac in Low Range, @ 160-280Vac in High Range	
		1001-1200Hz: < 2% @ 100-140Vac in Low Range, @ 160-280Vac in High Range	

Continued in next column

OUTPUT SPECIFICATIONS (Continued)		
Ripple & Noise (rms)	L: < 700 mVrms @ 20Hz-1MHz BW	
	H: < 1100 mVrms @ 20Hz-1MHz BW	
Ripple & Noise (peak)	< 4000mVpp @ 20Hz-1MHz BW	
Voltage Rise / Fall time	< 180 usec	
Over Current Fold-back	Resolution	0.01 A
	Accuracy	± (0.5% setting + 1.0% F.S.)
	Response	< 1400 msec

MODEL	All	
PROGRAMMABLE FUNCTIONS		
Transients (Available from 15-70Hz)	Modes	List, Pulse, Step
	Parameters	AC Voltage, Frequency, DC Voltage, Current, Start Phase, Stop Phase
	Timing	Transition Time: 0.0 - 66.5 ms Resolution: 0.1 sec Transient Count: 0 - 9999
Test Mode	Pass/Fail based on Measurements	

MODEL	Enhanced (E) Versions Only	
PROGRAMMABLE IMPEDANCE		
Range	Resistance	0 Ω - 1 Ω
	Inductance	200 uH - 1 mH
HARMONICS & INTER HARMONICS		
Range	15 Hz - 2400 Hz	
Waveform Synthesis	2 - 40 Harmonics @ 50 Hz or 60 Hz	
HARMONIC & THD MEASUREMENTS		
Parameters	Voltage, Current	
Harmonic Measurements	2 - 40 Harmonics @ 50Hz or 60 Hz	
THD %	Calculated	



TECHNICAL SPECIFICATIONS (Continued...)

MODEL		CPS106	CPS110	CPS115	CPS120	CPS130	CPS140	CPS150	
CURRENT & POWER MEASUREMENTS									
Current RMS (Arms)	High Range	0.15 - 5.6 A	0.15 - 9.2 A	0.15 - 13.8 A	0.15 - 20.0 A	0.3 - 27.6 A	0.3 - 32 A	0.3 - 46 A	
	Med. Range	-	-	-	-	0.2 - 20 A	0.2 - 20 A	0.2 - 20 A	
	Low Range	0.1 - 2.8 A	0.1 - 4.6 A	0.1 - 6.9 A	0.1 - 5 A	0.1 - 5 A	0.1 - 5 A	0.1 - 5 A	
	mA Range	-	-	-	0.02 - 1.5 A	0.02 - 1.5 A	0.02 - 1.5 A	0.02 - 1.5 A	
	Resolution	0.01 A							
	Accuracy	H/M: \pm (0.4% setting + 1.0% F.S.) L/mA: \pm (0.4% setting + 1.0% F.S.)			H/M: \pm (0.4% setting + 1.5% F.S.) L/mA: \pm (0.4% setting + 1.2% F.S.)		H/M: \pm (0.4% setting + 1.0% F.S.) L/mA: \pm (0.4% setting + 1.5% F.S.)		
Peak Curr. (A)	Range	0 - 32.4 A	0 - 81.5 A	0 - 81.5 A	0 - 81.5 A	0 - 168.6 A	0.05 - 163 A	0.05 - 188 A	
	Resolution	0.01 A							
	Accuracy	H/M: \pm (0.4% setting + 1.0% F.S.) L/mA: \pm (0.4% setting + 1.0% F.S.)			H/M: \pm (0.4% setting + 0.6% F.S.) L/mA: \pm (0.4% setting + 1.0% F.S.)				
Power (Watts)	Range	0-612 W	0 - 1020 W	0 - 1530 W	0 - 2040 W	0 - 3060 W	0 - 4080 W	0 - 5100 W	
	Resolution	0.1 W							
	Accuracy	\pm (0.4% setting + 1.0% F.S.) @ PF > 0.2 and Voltage > 5.0 V							
App. Power (VA)	Range	0-612 VA	0 - 1020 VA	0 - 1530 VA	0 - 2040 VA	0 - 3060 VA	0 - 4080 VA	0 - 5100 VA	
	Resolution	0.1 VA							
	Accuracy	Calculated, $V_{rms} * I_{rms}$							
Reactive Power (VAR)	Range	0-612 VAR	0 - 1020 VAR	0 - 1530 VAR	0 - 2040 VAR	0 - 3060 VAR	0 - 4080 VAR	0 - 5100 VAR	
	Resolution	0.1 VAR							
	Accuracy	Calculated, $\sqrt{(VA^2 - W^2)}$							

MODEL		All Models
MEASUREMENT SPECIFICATIONS-V, F, P		
Voltage	AC Range	0 - 320 Vac
	DC Range	0 - 424 Vdc
	Resolution	0.1 V
	Accuracy	\pm (0.2% setting + 0.2% F.S.)
Frequency	Range	S Version: 15 - 1000 Hz, E Version: 15 - 1200 Hz
	Resolution	0.1 Hz 15.0 - 99.9 Hz 1 Hz 100 Hz - 1000 Hz 5 Hz 1001 Hz - 1200 Hz
	Accuracy	\pm 0.1% of setting
Power Factor	Range	0.00 - 1.00
	Resolution	0.01
	Accuracy	Calculated W/VA

MODEL		All Models
TEST MODE PARAMETERS		
Memories		1 through 50
Steps / Memory		1 through 9
Memory Cycling		0 - 9999, 0 = Cont., 1 = OFF
Test Limits		Frequency, Current Hi/Lo, Power Hi/Lo, App. Power Hi/Lo, PF Hi/Lo
Ramp Up or Down		0.0 - 999.9
Delay		0.5 - 999.9
Dwell		0.5 - 999.9
Step Cycles		0 - 9999, 0 = Cont., 1 = OFF
Connect		ON, OFF
Surge / Drop Voltage		ON: Start 0-20ms, Duration 0-20ms OFF: Start 0-99ms, Duration 0-99ms

MODEL	CPS106 ~ 115	CPS120 ~ 150
SYSTEM PARAMETERS		
Display	5.6" Color Touch 640 x 480	4.3" Color Touch 640 x 480
Data Entry Modes	Soft Keys, Numeric Keypad, Shuttle, USB stick	
Output Protection	OCP, OVP, OTP, RCP	
AC Input Protection	PRI-UVP, PRI_OTP, PRI_OCP	
Control Interfaces	USB, RS232, RS485 (A/B)	
Optional Interface	LAN + GPIB (Replaces Std. I/Fs)	LAN, GPIB

MODEL	CPS106	CPS110	CPS115
Option -EXT: External I/O			
DIGITAL I/O			
TTL Inputs	Output ON/OFF, KEEP OFF, RESET, RECALL SETUP 1-7 (3 bits)		
Relay Contacts	3 sets, PASS, FAIL (contact closure)		
Connector Type	20 Position dual row compression		
ANALOG			
Voltage Input	Modes: SYNC or ANALOG, RMS SET		
Connector Type	BNC		
Option -MSB: Master/Slave Bus			
Modes	Parallel	4 units max. for higher power	
	Series	2 units max. for 600V output	
	Three Phase	3 units in Delta or Wye Configuration	

MODEL	CPS120, CPS130, CPS140, CPS150	
Option -AUX: Auxiliary I/O and Master/Slave Bus		
Same as -EXT option for CPS106 ~ CPS115 but adds:		
Relay Contacts	Adds 1 set	
Includes Master/Slave Bus:		
Modes	Parallel	4 units max. for higher power
	Series	2 units max. for 600V output
	Three Phase	3 units in Delta or Wye Configuration

TECHNICAL SPECIFICATIONS (Continued...)

MODEL	CPS106	CPS110	CPS115	CPS120	CPS130	CPS140	CPS150
MECHANICAL & ENVIRONMENTAL SPECIFICATIONS							
Dimensions (W x H x D)	432 x 87 x 520 mm			432x133x520mm	432 x 177 x 520 mm		
	17" x 3.425" x 20.5"			17"x5.24"x20.5"	17" x 7" x 20.5"		
Shipping Size (W x H x D)	744 x 241 x 594 mm			597x276x694mm	597 x 321 x 694 mm		
	29.3" x 9.5" x 23.4"			23.5"x10.9"x27.3"	23.5" x 12.6" x 27.3"		
Rack Mount	Width w/Handles & Rack Ear Kit = 483 mm / 19". Shelf or L-Bracket Support Required						
Weight	Net	15.9 Kg / 35 lbs			21Kg / 47.2 lbs	29 Kg / 63.9 lbs	
	Shipping	19 Kg / 42 lbs			24.4Kg/53.8lbs	32 Kg / 70.5 lbs	
Operating Environment							
Temperature	Operating	0° to 40° C / 32° to 104° F					
	Storage	-40° to 85° C / -40° to 185° F					
Fan Cooled	Temperature controlled. Front intake rear exhaust. Fan noise 73 dBA at max. fan speed						
Temperature Coefficient	Voltage: 100ppm/°C, Current: 300ppm/°C, Frequency: 100ppm/°C						
Rel. Humidity	5% to 95% non-condensing						
Altitude	Operating	2000 m / 6550 feet					

MODEL	All Models
REGULATORY COMPLIANCE	
Emissions	CE marked per EMC Directive 2014/30/EU/EN61326-1:2013 Class A for emissions and immunity as required for CE Mark. FCC verification for conformity for CFR 74 Part 15 of FCC rules
Safety	CE marked per LVD Directive 2014/35/EU/EN61010-1, third edition as required for CE Mark
CE Mark	Installation Over voltage Category II, Pollution Degree 2, Class II Equipment, indoor use only
Isolation Voltage	3000Vac Input to Output, 1500Vac Input to Chassis
RoHS	Meets EU Directive 2011/65/EU for restriction of hazardous substances in Electrical and Electronic Equipment

MODEL FEATURES COMPARISON

FEATURES	STANDARD (S)	ENHANCED (E)
AC Mode	●	●
DC Mode	●	●
AC+DC Mode	●	●
Frequency Range	15-1000Hz	15-1200Hz
Dual AC Voltage Ranges 150/300 Vac	●	●
Dual DC Voltage Ranges 212/425 Vdc	●	●
Harmonic Waveforms Library (fixed)	●	●
Waveform Synthesis from Front Panel	●	●
Transient List Mode	●	●
Measurements	●	●
Harmonic Waveform Synthesis		●
Harmonic Analysis & THD Measurements		●
Programmable Impedance		●
IEC411	●	●
IEC413		●
IEC414		●
IEC428		●
Triac Function		●
LAN option		option
USB	●	●
GPIB option		option
RS232	●	●
RS485	●	●

Feature Comparison Table Standard versus Enhanced version models

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SHIP KIT CONTENTS

ITEMS INCLUDED	QTY
Rack mount Handles (removable)	2
Output Terminals Safety Cover	1
Input Terminals Safety Cover	1
Screws to install Rack mount Handles	12
RS232 Serial Cable, 1 meter	1
LAN Cat-5 Cable, 1 meter	1
USB Cable, 1 meter	1
Option -GPIB / LAN+GPIB, GPIB Cable	1
Option - AUX, DVI Cable	1
Option -EXT, BNC Cable	1



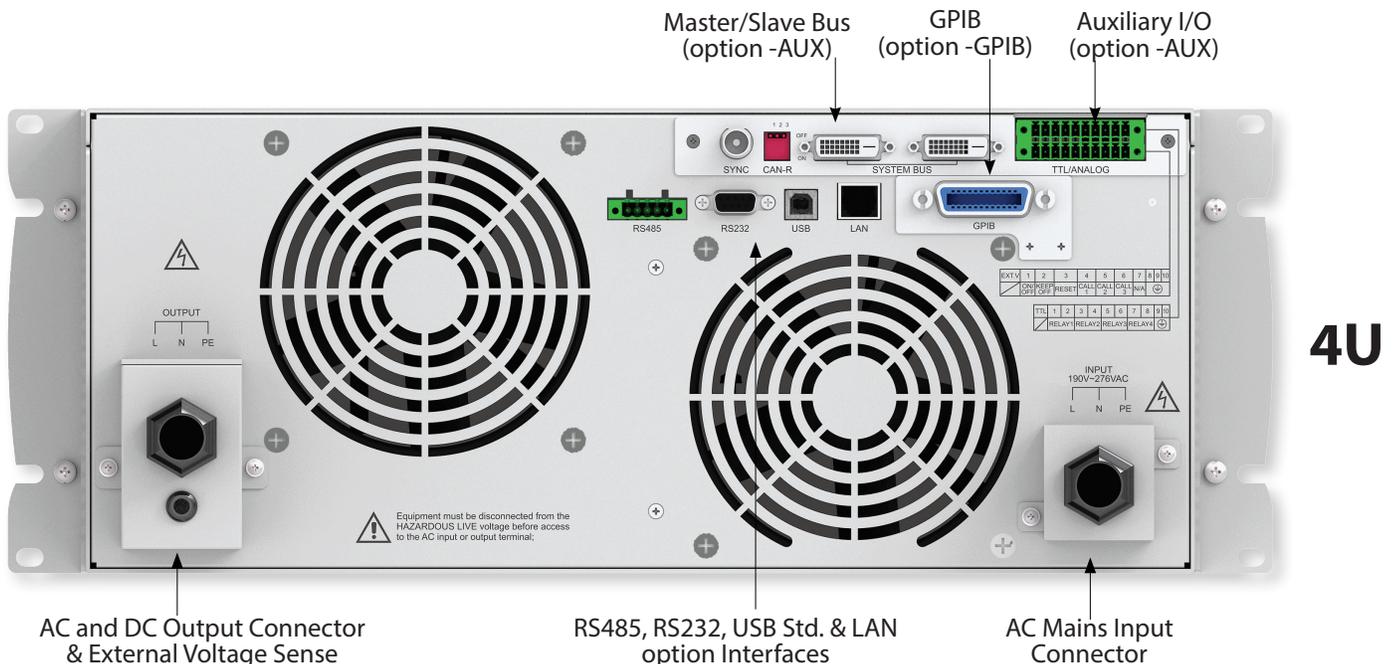
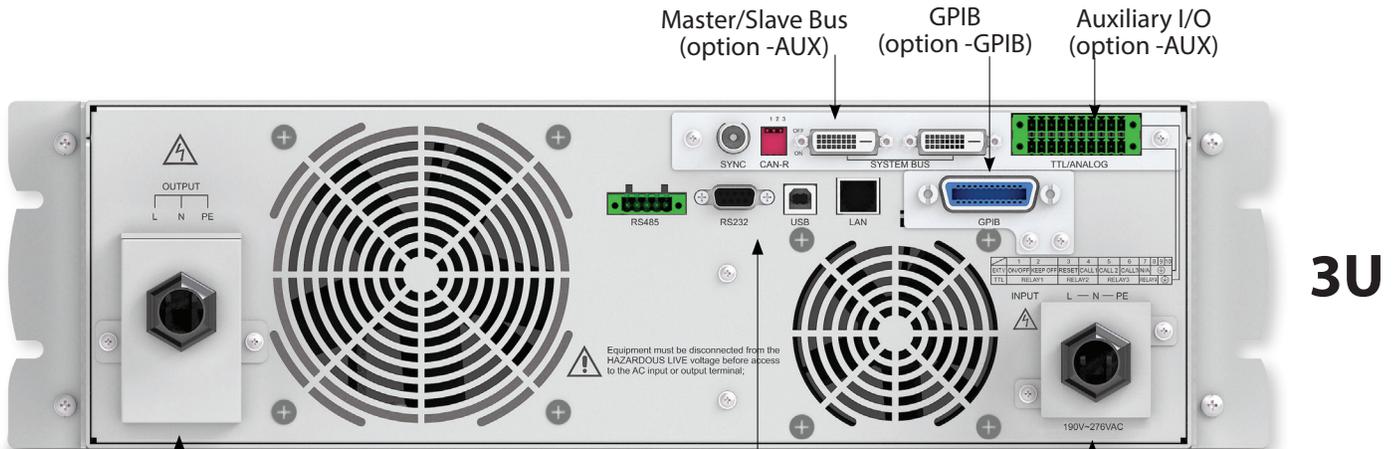
Ship Kit - Content excluding options

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REAR PANEL CONNECTORS

All input power and load connections are made at the rear panel. AC or DC output is available on the same output terminal connector. Safety covers for AC input and AC/DC output connectors are included with each unit.

Digital remote control interfaces are also located on the rear panel. Installed options provide additional connectors.



ORDERING INFORMATION

STANDARD MODELS	DESCRIPTION	AC INPUT	RACK HEIGHT
CPS106S	AC&DC Power Source, 600VA, USB/RS232/RS485	90 - 265 Vac, 1ø	2U / 3.5" / 89 mm
CPS110S	AC&DC Power Source, 1000VA, USB/RS232/RS485	90 - 265 Vac, 1ø	2U / 3.5" / 89 mm
CPS115S	AC&DC Power Source, 1500VA, USB/RS232/RS485	100 - 265 Vac, 1ø	2U / 3.5" / 89 mm
CPS120S	AC&DC Power Source, 2000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	3U / 5.25" / 133 mm
CPS130S	AC&DC Power Source, 3000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	4U / 7.0" / 178 mm
CPS140S	AC&DC Power Source, 4000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	4U / 7.0" / 178 mm
CPS150S	AC&DC Power Source, 5000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	4U / 7.0" / 178 mm

ENHANCED MODELS	DESCRIPTION	AC INPUT	RACK HEIGHT
CPS106E	AC&DC Power Source, 600VA, USB/RS232/RS485	90 - 265 Vac, 1ø	2U / 3.5" / 89 mm
CPS110E	AC&DC Power Source, 1000VA, USB/RS232/RS485	90 - 265 Vac, 1ø	2U / 3.5" / 89 mm
CPS115E	AC&DC Power Source, 1500VA, USB/RS232/RS485	100 - 265 Vac, 1ø	2U / 3.5" / 89 mm
CPS120E	AC&DC Power Source, 2000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	3U / 5.25" / 133 mm
CPS130E	AC&DC Power Source, 3000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	4U / 7.0" / 178 mm
CPS140E	AC&DC Power Source, 4000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	4U / 7.0" / 178 mm
CPS150E	AC&DC Power Source, 5000VA, USB/RS232/RS485	190 - 265 Vac, 1ø	4U / 7.0" / 178 mm

OPTIONS	DESCRIPTION	COMPATIBLE WITH MODELS
-LAN+GPIB	LAN and GPIB Interface. (Replaces USB, RS232, RS485 interface)	CPS106, CPS110, CPS115
-EXT	External Input & Auxiliary I/O (Mutually exclusive with -MSB)	
-MSB	Master/Slave Bus Interface (Mutually exclusive with -EXT)	
-LAN	LAN Interface	CPS120, CPS130, CPS140, CPS150
-GPIB	GPIB Interface	
-AUX	Auxiliary I/O, Series, Parallel & Multi-phase mode	



CPS106 2U Model shown with Optional LAN+GPIB Interface

Worldwide Service & Support

Adaptive Power Systems' customer support is second to none. Our Customer Support Program provides the training, repair, calibration, and technical support services that our customers value. Customers can rely on us for excellent support before, during and after the sale with support and service centers around the world.

New Product Warranty: One (1) year.

Complete calibration and repair services are offered at our US, European and Chinese manufacturing facilities (see contact info below). Calibrations are to original factory specifications and are traceable to NIST (National Institute of Standards and Technology).

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