Frequency Converters

Programmable AC & DC Power Sources

EMC Test Systems

Bidirectional Sources

DC Power Supplies

Electronic Loads

Battery Test Solutions

Current Sources

Power Analyzers

Product Overview

PPST SOLUTIONS

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PPST SOLUTIONS

Sales
Support
Service
Strong Partners
Special Power Expertise
Application Knowledge
Solutions

WE HAVE WHAT YOU NEED.






We are experts in the field of Power Conversion and Electronic Instrumentation and offer you the best in Power Supplies, Loads and Test & Measurement Devices.

Professional Power Supplies & Instrumentation

We are specialists in power conversion and electronic test and measurement equipment. Our solutions are used for R&D, quality inspection, field test, inline test, service and maintenance in the following industries:

- Avionics and Space Exploration
- Industrial and Medical Electronics
- Household Appliances and Lighting
- Automotive and Railway
- Test and Measurement
- IT and Telecom
- EMC Compliance and Safety Test Labs
- Alternative Energy and Smart Grids
- Electrical power industry

Special Solutions

We can offer specific, individual and customized products, solutions or test systems.

Our Application Engineers are available to discuss the exact needs for your application.

Consulting Services

Our technical sales engineers are here for you and apply their expertise to:

- Analyze your specifications and requirements
- Study your exact needs and find the best technically and commercially available solution
- Demonstrate test equipment on site as needed

Strong Partners

Our partners and suppliers are recognized leaders in the field of power conversion and test & measurement instrumentation.

Expertise and manufacturer's support allow us to offer our customers high quality and affordable products and solutions.

Service

In collaboration with our partners we offer service and support as well as professional training and commissioning.

Equipment Rentals and RMA service for repairs and calibrations complete our range.

POWER SOURCES, SUPPLIES AND ELECTRONIC LOADS

PRODUCT GUIDE | AC / AC+DC SOURCES

AC Waveform	DC Output	Ramp Function	Regenerative (4Q)	Series	Power	Voltage	Frequency	RS232	GPIB	USB	LAN	Analog	PLC
50/60Hz - Commercial & Industrial Applications													
1 phase													
Sine	-	-	-	**FC300**	500VA/1000VA	0-310Vac	40-450Hz	-	-	-	-	-	-
	-	-	-	**CGS100**	500VA - 4kVA	0-310Vac/420Vdc	DC, 40-500Hz	✓	✓	✓	✓	✓	✓
	✓	✓	-	**CPS100**	600VA-5kVA	0-300Vac/424Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	-	✓	-	**APS1000**	3-60kVA	0-300Vac	45-500Hz	✓	✓	-	-	-	✓
	-	✓	-	**ADF**	15kVA - 45kVA	0-300Vac	45-500Hz	✓	✓	✓	✓	✓	-
Sine + Arbitrary	-	✓	-	**CPS100**	600VA-5kVA	0-300Vac/424Vdc	DC, 15-1200Hz	✓	✓	-	-	✓	-
	-	✓	-	**LSX**	1.5-6kVA	0-300Vac	15-1200Hz	✓	✓	-	-	✓	-
	-	✓	4Q	**LMX**	500VA-30kVA	0-300Vac	15-5000Hz	✓	✓	✓	✓	✓	✓
	✓	✓	-	**AFX**	6-150kVA	0-300Vac/425Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	-	✓	-	**MS**	62.5-625kVA	0-1000Vac	40-1000Hz	✓	✓	-	-	✓	-
1 and 3 phase													
Sine	✓	✓	-	**CFS300**	3kVA/6kVA	0-520Vac/420Vdc	DC, 40-1000Hz	✓	✓	✓	✓	-	✓
	-	✓	-	**APS3000**	3-180kVA	0-300Vac	45-500Hz	✓	✓	-	-	-	✓
	-	✓	-	**ADF**	15kVA - 90kVA	0-300Vac	45-500Hz	✓	✓	✓	✓	✓	✓
Sine + Arbitrary	-	✓	-	**LSX**	1.5-6kVA	0-600Vac	15-1200Hz	✓	✓	-	-	✓	-
	-	✓	4Q	**LMX**	500VA-30kVA	0-600Vac	15-5000Hz	✓	✓	✓	✓	✓	✓
	✓	✓	-	**AFX**	6-180kVA	0-520Vac/425Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	-	✓	-	**MS**	62.5-625kVA	0-1000Vac	40-1000Hz	✓	✓	-	-	✓	-
EMC Test Systems - Harmonics & Flicker, IEC61000-4 Immunity													
1 phase													
Sine + Arbitrary	✓	✓		**ECTS2**	750VA-6kVA	0-300Vac/424Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	-
	-	✓	4Q	**LMX**	500VA-30kVA	0-300Vac	15-5000Hz	✓	✓	✓	✓	✓	✓
	✓	✓	-	**AFX**	6-180kVA	0-300Vac/425Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
1 and 3 phase													
Sine + Arbitrary	-	✓	-	**ECTS2**	6-90kVA	0-300Vac/424Vdc	15-1200Hz, DC	✓	✓	✓	✓	✓	-
	-	✓	4Q	**LMX**	750VA-6kVA	0-300Vac	15-5000Hz	✓	✓	✓	✓	✓	✓
	✓	✓	-	**AFX**	6-90kVA	0-300Vac/425Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	✓	✓	✓	**AZX**	30-440kVA	0-440Vac/650Vdc	DC, 1-1000Hz	✓	✓	✓	✓	✓	✓
DC Power Sources													
DC	✓	✓		**DCS Series**	5kW - 1000kW	0-2000Vdc	DC	✓	✓	✓	✓	✓	-
	✓	✓	✓	**DCB Series**	5kW - 1000kW	0-2000Vdc	DC	✓	✓	✓	✓	✓	-
	✓	✓	✓	**AL3000(R)**	5kW - 500kW	0-1200Vdc	DC	✓	✓	✓	✓	✓	-


CGS100 Series (APS)


CPS100 Series (APS)


LSX Series (PPS)


LMX Series (PPS)


AFX Series (PPS)


ECTS2 Series EMC Test (PPS)


DCS Series (APS)

APPLICATIONS FOR AC SOURCES (continued on the next page)

- 50/60Hz frequency conversion
- Global power grid simulation with sinewave or full arbitrary waveform generation for harmonic and interharmonic generations
- Testing of motors, compressors, pumps, electrical tools, Distribution and Power Transformer testing
- Testing of lighting systems and ballasts, Watt-hour meter testing
- Testing of home appliances in R&D, Burn-in, production and maintenance

PPS AFX Series AC & DC

PPS AZX Series Regenerative AC & DC

GI Series (Zenone)

GIS Series (Zenone)

AC Waveform	DC Output	Ramp Function	Regenerative (4Q)	Series	Power	Voltage	Frequency	RS232	GPIB	USB	LAN	Analog	PLC
400Hz | 360-800Hz - Avionics & Military Applications													
1 phase													
Sine	-	-	-	**FC300**	500VA/1000VA	0-310Vac	40-450Hz	-	-	-	-	-	✓
	-	✓	-	**CGS100**	500VA-4kVA	0-310Vac/420Vdc	DC, 40-500Hz	✓	✓	✓	✓	✓	✓
	✓	✓	-	**CPS100**	600VA-5kVA	0-300Vac/424Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	-	✓	-	**APS1000**	10kVA or 20kVA	0-300Vac	45-500Hz	✓	✓	-	-	-	✓
	-	✓	-	**ADF**	15kVA - 90kVA	0-300Vac	45-500Hz	✓	✓	✓	✓	✓	-
Sine + Arbitrary	-	✓	-	**CPS100**	600VA-5kVA	0-300Vac/424Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	-	✓	-	**LSX**	1.5-6kVA	0-300Vac	15-1200Hz	✓	✓	-	-	✓	-
	-	✓	4Q	**LMX**	500VA-90kVA	0-300Vac	15-5000Hz	✓	✓	-	-	✓	✓
	✓	✓	-	**AFX**	6-180kVA	0-300Vac/425Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	-	✓	-	**MS**	62.5-625kVA	0-1000Vac	40-1000Hz	✓	✓	-	-	✓	-
1 and 3 phase													
Sine	✓	✓	-	**CFS300**	3kVA/6kVA	0-520Vac/420Vdc	DC, 40-1000Hz	✓	✓	✓	✓	-	✓
	-	✓	-	**APS3000**	15kVA - 150kVA	0-300Vac	45-500Hz	✓	✓	-	-	-	✓
	-	-	✓	**FVC**	5-1000kVA	0-1000Vac	40-200Hz	✓	-	✓	✓	✓	✓
	-	✓	-	**ADF**	15kVA - 90kVA	0-300Vac	45-500Hz	✓	✓	✓	✓	✓	-
Sine + Arbitrary	-	✓	-	**LSX**	1.5-6kVA	0-600Vac	15-1200Hz	✓	✓	-	-	✓	-
	-	✓	4Q	**LMX**	500VA-90kVA	0-600Vac	15-5000Hz	✓	✓	-	-	✓	✓
	✓	✓	-	**AFX**	6-180kVA	0-520Vac/425Vdc	DC, 15-1200Hz	✓	✓	✓	✓	✓	✓
	-	✓	-	**MS**	62.5-625kVA	0-1000Vac	40-1000Hz	✓	✓	-	-	✓	-
	✓	✓	✓	**AZX**	30-440kVA	0-440Vac/650Vdc	DC, 1-1000Hz	✓	✓	✓	✓	✓	✓
Regenerative Applications													
1,2 and 3 phase													
Sine + Arbitrary	✓	✓	✓	**AZX**	30-440kVA	0-440Vac/1000Vdc	1-1000Hz	✓	✓	✓	✓	✓	✓
Current Source Applications													
1 and 3 phase													
Sine + Arbitrary	-	✓	✓	**GI Series**	5-300kVA	900A-40kA	40-200Hz	✓	✓	✓	✓	✓	-
	✓	✓	✓	**GIS Series**	600VA-300kVA	40A-10kA	DC-2000Hz	✓	✓	✓	✓	✓	-

APPLICATIONS FOR AC SOURCES (continuation)

- Power line disturbance tests per commercial, avionics & military standards requirements
- Simulation of voltage dips, interruptions, voltage and frequency variations and fluctuations, drop outs, phase shifts, DC offset
- Commercial and Military Avionics compliance tests per ABD0100.1.8E, ABD0100.1.8.1C, DO160G, AMD24C, MIL-STD704A&F
- Harmonic and Flicker tests per IEC61000-3-2/61000-3-3
- Conducted immunity tests per IEC61000-4-11/-13/-14/-27/-28/-29p/-34
- Full 4 quadrant regenerative models for inverter tests and smart grid applications including UL1741
- Test systems for compliance to IEC/EN/UL/CSA regulations
- PV inverter / Micro PV inverter testing and LVRT testing

AC + DC SOURCES | AC → AC, DC, AC+DC

AFX Series

The AFX Series represent a break-through in solid state power conversion that reduces the size and weight of programmable AC and DC power sources dramatically. By paralleling master and auxiliary AFX units, higher power systems can be configured easily to provide more than 15kVA of power.

15kVA in only 4U!

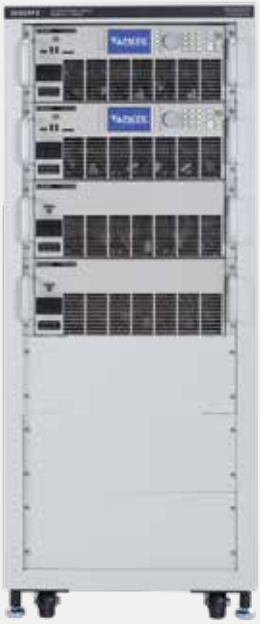
- **Light weight and compact size:** 15kVA in only 4U, 51 kg/112 lbs.
- **Three Phase, Split Phase and Single Phase Output Modes**
- **Power: 6kVA up to 180kVA**
- **Voltage: Single Constant Power Voltage Range to 333Vac or 425Vdc**
- **Frequency: DC, 15-1200Hz** (1-3000Hz extended)
- Modular Higher Power Systems by paralleling master and auxiliary AFX units
- AC, DC and AC+DC Output Capability
- Enhanced Protection Modes
- Unique Sleep Mode
- Interfaces: USB, RS232, LAN (LXI) & GPIB
- Embedded Web Server & LXI LAN Interface
- Pacific Power Source PPSC-Studio Software
- Avionic Test Sequences:
  - ABD0100.1.8 - Airbus A380, AC & DC Power Groups
  - ABD0100.1.8.1 - Airbus A350, AC & DC Power Groups
  - AMD24C - Airbus A400M, AC & DC Power Groups
  - Boeing 787B3-0147 - B787, AC & DC Power Groups
  - MIL-STD704 - US DoD, AC & DC Power Groups
  - RTCA-DO160 Section B, AC & DC Power Groups
- IEC Test Sequences:
  - IEC 61000-4-11, IEC 61000-4-13, IEC 61000-4-14, IEC 61000-4-17, IEC 61000-4-27, IEC 61000-4-28, IEC 61000-4-34

	MODEL	Phase Mode	Rated Power* (AC/DC)	Voltage Range	Max. AC/DC Current		Form Factor
					3 & 2 Phase Mode	1 Phase Mode	
AFX Series	360AFX	1, 2 & 3	6 kVA, kW / 6 kW	0-300 Vac / 0-425 Vdc *Extended range mode: 0-333Vac*	16.7 Arms / 8.4 Adc	50 Arms / 25.0 Adc	4U Chassis
	390AFX	1, 2 & 3	9 kVA, kW / 9 kW		25.0 Arms / 13.9 Adc	75 Arms / 37.5 Adc	
	3120AFX	1, 2 & 3	12 kVA, kW / 12 kW		33.3 Arms / 16.7 Adc	100 Arms / 50.0 Adc	
	3150AFX	1, 2 & 3	15 kVA, kW / 15 kW		41.7 Arms / 21.0 Adc	125 Arms / 62.5 Adc	
	3180AFX	1, 2 & 3	18 kVA, kW / 18 kW		50.0 Arms / 27.8 Adc	150 Arms / 75.0 Adc	15U Cabinet
	3240AFX	1, 2 & 3	24 kVA, kW / 24 kW		66.7 Arms / 33.4 Adc	200 Arms / 100.0 Adc	
	3300AFX	1, 2 & 3	30 kVA, kW / 30 kW		83.3 Arms / 41.7 Adc	250 Arms / 125.0 Adc	
	3450AFX	1, 2 & 3	45 kVA, kW / 45 kW		125.0 Arms / 62.5 Adc	375 Arms / 187.5 Adc	
	3600AFX	1, 2 & 3	60 kVA, kW / 60 kW		166.7 Arms / 83.3 Adc	500 Arms / 250.0 Adc	28U Cabinet
	3750AFX	1, 2 & 3	75 kVA, kW / 75 kW		208.3 Arms / 104.0 Adc	625 Arms / 312.5 Adc	
	3900AFX	1, 2 & 3	90 kVA, kW / 90 kW		250.0 Arms / 125.0 Adc	750 Arms / 375.0 Adc	

1 | AFX Models from 6kVA up to 15kVA

2 | AFX Model with 30kVA in 15U

3 | AFX Model with 45kVA in 15U



4 | AFX Model with 60kVA in 28U

5 | AFX Model with 90kVA in 28U

AFX Series

Unique AFX Features and Benefits:

The AFX Series is based on a truly revolutionary technology platform that enables functionality not previous found on programmable AC and DC source products from any other manufacturer. These features help address a wide range of applications while at the same time providing a higher level of protection for the unit under test.

- Compact Size
- Light Weight
- Single Voltage Range with Constant Power
- UPC Studio Compatibility
- Energy Savings Modes
- Power Flex Upgrade Capability
- Waveform Capture Scope Functions
- Harmonics Measurements

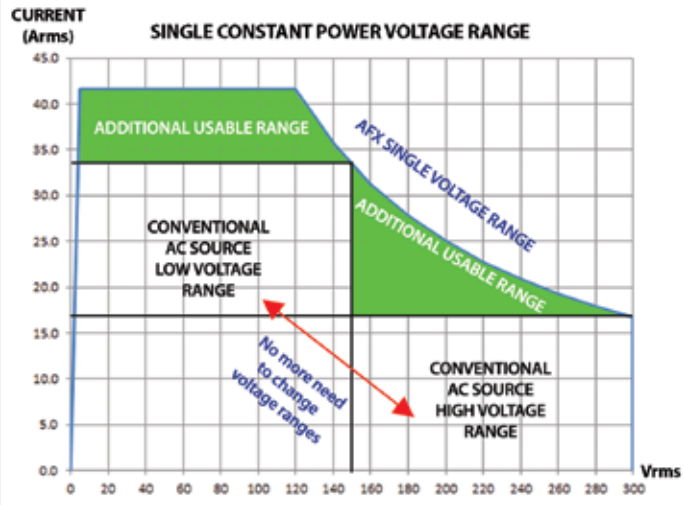
- Enhanced Protection Modes:
  - Constant Voltage Protection
  - Constant Current Protection
  - Peak Current Protection
  - True Power Protection
  - Apparent Power Protection
  - Over Voltage Protection
  - Internal DC Bus Voltage Protection
  - Over Temperature Protection

Single Voltage Range with Constant Power Profile:

Traditional AC power sources use two voltage ranges to provide either high voltage or high current. By contrast, the AFX Series uses a unique single voltage range that operates along a constant power curve. This provides more current at low voltages, eliminating the need to switch between voltage ranges and provides a much wider operating range (demonstrated as green in figure 5).

Switching voltage ranges on other AC sources causes the output to be turned off and the EUT to shut down. This makes it difficult to test universal, wide input range AC products.

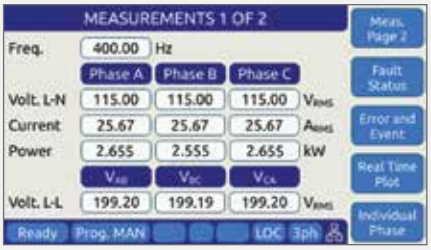
The blue line and green shaded area in the chart shows the additional operating range available compared to a conventional AC power source with a 150V/300V range pair. The same applies to DC mode of operation where a single 425Vdc voltage range is used to provide both high DC current and DC voltage.



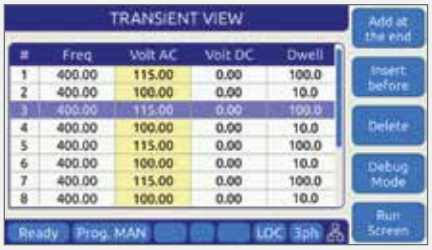
5 | Extended Operating Range for 3150AFX along Constant 5 kVA per Phase Power Curve

Simple and Intuitive Operation:

6 | Control



7 | Metering



8 | Transient Screen in Data Entry Mode

CGS100 Series

These compact Single Phase AC and DC Power Supplies are available at 500VA, 1250VA, 2000VA and 4000VA.

- **Single phase**
- **Power: 800VA, 1250VA, 2000VA or 4000VA**
- **Voltage Ranges:**
  - **AC: 0-155Vac and 0-310Vac**
  - **DC: 0-210Vdc and 0-420Vdc**
- **Current Ratings see Table**
- **Frequency: DC, 40-500Hz**
- Standard USB and LAN Interface, optional RS232 or GPIB
- 3 Memory Locations for Setup Storage
- Programmable Start/Stop Phase Angle
- Single Phase AC Input

CFS300 Series

	MODEL	Phase	Rated Power (AC/DC)	max. Current AC		max. Current DC		Frequency	Height
				155Vac Range	310Vac Range	210Vdc Range	420Vdc Range		
CFS100 Series	CGS105	1	500VA	5.0Arms	2.5Arms	3.0Adc	1.5Adc	DC, 40-500Hz	2 U
	CGS112	1	1250VA	12.5Arms	6.75Arms	7.5Adc	3.75Adc		2 U
	CGS120	1	2000VA	20.0Arms	10.0Arms	12.0Adc	6.0Adc		2 U
	CGS140	1	4000VA	40.0Arms	20.0Arms	18.4Adc	9.2A		5 U

1 | Front Panel - CGS105, CGS112, CGS120

2 | Front Panel - CGS140

CPS100 Series

The CPS100 Series is a family of advanced programmable AC and DC Sources with Single Phase Output.

- **Single phase** (3-Phase available using Master/Slave 3-Phase Mode)
- **Power: 600VA up to 5kVA** (Up to 20kVA using Master/Slave Parallel Mode)
- **Voltage: up to 300Vac, 424Vdc** (Up to 600Vac, 848Vdc using Master/Slave Serial Mode)
- **Frequency: DC, 15-1200Hz**
- Modern Color Touch LCD User Interface
- IEC 61000-4-11, IEC 61000-4-13, IEC 61000-4-14, IEC 61000-4-28 Tests
- Standard: USB, LAN, RS232, RS485; Optional 0-10V; optional: GPIB
- Windows® compatible Software
- 19" rack or bench unit

	MODEL	Phase	Rated Power	Output Voltage max		Rated Current max				Output Frequency
				AC	DC	AC		DC		
						Low Rng	HIgh Rng	Low Rng	High Rng	
CPS100 Series Models	CPS106	1	600VA	Low Range: 150V High Range: 300V	Low Range: 212V High Range: 424V	5.6	2.8	3.96	1.89	Standard: DC, 15-1000Hz Enhanced: DC, 15-1200Hz
	CPS110	1	1000VA			9.2	4.6	6.5	3.3	
	CPS115	1	1500VA			13.8	6.9	9.76	4.88	
	CPS120	1	2kVA			16.0	8.0	11.3	5.65	
	CPS130	1	3kVA			27.6	13.8	19.6	9.8	
	CPS140	1	4kVA			32.0	16.0	22.6	11.3	
	CPS150	1	5kVA			46.0	23.0	32.6	16.3	
	All Model available in Standard Version (S suffix) or Enhanced Version (E suffix)									

1 | Front Panel - CPS106, CPS110, CPS115

2 | Front Panel - CPS120

3 | Front Panel - CPS130, CPS140, CPS150

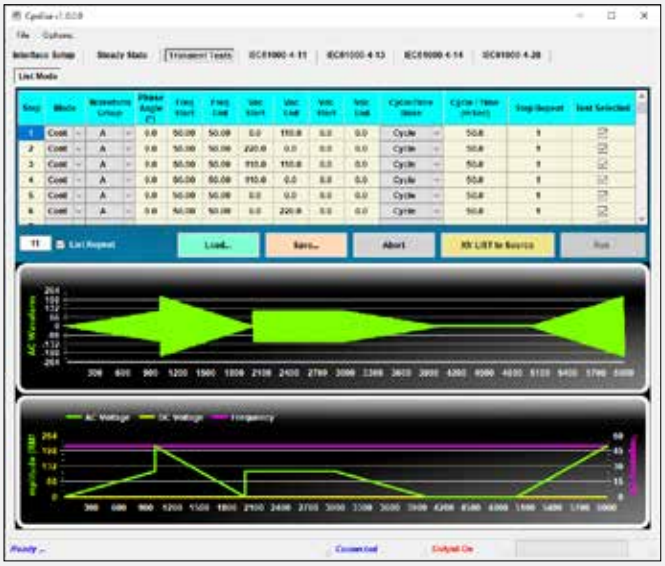
CFS300 Series

These Single and Three Phase AC and DC Power Supplies are available with 3kVA and 6kVA.

- **1 and 3 phase**
- **Power: 3kVA or 6kVA**
- **Voltage Ranges:**
  - **AC: 0-150Vac and 0-300Vac**
  - **DC: 0-210Vdc and 0-420Vdc**
- **Current see Table**
- **Frequency: DC, 40-1000Hz**
- Standard USB and RS232 Interface, optional LAN or GPIB
- 50 Memory Locations with Nine Test Steps for Pass/Fail Measurements against pre-set Limits
- Programmable Start/Stop Phase Angle

	MODEL	Phases	Rated Power (AC/DC)	max. Current AC				max. Current DC		Frequency	Height
				150Vac Range		300Vac Range		210Vdc Range	420Vdc Range		
				1ø	3ø	1ø	3ø				
CFS300 Series	CFS330	1-3	3kVA	27.6Arms	9.2Arms	13.8Arms	4.6Arms	14.4A	7.2A	DC, 40-1000Hz	9 U
	CFS360	1-3	6kVA	55.2Arms	18.4Arms	27.6Arms	9.2Arms	28.8A	14.4A		

CPS Series Graphical User Interface for Windows



CPS Series Graphical User Interface Transients Programming

AC SOURCES | AC-AC

LSX Series

The LSX Series are High Performance Switching AC Power Sources with power levels from 1.5kVA up to 6kVA.

- **1 and 3 phase**
- **Power: 1500VA up to 6000VA**
- **Voltage: 0-600V**
- **Frequency: 15-1200Hz** Full Power Operation, 5000Hz small signal bandwidth
- Compact Size and Power Efficient Operation
- Standard LAN/LXI, USB, IEEE-488.2 and RS232
- PPSC Studio Software, Web Server, Drivers for LabVIEW™
- Programmable Output Impedance
- Harmonics Generation, Analysis and Waveform Capture

Available Options:

- Transformer Coupled voltage ranges on select models
- Reduced feature set **M Version** LSXM models for less demanding applications.

	MODEL	Rated Power (VA)	Output Voltage max (L-N/L-L) (V_{rms})				Rated Current max (A_{rms})				Output frequency (Hz)	AC Input	Height
			Direct	Transformer			Direct	Transformer					
				T 1.5:1	T 2.0:1	T 2.5:1		T 1.5:1	T 2.0:1	T 2.5:1			
LSX Series 1 phase	115LSX	1500	132	-	-	-	16.0	-	-	-	15-1200	1 ø	3U
LSX Series 1 phase	115LSXT	1500	132	0-198	0-264	0-330	16.0	10.7	8.0	6.4	15-1200	1 ø	3U
LSX Series 1 phase	120LSX	2000	150/300	-	-	-	20/14	-	-	-	15-1200	1 ø	3U
LSX Series 1 phase	140LSX	4500	135/270	-	-	-	32/16	-	-	-	15-1200	3 ø	5U
LSX Series 1 phase	140LSXT	4500	135/270	202/404	270/540	338/600	32/16	21.3/10.7	16.0/8.0	12.8/6.4	15-1200	3 ø	8U
LSX Series 1 phase	160LSX	6000	132/264	-	-	-	48/16	-	-	-	15-1200	3 ø	5U
LSX Series 1 phase	160LSXT	6000	132/264	198/396	264/528	330/600	48/16	32/10.6	24/8	19.2/6.4	15-1200	3 ø	8U
LSX Series 3 phase	315LSX	1500	1ø: 132/264 3ø: 132	198* (3ø only)	264* (3ø only)	338* (3ø only)	1ø: 12/8 3ø: 4/ø	2.6/ø* (3ø only)	2.0/ø* (3ø only)	1.6/ø* (3ø only)	15-1200	1 ø	3U
LSX Series 3 phase	320LSX	2000	1ø: 150/300 3ø: 150	225* (3ø only)	300* (3ø only)	375* (3ø only)	1ø: 20/12 3ø: 7/ø	4.66/ø* (3ø only)	3.5/ø* (3ø only)	2.8/ø* (3ø only)	15-1200	1 ø	3U
LSX Series 3 phase	345LSX	4000	1ø: 135/270 3ø: 135	-	-	-	1ø: 36/12 3ø: 12/ø	-	-		15-1200	3 ø	5U
LSX Series 3 phase	345LSXT	4000		1ø: 202/404 3ø: 202/350	1ø: 270/540 3ø: 270/468	1ø: 338/600 3ø: 338/585		1ø: 24/8 3ø: 8/ø	1ø: 18/6 3ø: 6/ø	1ø: 14.4/4.8 3ø: 4.8/ø	15-1200	3 ø	8U
LSX Series 3 phase	360LSX	6000	1ø: 132/264 3ø: 132	-	-	-	1ø: 48/16 3ø: 16/ø	-	-	-	15-1200	3 ø	5U
LSX Series 3 phase	360LSXT	6000		1ø: 198/396 3ø: 198/343	1ø: 264/528 3ø: 264/457	1ø: 330/600 3ø: 330/572		1ø: 32/10.7 3ø: 10.7/ø	1ø: 24/8 3ø: 8/ø	1ø: 19.2/6.4 3ø: 6.4/ø	15-1200	3 ø	8U

* requires option M99211 (2.2kVA magnetics module)

1 | Front Panel - 115LSX, 120LSX, 315LSX, 320ASS

2 | Front Panel - 140LSX, 160LSX

3 | Front Panel - 345LSX, 360LSX

LMX Series

The all new LMX Series is a family of High Performance Linear AC power sources covering the power range from 500VA to 6kVA with single chassis models, and from 8kVA up to 30kVA with multi chassis systems.

- **1 and 3 phase**
- **Power: 500VA up to 30kVA**
- **Voltage: 0-600V**
- **Frequency: 15-5000Hz** Full Power Operation, 40kHz small signal bandwidth
- Extreme Low Noise and Distortion Output
- Variable Speed Fan Control for Quiet Operation
- Standard LAN/LXI, USB, IEEE-488.2 and RS232
- PPSC Studio Software, Web Server, Drivers for LabVIEW™
- Programmable Output Impedance
- Harmonics Generation, Analysis and Waveform Capture

Available Options:

- Transformer Coupled voltage ranges
- -PB: Master/Slave Parallel Mode on 140LMX, 160LMX, 345LMX and 360LMX

	MODEL	Rated Power (VA)	Output Voltage max (L-N/L-L) (V_{rms})				Rated Current max (A_{rms})				Output frequency (Hz)	AC Input	Height
			Direct	Transformer			Direct	Transformer					
				T 1.5:1	T 2.0:1	T 2.5:1		T 1.5:1	T 2.0:1	T 2.5:1			
LMX Series 1 phase	105LMX	500	135/270	-	-	-	4.0/2.0	-	-	-	15-5000	1 ø	3U
	105LMXT	500	135/270	202/404	270/540	338/600	4.0/2.0	2.6/1.3	2.0/1.0	1.6/0.8	45-5000	1 ø	3U
	108LMX	750	135/270	-	-	-	6.0/3.0	-	-	-	15-5000	1 ø	3U
	108LMXT	750	135/270	202/404	270/540	338/600	6.0/3.0	4.0/2.0	3.0/1.5	2.4/1.2	45-5000	1 ø	3U
	112LMX	1200	150/300	-	-	-	10.0/5.0	-	-	-	15-5000	1 ø	3U
	140LMX	4000	135/270	-	-	-	32/16	-	-		15-5000	3 ø	8U
	140LMXT	4000	135/270	202/404	270/540	338/600	32/16	21.3/10.7	16.0/8.0	12.8/6.4	45-5000	3 ø	11U
	160LMX	6000	135/270	-	-	-	48/16	-	-	-	15-5000	3 ø	8U
	160LMXT	6000	135/270	202/404	270/540	338/600	48/16	32.0/10.7	24.0/8.0	19.2/6.4	45-5000	3 ø	11U
LMX Series 3 phase	305LMX	500	1ø: 132/264 3ø: 234	-	-	-	1ø: 4/2 3ø: 2	-	-	-	15-5000	1 ø	3U
	305LMXT	500		1ø: 202/404 3ø: 350	1ø: 270/540 3ø: 468	1ø: 338/600 3ø: 585		1ø: 2.6/1.3 3ø: 1.3	1ø: 2/1 3ø: 0.75	1ø: 1.6/0.8 3ø: 0.6	45-5000	1 ø	3U
	308LMX	750	1ø: 135/270 3ø: 135	-	-	-	1ø: 6/2 3ø: 2	-	-		15-5000	1 ø	3U
	308LMXT	750		1ø: 202/404 3ø: 350	1ø: 270/540 3ø: 468	1ø: 338/600 3ø: 585		1ø: 4/1.3 3ø: 1.3	1ø: 3/1 3ø: 1	1ø: 2.4/0.8 3ø: 0.8	45-5000	1 ø	3U
	312LMX	1200	1ø: 150/300 3ø: 260	225* (3ø only)	300* (3ø only)	375* (3ø only)	1ø: 10/3.3 3ø: 3.3	2.2/ø* (3ø only)	1.66/ø* (3ø only)	1.33/ø* (3ø only)	45-5000	1 ø	3U
	320LMX	2000	1ø: 135/270 3ø: 135	-	-	-	1ø: 18/6 3ø: 6	-	-	-	15-5000	3 ø	5U
	320LMXT	2000		1ø: 202/404 3ø: 202/350	1ø: 270/540 3ø: 270/468	1ø: 338/600 3ø: 330/585		1ø: 12/4 3ø: 4	1ø: 9/3 3ø: 3	1ø: 7.2/2.4 3ø: 2.4	45-5000	3 ø	8U
	345LMX	4500	1ø: 135/270 3ø: 135/234	-	-	-	1ø: 36/12 3ø: 12	-	-	-	15-5000	3 ø	8U
	345LMXT	4500		1ø: 202/404 3ø: 202/350	1ø: 270/540 3ø: 270/468	1ø: 338/600 3ø: 330/585		1ø: 24/8 3ø: 8	1ø: 18/6 3ø: 6	1ø: 14.4/4.8 3ø: 4.8	45-5000	3 ø	11U
	360LMX	6000	1ø: 135/270 3ø: 135/234	-	-	-	1ø: 48/16 3ø: 16	-	-	-	15-5000	3 ø	8U
	360LMXT	6000		1ø: 202/404 3ø: 202/350	1ø: 270/540 3ø: 270/468	1ø: 338/600 3ø: 330/585		1ø: 32/10.7 3ø: 10.7	1ø: 24/8 3ø: 8	1ø: 19.2/6.4 3ø: 6.4	45-5000	3 ø	11U
	Parallel Mode possible up to 30kVA												

1 | Front Panel - 105LMX, 108LMX, 112LMX, 305LMX, 308LMX, 312LMX

2 | Front Panel - 320LMX

3 | Front Panel - 345LMX, 360LMX

AC SOURCES | AC-AC

ADF Series

The ADF Series represent a break-through in solid state power conversion that reduces the size and weight of programmable AC power sources dramatically. By paralleling master and auxiliary ADF units, higher power systems can be configured easily to provide more than 15kVA of power.

15kVA in only 4U!

- **Light weight and compact size:** 15kVA in only 4U, 51 kg/112 lbs.
- **Single phase ouput models or Three/ Split phase output models**
- **Power: 15kVA up to 90kVA**
- **Voltage: Single Constant Power Voltage Range to 300Vac**
- **Frequency: DC, 45-500Hz** (15-1200Hz with Option F)
- Pure Sine wave output
- Modular Higher Power Systems by paralleling master and auxiliary ADF units
- Enhanced Protection Modes
- Unique Sleep Mode
- Interfaces: USB, RS232, LAN (LXI) & GPIB
- Embedded Web Server & LXI LAN Interface
- Pacific Power Source PPSC-Studio Software

GPIB RS232 USB LAN

	MODEL	Phase Mode	Rated Power* (AC)	Voltage Range	Max. AC Current		Form Factor
					3 & 2 Phase Mode	1 Phase Mode	
AFX Series	1150ADF	1	15 kVA, kW	0-300 Vac *Option V: 0-333Vac*		125 Arms	4U Chassis
	3150ADF	2 & 3	15 kVA, kW		41.7 Arms		
	1300ADF	1	30 kVA, kW			250 Arms	18U Cabinet
	3300ADF	2 & 3	30 kVA, kW		41.7 Arms		
	1450ADF	1	45 kVA, kW			375 Arms	
	3450ADF	2 & 3	45 kVA, kW		83.3 Arms		
	3600ADF	2 & 3	60 kVA, kW		166.7 Arms		28U Cabinet
	3750ADF	2 & 3	75 kVA, kW		208.3 Arms		
	3900ADF	2 & 3	90 kVA, kW		250.0 Arms		

MS Series

The Model 3060-MS is a high power solid state frequency converter consisting of one to ten 50 kW/62.5 kVA, 3 phase AC Power Sources.

- **1 and 3 phase**
- **Power: 62.5kVA/50kW per Cabinet**
- **Voltage: 0-208V** (optional up to 1000V L-L)
- **Frequency: adjustable from 47Hz up to 500Hz** or fixed 50Hz, 60Hz or 400Hz, optional 10-1000Hz
- Easy Paralleling for Higher Power Output to 1750A/Phase
- UPC Studio Software, Drivers for LabVIEW™, RS232 Interface
- Rugged Industrial Construction and Power Efficient Operation
- True-RMS metering of volts, amps and power

Available Options:

- GPIB Interface (IEEE-488.2)
- Output Transformers for Higher Voltage Ranges
- SCU/UPC32 Advanced Controller with 10Hz - 1000Hz Capability
- Avionics Test Options for Airbus, Boeing, MIL-STD704 & RTCA/DO160
- UPC Studio Software Suite

	MODEL	Rated Power	Output Voltage	Rated Current max	Output frequency
MS Series	3060MS-50	50 kW / 62.5 kVA	0-120V L-N / 0-208V L-L optional up to 1000V L-L	175Arms / Phase	47-500Hz optional 10-1000Hz
	3060MS-100	100 kW / 125 kVA		350Arms / Phase	
	3060MS-150	150 kW / 187.5 kVA		525Arms / Phase	
	3060MS-200	200 kW / 250 kVA		700Arms / Phase	
	3060MS-250	250 kW / 312.5 kVA		875Arms / Phase	
	3060MS-300	300 kW / 375 kVA		1050Arms / Phase	
	3060MS-350	350 kW / 437.5 kVA		1225Arms / Phase	
	3060MS-400	400 kW / 500 kVA		1400Arms / Phase	
	3060MS-450	450 kW / 562.5 kVA		1575Arms / Phase	
	3060MS-500	500 kW / 625 kVA		1750Arms / Phase	

AZX Series

The AZX Series is a high power, regenerative AC and DC power source that can both sink and source current to the EUT. This series is ideally suited for grid emulation and Power Hardware in the Loop (PHIL) applications.
A higher than normal voltage range for 360Vrms Line to Neutral or 624Vrms Line to Line supports high line testing for 480Vac grid products up to 130% of nominal.

- **High Efficiency, Fully Isolated Energy Recovery to the Grid**
- **Single, Split or Three Phase Output modes**
- **DC, 1Hz to 1000Hz Bandwidth Supports 50/60Hz Grid Simulation as well as Defense and Avionics Test Applications**
- **Power: 30kVA up to 400kVA**
- **Dual Voltrage Ranges to 440Vac LN / 760Vac LL**
- Arbitrary Waveforms
- Modular Higher Power Systems by Paralleling up to four AZX Cabinets
- Enhanced Protection Modes
- Interfaces: USB, RS232, LAN (LXI) & GPIB
- Embedded Web Server & LXI LAN Interface
- Pacific Power Source PPSC-Studio Software
- Availabe as part of EMC Harmonics and Flicker Test Systems (see ECTS2 Series)

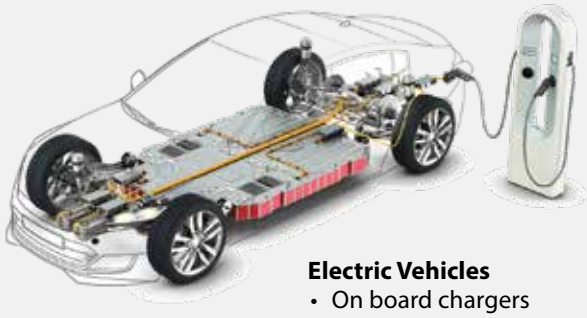
GPIB RS232 USB LAN

	MODEL	Phase Mode	Rated Power* (AC, DC)	Voltage Range	Max. AC Current (low V range)		Form Factor
					3 Phase Mode	1 Phase Mode	
AZX Series	3300AZX	1, 2 & 3	30 kVA, kW	AC: 0-225 Vac 0-440 Vac DC: 0 - ± 335 Vdc 0 - ± 650 Vdc	90 Aac / 60 Adc	270 Aac / 180 Adc	Cabinet
	3450AZX	1, 2 & 3	45 kVA, kW		110 Aac / 80 Adc	330 Aac / 240 Adc	Cabinet
	3550AZX	1, 2 & 3	55 kVA, kW		130 Aac / 100 Adc	390 Aac / 300 Adc	Cabinet
	3190AZX	1, 2 & 3	90 kVA, kW		220 Aac / 160 Aac	660 Aac / 480 Adc	Dual Cabinet
	31100AZX	1, 2 & 3	110 kVA, kW		260 Aac / 200 Adc	600 Adc	Dual Cabinet
	31650AZX	1, 2 & 3	165 kVA, kW		390 Aac / 300 Adc	900 Adc	Three Cabinets
	32200AZX	1, 2 & 3	220 kVA, kW		520 Aac / 400 Adc	1200 Adc	Four Cabinets

APPLICATIONS

Solar Inverters

- Low Voltage Ride Through
- Frequency Ride Through
  - UL 1741
- Anti-Islanding
  - IEEE 1547
- EMC Compliance
  - IEC 61000-3-15
  - IEC 62116



Electric Vehicles

- On board chargers
- Charging Stations
- AC & DC Drive Motors

Using regenerative power test equipment like the AZX Series of PV Inverter testing, the level of power that can be tested increases significantly without the need for a high current utility grid service as up to 85% if the power used to test the EUT is recycled as illustrated in the figure to the right.
This approach also reduces energy usage and HVAC cooling requirements.

ECTS2 Series

Pacific Power Source EMC Compliance Test Systems use a greatly enhanced harmonics and flicker measurement system and newly designed flicker impedance options to support single and three phase AC harmonics, flicker and power line immunity compliance testing up to the maximum required current of 75A per phase.

- **1 and 3 phase**
- **Power: 500VA up to 30kVA**
- **Voltage: 0-600V**
- **Frequency: 15-5000Hz** Full Power Operation, 40kHz small signal bandwidth
- Extreme Low Noise and Distortion Output
- Variable Speed Fan Control for Quiet Operation
- Standard LAN/LXI, USB, IEEE-488.2 and RS232
- Programmable Output Impedance
- Harmonics Generation, Analysis and Waveform Capture

Emissions Standards:

- IEC 61000-2-3 & 2-12 Harmonics
- IEC 61000-3-3 & -3-12 Flicker

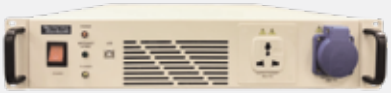
Available Options:

- IEC 61000-4-13 Harmonics & Interharmonics option (-413)
- Electronic Power Transfer Switch for IEC 61000-4-11 & IEC 61000-4-34

IEC Immunity	Description	Edition
IEC 61000-4-11	Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	3.0
IEC 61000-4-13	Harmonics and interharmonics includingmains signalling at a.c. power port, low frequency immunity tests (Option)	1.2
IEC 61000-4-14	Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	1.2
IEC 61000-4-17	Ripple on DC input power port immunity test	1.2
IEC 61000-4-27	Unbalance, immunity test for equipment with input current not exceeding 16 A per phase	1.1
IEC 61000-4-28	Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase	1.2
IEC 61000-4-34	Voltage dips, short interruptions and voltage variations immunity tests for equipment with mains current more than 16 A per phase	1.1

	MODELS[1]	DESCRIPTION
ECTS2 - 1 phase	ECTS2-108L	750 VA Test System, Single Phase, 3 Arms @ 230V + LFZ-1-16. ECTS2-108L: No Cabinet. No cabinet. This inexpensive, low power system is ideally suited for lighting product (Class C) harmonics and flicker test requirements
	ECTS2-140L-A	4 kVA Test System, Single Phase, 16 Arms @ 230V + LFZ-1-16. ECTS2-140L-A, Installed in 18U Cabinet.
	ECTS2-160L-A	6 kVA Test System, Single Phase, 16 Arms @ 230V + LFZ-1-16. ECTS2-160L-A, Installed in 18U Cabinet.
ECTS2 Series 3 phase	ECTS2-360F-n	6 kVA System, Single Phase, 26 Arms @ 230V + LFZ-1-16 Impedance
	ECTS2-3150F-n	15 kVA System, Single, Split and Three Phase, 21.7 Arms/Phase @ 230V in 3 Phs Mode + LFZ-3-16 Impedance
	ECTS2-3300F-n	30 kVA System, Single, Split and Three Phase, 43.3 Arms/Phase @ 230V in 3 Phs Mode + LFZ-3-40 Impedance. Also available as Regenerative ECTS2-3300Z-n AZX based system.
	ECTS2-3450F-n	45 kVA System, Single, Split and Three Phase, 65.0 Arms/Phase @ 230V in 3 Phs Mode, LFZ-3-40 & LFZ-3-75 Impedances. Also available as Regenerative ECTS2-3500Z-n AZX based system.
	ECTS2-3550Z-n ECTS2-3600F-n	55 or 60 kVA System, Single, Split and Three Phase, 75.0 or 84.0 Arms/Phase @ 230V in 3 Phs Mode, LFZ-3-40 & LFZ-3-75 Impedances. Z system uses 3500AZX Regenerative AC&DC Source.
	ECTS2-3750F-n	75 kVA System, Single, Split and Three Phase, 108 Arms/Phase @ 230V in 3 Phs Mode, LFZ-3-40 & LFZ-3-75 Impedances
	ECTS2-3900F-n ECTS2-31100Z-n	90 or 110 kVA System, Single, Split and Three Phase, 130 Arms/Phase @ 230V in 3 Phs Mode, LFZ-3-40 & LFZ-3-75 Impedances. Also available as 100kVA Regenerative ECTS2-31000Z-n AZX based system.
Included	Hardware	AC Power Source, Measurement System, Lumped Flicker Impedance, Receptacle Panel, System Wiring, Power Input Terminals
	Software	Hfa Software for IEC 61000-3-2 Harmonics and IEC 61000-3-3 Flicker Testing, PPSC Manager AC Source Control, PPSC Test Manager License, IEC-AC-4xx Test Sequences Bundle (IEC 61000-4-11, IEC 61000-4-14, IEC 61000-4-27, IEC 61000-4-28 and IEC 61000-4-34)

Note 1: ECTS2 Test Systems are also available with AZX Series Regenerative Grid Simulator Power Source for EMC testing of PV Inverter, bidirecational On Board EV Chargers etc.



1 | Front Panel - LFZ-1-16 Lumped Impedance & Measurement Module

2 | Front Panel -LFZ-3-16 Lumped Impedance & Measurement Module

3 | Electronic Power Transfer Switch, 3 Phase, 100A

AC SOURCES | SOFTWARE FOR PACIFIC POWER SOURCE PRODUCTS

Enhanced Control of Your PPS Power Source

UPC/PPSC Manager Software gives you the tools necessary to quickly and easily operate your Pacific AC Power Source.
With our complete, graphical interface, control all areas of your AC Power Source testing with simple presets, user prompts, test plans and custom reports. Test Manager allows you to quickly create and run test sequences and test plans. Automated instrument compliance testing and certification lets you obtain pre-configured test sequences and test plans from Pacific Power Source for a variety of standard and custom applications.
A wide range of test sequences compliant to industrial and avionic standards are available.

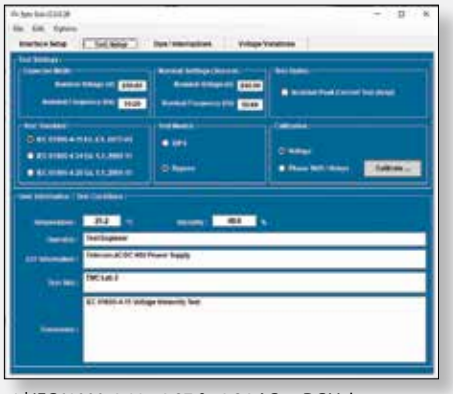
IEC61000-4 AC IMMUNITY TEST ROUTINES

The Pacific Power Source IEC AC Immunity Test option includes pre-defined test sequences for all relevant IEC 61000-4 standards. This option provides a complete solution for IEC AC conducted immunity testing when combined with an LMX, LSX, AFX, ADF, AZX or MS Series AC Power Source. A summary of standard numbers, descriptions, editions and publication dates are provided in the table below. Alternative, Windows 10 based GUI software for all IEC61000-4 Immunity Test standards is avaiable as well.

All IEC test sequences share a common user interface and controls making it easy for an operator to perform multiple tests on a given EUT. The underlying execution platform for the IEC AC Immunity test option is the UPC/PPSC Test Manager program which is a component of the Pacific Power Source UPC/PPSC Studio suite of Windows® software.

IEC Standard	Description	Edition
IEC61000-4-11	Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests (AC <16A) (pre-compliance only)	Edition 3.0, 2020-01
IEC61000-4-13	Testing and measurement techniques – Harmonics and inter harmonics including mains signaling at AC power port, low frequency immunity tests	Edition 1.2, 2015-12
IEC61000-4-14	Testing and measurement techniques – Voltage fluctuation immunity test	Edition 1.2, 2009-08
IEC61000-4-17	Testing and measurement techniques – Ripple on DC input power port immunity test	Edition 1.2 with am1&2, 2009-01
IEC61000-4-27	Testing and measurement techniques - Unbalance, immunity test for equipment with input current not exceeding 16 A per phase (pre-compliance only)	Edition 1.1 Consol. with am1, 2009-04
IEC61000-4-28	Testing and measurement techniques - Variation of power frequency, immunity test for equipment with input current not exceeding 16 A per phase	Edition 1.2 Consol. with am1&2, 2009-04
IEC61000-4-34	Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests for equipment with mains current more than 16 A per phase (pre-compliance only)	Edition 1.1, 2009-11

IEC61000-4-XX AC and DC Power Immunity Test Control Software for Windows



1 | IEC61000-4-11, -4-27 & -4-34 AC or DC Voltage Dips & Interruptions GUI

2 | IEC61000-4-13 Harmonics & Inter Harmonics Immunity test GUI

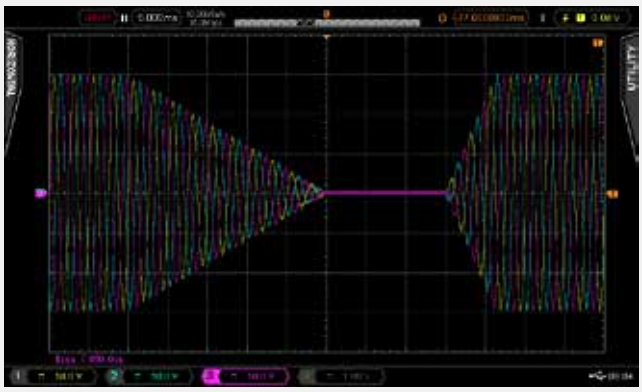
3 | IEC61000-4-14, -4-17 -4-27p & -4-28 AC or DC Immunity tests GUI

AVIONICS COMPLIANCE TEST OPTIONS

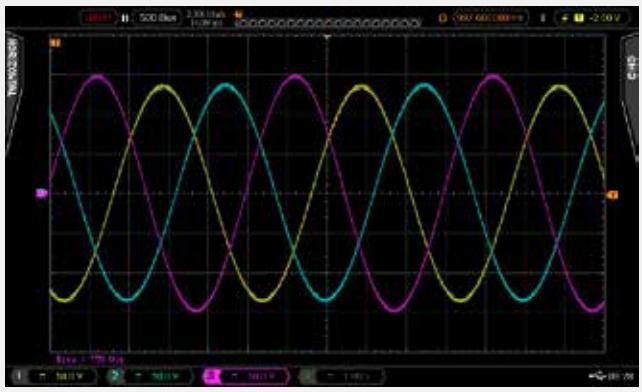
Pacific Power Source provides comprehensive Test Sequence software for the following commercial avionics test standards:

Manufacturer / Organization	Test Standard	Airframe	Revision
Airbus Industries, Europe	ABD0100.1.8	A380	E
	ABD0100.1.8.1	A350	C
	AMD24C	A400M	C
Boeing, USA	787B3	787 Dreamliner	C
Radio Technical Commission for Aeronautics (RTCA)	DO160, Section 16	Commercial Aviation	A & G
US Department of Defense (DoD)	MIL-STD-704	Military Aviation	A & F
US Department of Defense (DoD)	MIL-STD-1399-300	Navy	B

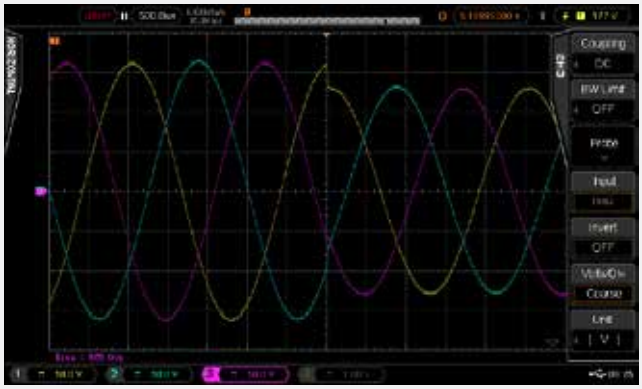
Airbus ABD0100.1.8 (A380):
A380 Table A, Test No.6, 3-Phase Voltage Transient, long duration:



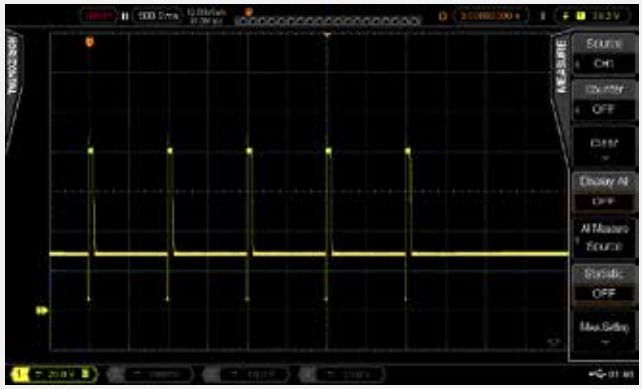
Airbus ABD0100.1.8.1 (A350):
A350 Abnormal Voltage and Frequency Test TCF201:



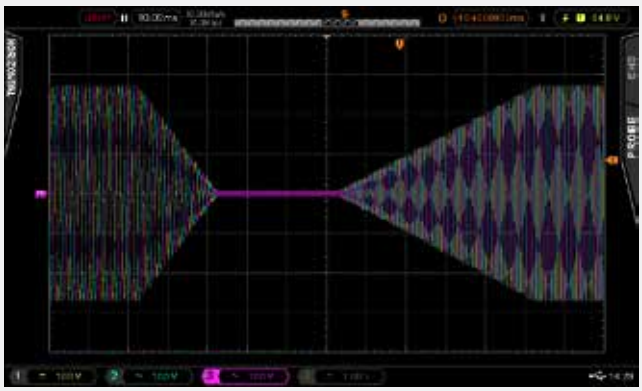
Airbus AMD24C (A400M):
Abnormal Test TCF201:



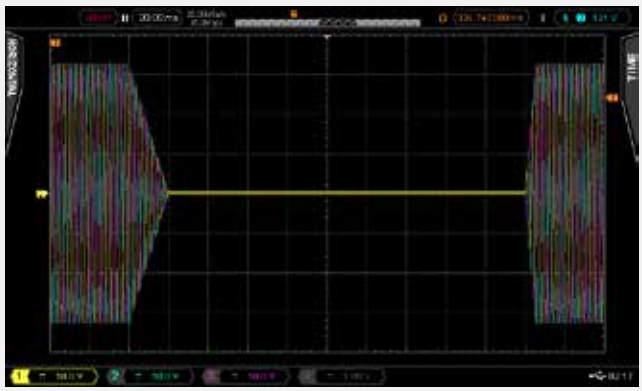
Airbus AMD24C (A400M):
LDC DC Transient Test, 5 second intervals:



Boeing 787B3-0147 (B787):
Voltage Transient (Per Table 3.3.2-6), Section 3.3.2.1 B.2.1a-5:

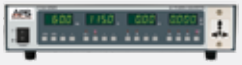


RTCA/DO-160, Section 16, Rev G.:
Section 16.5.1.4 b Test Condition 7:



FREQUENCY CONVERTERS | AC-AC

FC300 Series



The FC 300 Series consists of two single phase frequency and voltage converters in sizes of 500VA and 1kVA.

- **Single phase**
- **Power: 500VA (FC305) and 1000VA (FC310)**
- **Voltage: 0-310V, Frequency: 40-450Hz**

The FC300 Series converters are a simple and cost effective solution for all of your lower power AC power conversion needs.

	MODEL	ø	Power	Voltage		Current max		Frequency
				Range 1	Range 2	Range 1	Range 2	
FC	FC305	1	500VA	0-155V	0-310V	4.6A	2.3A	40-450Hz
	FC310	1	1000VA	0-155V	0-310V	9.2A	4.6A	40-450Hz

APS1000 Series

The APS1000 Series frequency and voltage converters consist of seven single phase output instruments ranging in size from 5kVA to 20kVA.

- **Single phase**
- **Power: from 5kVA to 20kVA**
- **Voltage: Dual range, 0-150V or 0-300V,** optional 300V/600V ranges available on most models
- **Frequency: 45-500Hz** (also available: 360-440Hz)
- Programmable Voltage, Dual Range; Programmable Frequency
- Current Limit Protection
- Simple Front Panel Controls
- Measurement readout for Frequency, Voltage, Current and Power all at once
- Low Voltage Distortion
- High Crest Factor and Peak Current Capability
- RS232 or GPIB Interface Options

MODEL	ø	Rated Power	Frequency Range	Output Voltage max (rms)	Output Amps (rms)	Input Power	Dimensions (HxDxW)	Weight
APS1010	1	10kVA	45- 500 Hz	300V	84A/42A	208/220/240/380/415/480V, 3ø	28"x29"x17"	228kg/503lbs
APS1020		20kVA			168A/84A	208/220/240/380/415/480V, 3ø	33"x29"x17"	350kg/772lbs

APS3000 Series

The APS3000 Series frequency and voltage converters consist of seven three phase output instruments ranging in size from 15kVA to 150kVA.

- **Three phase**
- **Power: from 15kVA to 150kVA**
- **Voltage: Dual range, 0-150V or 0-300V,** optional 300V/600V ranges available
- **Frequency: 45-500Hz** (also available: 360-440Hz)
- Programmable Voltage, Dual Range; Programmable Frequency
- Three Phase or Split Phase Output
- Current Limit Protection
- Measurement readout for Frequency, Voltage, Current and Power for each phase
- Low Voltage Distortion
- High Crest Factor and Peak Current Capability
- RS232 or GPIB Interface Options

MODEL	ø	Rated Power	Frequency Range	Output Voltage max (rms)	Output Amps (rms)	Input Power	Dimensions (HxDxW)	Weight (kg/lbs)
APS3015	3	15kVA	45- 500 Hz	300V	42A/21A	208/220/240/380/415/480V, 3ø	38"x39"x24"	362kg/798lbs
APS3030		30kVA			84A/42A	208/220/240/380/415/480V, 3ø	38"x39"x24"	547kg/1206lbs
APS3060		60kVA			168A/84A	208/220/240/380/415/480V, 3ø	65"x39"x32"	909kg/2004lbs
APS3090		90kVA			252A/126A	380/415/480V, 3ø	71"x39"x48"	1505kg/331lbs
APS3120		120kVA			336A/168A	380/415/480V, 3ø	71"x47"x48"	2139kg/471lbs
APS3150		150kVA			417A/208A	380/415/480V, 3ø	71"x47"x63"	1800kg/396lbs

DCS Series

The DCS Series from Adaptive Power Systems offers autoranging Voltage and Current capabilites to 1500Vdc + 510Adc in a 3U or 2000Vdc + 1000A in a 4U rack mount chassis. Power ratings are 5kW, 10kW, 15kW or 30kW per chassis with master/slave paralleling capabilty to 1080kW

15kW in 3U 19" Rack Chassis

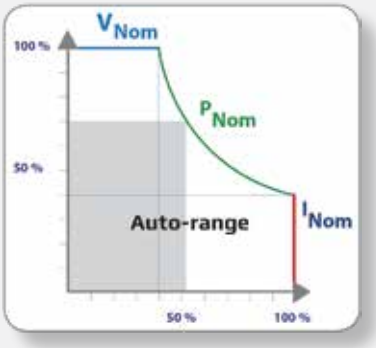
30kW in 4U 19" Rack Chassis

- **Power: up to 15kW per 3U or 30kW per 4U chassis**
- **Voltage: up to 2000Vdc**
- **Current: up to 510A per 3U or 1000A per 4U chassis**
- Unique Auto-Ranging Constant Power Voltage and Current output profile
- Modes: Constant Voltage (CV)/Constant Current (CC) or Constant Power (CP)
- Modular architecture, parallel master/slave operation for higher power and current
- USB, analog inputs, digital I/O standard; optional LAN, Modbus and other interfaces
- Resistance simulation mode included
- Proven and reliable digital design

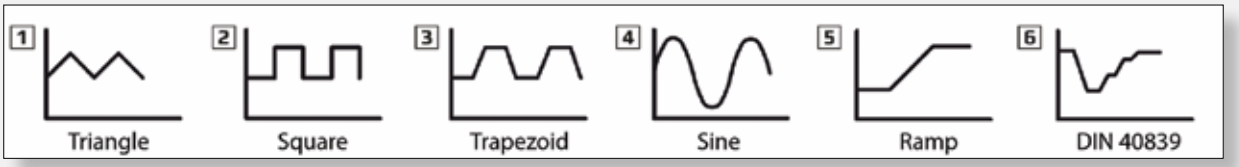
30kW in only 4U!

The unique constant power V-I output operating range of the DCS Series suport higher current at lower voltages as well as higher voltage at lower currents for a broader range of application support using the same DC power supply.

All DCS models include a function generator which can generate typical functions, as displayed in the figure below. These waveforms can be applied to either the output voltage or the output current.



Auto-Ranging Output



Function Generator

	MODEL	Rated Power	Voltage Range	Current Range
DCB Series	DCS80-170	5kW	0 ~ 80 Vdc	0 ~ 120 Adc
	DCS200-70	5kW	0 ~ 200 Vdc	0 ~ 70 Adc
	DCS360-40	5kW	0 ~ 360 Vdc	0 ~ 40 Adc
	DCS500-30	5kW	0 ~ 500 Vdc	0 ~ 30 Adc
	DCS750-20	5kW	0 ~ 750 Vdc	0 ~ 20 Adc
	DCS80-510	15kW	0 ~ 80 Vdc	0 ~ 360 Adc
	DCS200-210	15kW	0 ~ 200 Vdc	0 ~ 210 Adc
	DCS360-120	15kW	0 ~ 360 Vdc	0 ~ 120 Adc
	DCS500-90	15kW	0 ~ 500 Vdc	0 ~ 90 Adc
	DCS750-60	15kW	0 ~ 750 Vdc	0 ~ 60 Adc
	DCS1000-40	15kW	0 ~ 1000 Vdc	0 ~ 40 Adc
	DCS1500-30	15kW	0 ~ 1500 Vdc	0 ~ 30 Adc

	MODEL	Rated Power	Voltage Range	Current Range
DCB Series	DCS80-340	10kW	0 ~ 80 Vdc	0 ~ 240 Adc
	DCS200-140	10kW	0 ~ 200 Vdc	0 ~ 140 Adc
	DCS360-80	10kW	0 ~ 360 Vdc	0 ~ 80 Adc
	DCS500-60	10kW	0 ~ 500 Vdc	0 ~ 60 Adc
	DCS750-40	10kW	0 ~ 750 Vdc	0 ~ 40 Adc
	DCS1000-30	10kW	0 ~ 1000 Vdc	0 ~ 30 Adc
	DCS80-1000	30kW	0 ~ 80 Vdc	0 ~ 1000 Adc
	DCS200-420	30kW	0 ~ 200 Vdc	0 ~ 420 Adc
	DCS360-240	30kW	0 ~ 360 Vdc	0 ~ 240 Adc
	DCS500-180	30kW	0 ~ 500 Vdc	0 ~ 180 Adc
	DCS750-120	30kW	0 ~ 750 Vdc	0 ~ 120 Adc
	DCS1000-80	30kW	0 ~ 1000 Vdc	0 ~ 80 Adc
	DCS1500-60	30kW	0 ~ 1500 Vdc	0 ~ 60 Adc
	DCS2000-40	30kW	0 ~ 2000 Vdc	0 ~ 40 Adc

AC Input options: 380V-480Vac 3ø ±10% + Earth, 45-66 Hz. Specify input voltage as -4 after model number

1 | 5000, 10000 & 15000 Watt Models

2 | 30000 Watt Models

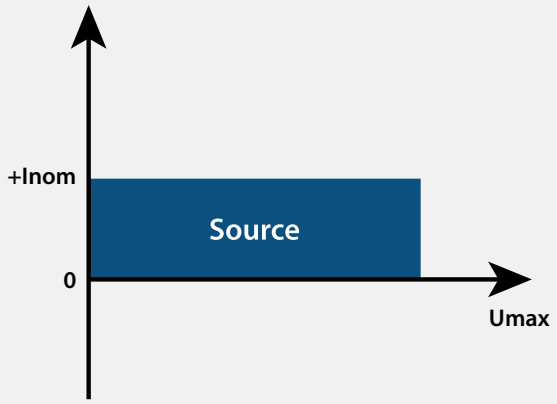
DC POWER SUPPLIES | AC → DC

AL3000 Series

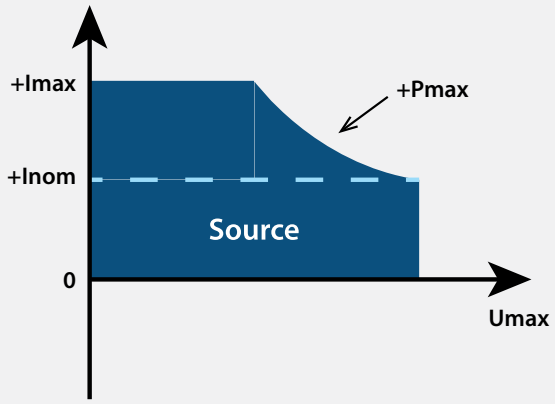
The AL3000 models are unidirectional high performance DC power supplies with up to 4MW of power available.

- **Power: up to 4MW**
- **Voltage: up to 1200V, higher voltages on request**
- **Current: up to 5000A**
- Modes: Constant Voltage (CV)/Constant Current (CC) or Constant Power (CP)
- Modular architecture, parallel circuit possible
- RS232, RS485, analog inputs, digital I/O, safety circuit; optional LAN, USB, Fiber Optic
- Resistance simulation 0-1000Ω, 1mΩ resolution
- Proven and reliable design
- Series AL3000R with power regeneration see page 19
- Customized solutions on request

Version with CC / CV:



Version with CP:



Examples for AL3000 configurations:

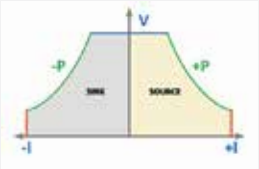
DCB Series

The DCB Series Bi-directional and regenerative DC Supplies from Adaptive Power Systems offer auto-ranging Voltage and Current capabilities to 1500Vdc and 360Adc in a 3U rack mount chassis. Power ratings are 5kW, 10kW, 15kW or 30kW per chassis with master/slave paralleling capability to 1080kW

30kW in only 4U!

- **Power: up to 15kW per 3U or 30kW per 4U chassis**
- **Voltage: up to 2000Vdc**
- **Current: up to 510A per 3U or 1000A per 4U chassis**
- Auto-Ranging Constant Power Voltage and Current output profile
- Source and Sink Capability with energy recovery to the grid
- Modes: Constant Voltage (CV)/Constant Current (CC) or Constant Power (CP)
- Modular architecture, parallel master/slave operation for higher power and current
- USB, analog inputs, digital I/O standard; optional LAN, Modbus and other interfaces
- Resistance mode included
- Proven and reliable digital design

SOURCE + SINK MODES



	MODEL	Rated Power	Voltage Range	Current Range
DCB Series	DCB80-120	5kW	0 ~ 80 Vdc	0 ~ 120 Adc
	DCB200-70	5kW	0 ~ 200 Vdc	0 ~ 70 Adc
	DCB360-40	5kW	0 ~ 360 Vdc	0 ~ 40 Adc
	DCB500-30	5kW	0 ~ 500 Vdc	0 ~ 30 Adc
	DCB750-20	5kW	0 ~ 750 Vdc	0 ~ 20 Adc
	DCS80-360	15kW	0 ~ 80 Vdc	0 ~ 360 Adc
	DCS200-210	15kW	0 ~ 200 Vdc	0 ~ 210 Adc
	DCS360-120	15kW	0 ~ 360 Vdc	0 ~ 120 Adc
	DCS500-90	15kW	0 ~ 500 Vdc	0 ~ 90 Adc
	DCS750-60	15kW	0 ~ 750 Vdc	0 ~ 60 Adc
	DCS1000-40	15kW	0 ~ 1000 Vdc	0 ~ 40 Adc
	DCS1500-30	15kW	0 ~ 1500 Vdc	0 ~ 30 Adc

	MODEL	Rated Power	Voltage Range	Current Range
DCB Series	DCB80-240	10kW	0 ~ 80 Vdc	0 ~ 240 Adc
	DCB200-140	10kW	0 ~ 200 Vdc	0 ~ 140 Adc
	DCB360-80	10kW	0 ~ 360 Vdc	0 ~ 80 Adc
	DCB500-60	10kW	0 ~ 500 Vdc	0 ~ 60 Adc
	DCB750-40	10kW	0 ~ 750 Vdc	0 ~ 40 Adc
	DCB80-1000	30kW	0 ~ 80 Vdc	0 ~ 1000 Adc
	DCB200-420	30kW	0 ~ 200 Vdc	0 ~ 420 Adc
	DCB360-240	30kW	0 ~ 360 Vdc	0 ~ 240 Adc
	DCB500-180	30kW	0 ~ 500 Vdc	0 ~ 180 Adc
	DCB750-120	30kW	0 ~ 750 Vdc	0 ~ 120 Adc
	DCB1000-80	30kW	0 ~ 1000 Vdc	0 ~ 80 Adc
	DCB1500-60	30kW	0 ~ 1500 Vdc	0 ~ 60 Adc
	DCB2000-40	30kW	0 ~ 2000 Vdc	0 ~ 40 Adc

AC Input options: 380V-480Vac 3ø ±10% + Earth, 45-66 Hz. Specify input voltage as -4 after model number

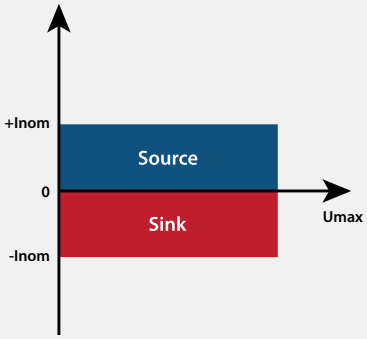
ADAPTIVE POER SYSTEMS

AL3000R Series

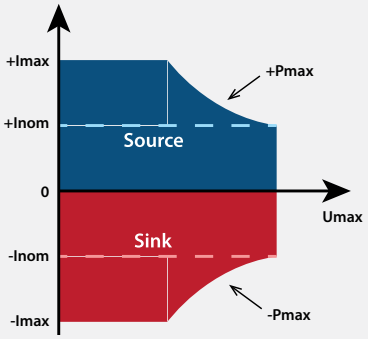
The AL3000R models are regenerative high performance DC power supplies with up to 4MW of power available.

- **Power: up to 4MW**
- **Voltage: up to 1200V**
- **Current: up to 5000A**
- **Full or partial regenerative**
- Modes: Constant Voltage/Constant Current or Constant Power
- Modular architecture, parallel circuit possible
- RS232, RS485, analog inputs, digital I/O, safety circuit; optional LAN, USB, Fiber Optic
- Resistance simulation 0-1000Ω, 1mΩ resolution
- Proven and reliable design
- Customized solutions on request

Version with CC / CV:



Version with CP:



ZENONE ELETTRONICA

3A Series

Available at a power level of 300VA per module, the 3A Series offers three voltage and current load combinations to meet your AC or DC test needs.

- **Modular** (up to 4 Modules per Chassis)
- **AC & DC**
- **Power: 300W/VA**
- **Voltage: up to 300V, DC**
- **Current: up to 20Arms**
- **Frequency: 40-400Hz**
- Operating Modes: CC, CC linear, CR, nonlinear with CF/PF settings
- Windows® compatible Software, Drivers for LabVIEW™

	MODEL	AC	DC	Max. Power (W/VA)	Max. Voltage (Vrms)	Max. Current (Arms)
3A	3A060-20	x	x	300	60	20
	3A150-08	x	x	300	150	8
	3A300-04	x	x	300	300	4

Mainframes are available for 1 or 4 Modules:

MAINFRAME	Slots	Max. Power	Interfaces	Dimensions (WxHxD)	Weight
34M01	1	300VA	RS232	150x177x445mm	5.5kg
34M01-1	1	300VA	RS232+GPIB	150x177x445mm	5.5kg
34M04	4	1200VA	RS232	440x177x445mm	9.3kg
34M04-1	4	1200VA	RS232+GPIB	440x177x445mm	9.3kg

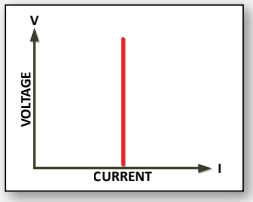
3C & 3D Series

Available in power levels from 1750W/VA to 11.25kW/kVA, the 3C & 3D Series Electronic AC & DC Load is widely used to test AC or DC power products such as Uninterruptable Power Supplies, Solid State and Rotary Frequency Converters, Adjustable AC Voltage Sources or DC Supplies.

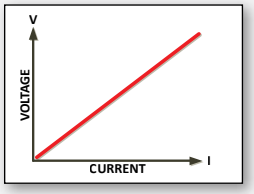
- **AC & DC**
- **Modes: CC, LIN, CV, CP, CR, UPS, AC Rectifier, PV, Battery Discharge**
- **Power: up to 3750VA/W per chassis or parallel to 11.25kVA/kW**
- **Voltage: up to 350Vac and 500Vdc**
- **Current: up to 37.5A per chassis or parallel to 112.5A**
- **Frequency: DC, 40-440Hz**
- **Master/Slave 3-Phase Mode Support for Delta or WYE AC**
- Available Interfaces: LAN, USB, RS232, or GPIB
- Windows® compatible Software, Drivers for LabVIEW™

	MODEL	AC	DC	Max. Power (W/VA)	Max. Voltage (Vac/Vdc)	Max. Current (A)
3C	3C018-18	x	x	1875	350/500	18.75
	3D018-18	x	x	1875	280/400	18.75
	3C028-18	x	x	2800	350/500	17.5
	3C028-28	x	x	2800	350/500	28.0
	3D018-18-EPF	x	x	3700/1875	280/400	18.75
	3C038-28	x	x	3750	350/500	28.0
	3C038-38	x	x	3750	350/500	37.5
	3C075-75	x	x	7500	350/500	75.0
	3C112-112	x	x	11250	350/500	112.5

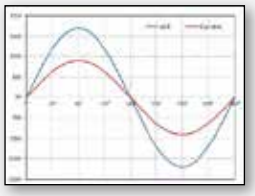
CC:



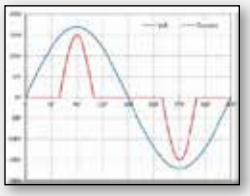
CR:



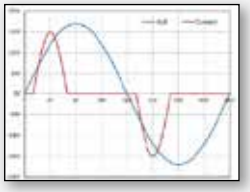
Linear Load:



Non-Linear Load:



Leading Power Factor (Positive PF):



Inrush Current Programming:

1 | Loads of Series 4 in various mainframes

2 | APS Load 3C038-38 Front and Rear)

4 Series

The Series 4 modular DC loads are individually configurable and are available with 40 to 300W per module.

- **Modular** (up to 8 Channels per Chassis)
- **Power: up to 300W (900W in TURBO mode on 41T models)**
- **Voltage: up to 500V, DC**
- **Current: up to 60A (180A in TURBO mode on 41T models)**
- Operating Modes: CC, CV, CR, CP, LED (only LED Modules)
- 41T Models add TURBO 3x Power/Current, CC+CV, CP+CV, MPPT and BMS Test Modes
- Single Channel Load Modules, Dual Channel Load Modules and LED Load Simulation Modules
- Windows® compatible Software, Drivers for LabVIEW™

	MODEL	AC	DC	Max. Power (W)	Max. Voltage (V)	Max. Current (A)
1 channel	41L0630 / 41T0630		x	150	60	30
	41L0660 / 41T0660		x	300	60	60
	41L2512 / 41T2512		x	300	250	12
	41L5012 / 41T5012		x	300	500	12
	41L0615 / 41T0615		x	75	60	15
	41T0880		x	400	80	80
	41T5020		x	400	500	20
2 channel	42L0860		x	250 / 50	80 / 80	60 / 6
	42L0824		x	120 / 120	80 / 80	24 / 24
	42L0803		x	40/40	80/80	3/3
LED	41D3024		x	300	300	24
	41D5012		x	300	500	12
	41D5024		x	300	500	24
	41D1204		x	150	120	4
	42D5006		x	150 / 150	500 / 500	6 / 6
	42D1202		x	75 / 75	500 / 500	2 / 2

The Mainframes are available for 1, 2 or 4 Modules and can be equipped with the optional interfaces USB, RS232, GPIB or LAN. T-version mainframe required for 41T Modules.

	MAINFRAME	Slots	Max. Power	Dimensions (WxHxD)	Weight
Model	44M01/44M01T	1	300W	160x177x452mm	5.5kg
	44M02/44M02T	2	600W	269x177x452mm	7.5kg
	44M04/44M04T	4	1200W	440x177x445mm	9.3kg

ADAPTIVE POWER SYSTEMS

41S Series

The Series 41S Economy Bench DC loads offer cost effective 250W to 700W capability in one of two width's bench chassis. Available in either 80V or 500V DC input voltage range.

- **Bench or Rack**
- **Power: 250W, 350W or 700W**
- **Voltage: 80V or 500V, DC**
- **Current: up to 15A to 140A**
- Operating Modes: CC, CV, CR, CP
- Static & Dynamic CC Modes
- Windows® compatible Software, Drivers for LabVIEW™

	MODEL	AC	DC	Max. Power (W)	Max. Voltage (V)	Max. Current (A)
41S	41S0850		x	250	80	50
	41S0870		x	350	80	70
	41T5015		x	350	500	15
	41T08140		x	700	80	140
	41T5030		x	700	500	30

ADAPTIVE POWER SYSTEMS

41T Series

The Series 41T Bench DC loads offer 800W capability in a half-rack wide bench or rack mount chassis. With full TURBO mode and available in either 80V or 500V DC input voltage range.

- **Bench or Rack**
- **Power: 400W (800W in TURBO mode)**
- **Voltage: 80V or 500V, DC**
- **Current: up to 160A (320A in TURBO mode) or 40A (80A in TURBO mode)**
- Operating Modes: CC, CV, CR, CP, CC+CV and CP+CV
- Fuse, Solar Panel MPPT and BMS Test Modes
- Windows® compatible Software, Drivers for LabVIEW™

	MODEL	AC	DC	Max. Power (W)	Max. Voltage (V)	Max. Current (A)
41T	41T08160		x	800	80	160
	41T5040		x	400	500	20

ADAPTIVE POWER SYSTEMS

5V Series

Available in power levels from 600W to 14,400W, the 5V Series offers higher voltage operation than the comparable 5L Series to support higher voltage, high current applications up to 500Adc.

- **Power: up to 14400W**
- **Voltage: up to 500V**
- **Current: up to 500A**
- 19" Racks
- Available Interface Options: USB, RS232, GPIB, LAN
- Windows® compatible Software, Drivers for LabVIEW™

	MODEL	AC	DC	Max. Power (W)	Max. Voltage (V)	Max. Current (A)
Series 5V	5V006-12		x	600	500	20
	5V012-04		x	1200	500	40
	5V018-06		x	1800	500	60
	5V018-01		x	1800	500	12
	5V024-08		x	2400	500	80
	5V036-12		x	3600	500	120
	5V036-02		x	3600	500	24
	5V054-18		x	5400	500	180
	5V054-04		x	5400	500	36
	5V072-05		x	7200	500	48
	5V072-24		x	7200	500	240
	5V090-06		x	9000	500	60
	5V090-30		x	9000	500	300
	5V108-36		x	10800	500	360
	5V108-07		x	10800	500	72
	5V126-42		x	12600	500	420
	5V144-50		x	14400	500	500

ADAPTIVE POWER SYSTEMS

5D Series

The 5D Series models are special LED loads designed to support development and test of LED drivers. These loads simulate various combinations of LED and their electrical characteristics.

- **Power: 1800W and 3600W**
- **Voltage: up to 600V**
- **Current: up to 24A**
- Available Interface Options: USB, RS232, GPIB, LAN
- Windows® compatible Software, Drivers for LabVIEW™

MODEL	AC	DC	Max. Power (W)	Max. Voltage (V)	Max. Current (A)	Construction
5D18-12		x	1800	600	12	Chassis
5D36-24		x	3600	600	24	Cabinet System

ADAPTIVE POWER SYSTEMS

5VP Series

Available in power levels from 5kW to 480kW, the 5VP Series Cabinet systems provide the highest level of programmable DC Loads available.

- **Power: up to 480kW**
- **Voltage: up to 1250V**
- **Current: up to 2000A**
- Cabinet Systems
- MASTER/SLAVE mode operation up to 8 loads
- Available Interfaces: USB, RS232, GPIB, LAN
- Windows® Software, Drivers for LabVIEW™

	MODEL	Power (kW)	Voltage (V)	Current (A)
5VPxA - 60V Models	5VP05-100A	5	60	1000
	5VP10-100A	10	60	1000
	5VP15-100A	15	60	1000
	5VP20-100A	20	60	1000
	5VP25-100A	25	60	1000
	5VP30-100A	30	60	1000
	5VP35-100A	35	60	1000
	5VP40-100A	40	60	1000
5VPxA - 600V	5VP05-16A	5	600	160
	5VP10-32A	10	600	320
	5VP15-48A	15	600	480
	5VP20-64A	20	600	640
	5VP25-80A	25	600	800
	5VP30-96A	30	600	960
	5VP35-112A	35	600	1120

	MODEL	Power (kW)	Voltage (V)	Current (A)
600V	5VP40-128A	40	600	1280
	5VP50-21A	50	600	210
	5VP60-24A	60	600	240
5VPxA - 1000V Models	5VP05-05A	5	1000	50
	5VP10-10A	10	1000	100
	5VP15-15A	15	1000	150
	5VP20-20A	20	1000	200
	5VP25-25A	25	1000	250
	5VP30-30A	30	1000	300
	5VP35-35A	35	1000	350
	5VP40-40A	40	1000	400
	5VP50-50A	50	1000	500
	5VP60-60A	60	1000	600
5VPxA - 1250V Models	5VP05-05A	5	1000	50
	5VP10-10A	10	1000	100
	5VP15-15A	15	1000	150
	5VP20-20A	20	1000	200
	5VP25-25A	25	1000	250
	5VP30-30A	30	1000	300
	5VP35-35A	35	1000	350
	5VP40-40A	40	1000	400
	5VP50-50A	50	1000	500
	5VP60-60A	60	1000	600

	MODEL	Power (kW)	Voltage (V)	Current (A)
5VPxC - 150V Models	5VP06-60C	6	600	600
	5VP08-80C	8	600	800
	5VP10-100C	10	600	1000
	5VP12-120C	12	600	1200
	5VP15-150C	15	600	1500
	5VP18-180C	18	600	1800
	5VP20-200C	20	600	2000
	5VP24-200C	24	600	2000
5VPxC - 600V Models	5VP06-42C	6	600	452
	5VP08-56C	8	600	560
	5VP10-70C	10	600	700
	5VP12-84C	12	600	840
	5VP15-105C	15	600	1050
	5VP18-126C	18	600	1260
	5VP20-140C	20	600	1400
	5VP24-168C	24	600	1680
5VPxC - 1200V Models	5VP06-24C	6	1200	240
	5VP08-32C	8	1200	320
	5VP10-40C	10	1200	400
	5VP12-48C	12	1200	480
	5VP15-60C	15	1200	600
	5VP18-72C	18	1200	720
	5VP20-80C	20	1200	800
	5VP24-96C	24	1200	960

ADAPTIVE POWER SYSTEMS

ELECTRONIC LOADS | DC

5L Series

Available in power levels from 600W to 2400W, the 5L Series is a workhorse DC load instrument for a wide range of bench and ATE applications up to 60Vdc.

- **Power: up to 1800W**
- **Voltage: up to 60V**
- **Current: up to 360A**
- 19" Rackmount or bench
- Available Interface Options: USB, RS232, GPIB, LAN
- Windows® compatible Software, Drivers for LabVIEW™

	MODEL	AC	DC	Max. Power (W)	Max. Voltage (V)	Max. Current (A)
Series 5L	5L06-12		x	600	60	120
	5L12-12		x	1200	60	120
	5L12-24		x	1200	60	240
	5L18-12		x	1800	60	120
	5L18-24		x	1800	60	240
	5L18-36		x	1800	60	360

ADAPTIVE POWER SYSTEMS

5P Series

Available in power levels from 2400W to 14,400W, the 5P Series Cabinet systems support low voltage, high current applications up to 1000Adc.

- **Power: up to 14400W**
- **Voltage: up to 60V**
- **Current: up to 1000A**
- 19" Cabinet Systems
- Available Interface Options: USB, RS232, GPIB, LAN
- Windows® compatible Software, Drivers for LabVIEW™

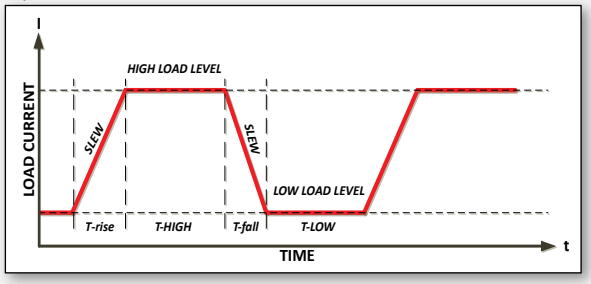
	MODEL	AC	DC	Max. Power (W)	Max. Voltage (V)	Max. Current (A)
Series 5P	5P024-24		x	2400	60	240
	5P024-48		x	2400	60	480
	5P036-24		x	3600	60	240
	5P036-48		x	3600	60	480
	5P036-72		x	3600	60	720
	5P054-36		x	5400	60	360
	5P054-72		x	5400	60	720
	5P054-99		x	5400	60	1000
	5P072-48		x	7200	60	480
	5P072-96		x	7200	60	960
	5P090-60		x	9000	60	600
	5P108-72		x	10800	60	720
	5P126-84		x	12600	60	840
	5P144-96		x	14400	60	960

ADAPTIVE POWER SYSTEMS

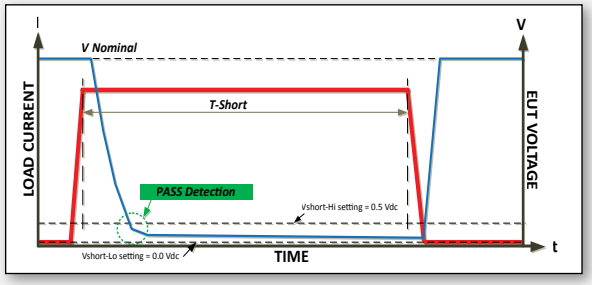
OPERATING MODES OF APS 5 SERIES DC ELECTRONIC LOADS

Following Operating Modes are available for the Series 5L, 5P, 5V and 5VP:

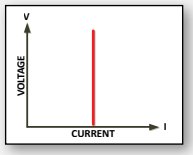
Dynamic Mode:



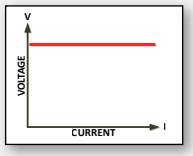
Short Circuit:



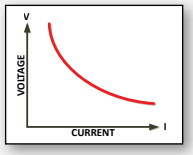
CC:



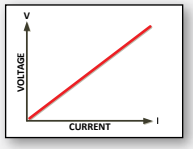
CV:



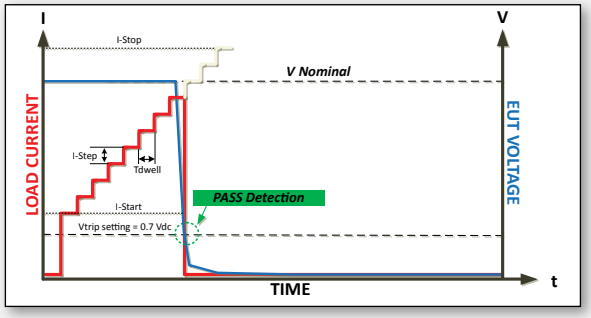
CP:



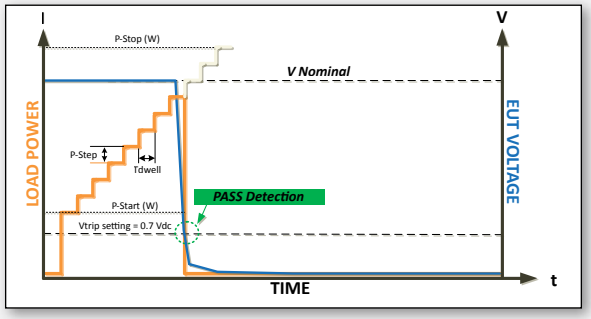
CR:



OCP (Over Current Protection) Mode:



OPP (Over Power Protection) Mode:



ADAPTIVE POWER SYSTEMS

6RL Series

The 6RL Series from Adaptive Power Systems offers energy recovery to the utility of power absorbed by the electronic load. Voltage and Current capabilites to 1500Vdc and 510Adc in a 3U or 2000Vdc +1000A per 4U rack mount chassis. Power ratings are 3.1kW to 15kW per chassis with master/slave paralleling capabilty to 1080kW

30kW in only 4U!

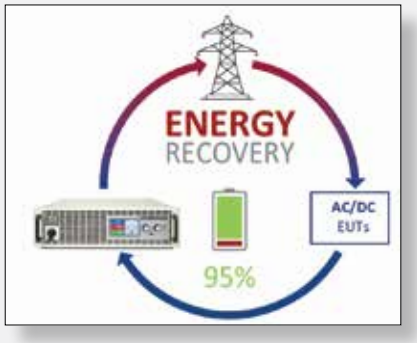
15kW in 3U 19" Rack Chassis

30kW in 4U 19" Rack Chassis

- **Power: Up to 15kW per 3U or 30kW per 4U chassis**
- **Voltage: up to 2000Vdc**
- **Current: up to 510A per 3U or 1000A per 4U chassis**
- Regeneration of energy up to 95%
- Modes: Constant Voltage (CV) / Constant Current (CC) / Constant Power (CP) or Constant Resistance (CR)
- Modular architecture, parallel master/slave operation for higher power and current
- USB, analog inputs, digital I/O standard; optional LAN, Modbus and other interfaces
- Resistance simulation mode included
- Proven and reliable digital design

The 6RL DC loads feed back 95% of energy absorbed back to the power grid. This eliminates the need to install cooling equipment and reduces energy bills. It also allows testing of EUTs without the need for high power outlets in the test lab.

All 6RL models include a function generator which can generate typical functions, as displayed in the figure below. These waveforms can be applied to either the output voltage or the output current.



Energy Recovey to the Grid

	MODEL	Input Power	Voltage Range	Current Range
6RL Series (208Vac input)	6RL3-170-80-2	3.1kW	0 ~ 80 Vdc	0 ~ 170 Adc
	6RL3-70-250-2	3.1kW	0 ~ 250 Vdc	0 ~ 70 Adc
	6RL3-30-500-2	3.1kW	0 ~ 500 Vdc	0 ~ 30 Adc
	6RL3-22-750-2	3.1kW	0 ~ 750 Vdc	0 ~ 22 Adc
	6RL6-340-80-2	6.2kW	0 ~ 80 Vdc	0 ~ 340 Adc
	6RL6-140-250-2	6.2kW	0 ~ 250 Vdc	0 ~ 140 Adc
	6RL6-60-500-2	6.2kW	0 ~ 500 Vdc	0 ~ 60 Adc
	6RL6-44-750-2	6.2kW	0 ~ 750 Vdc	0 ~ 44 Adc
	6RL6-30-1000-2	6.2kW	0 ~ 1000 Vdc	0 ~ 30 Adc
	6RL9-510-80-2	9.3kW	0 ~ 80 Vdc	0 ~ 510 Adc
	6RL9-210-250-2	9.3kW	0 ~ 250 Vdc	0 ~ 210 Adc
	6RL9-90-500-2	9.3kW	0 ~ 500 Vdc	0 ~ 90 Adc
	6RL9-66-750-2	9.3kW	0 ~ 750 Vdc	0 ~ 66 Adc
	6RL9-30-1500-2	9.3kW	0 ~ 1500 Vdc	0 ~ 30 Adc

208Vac Grid Connection Models

	MODEL	Input Power	Voltage Range	Current Range
6RL Series (380~480Vac input)	6RL5-170-80-4	5kW	0 ~ 80 Vdc	0 ~ 170 Adc
	6RL5-70-200-4	5kW	0 ~ 200 Vdc	0 ~ 70 Adc
	6RL5-40-360-4	5kW	0 ~ 360 Vdc	0 ~ 40 Adc
	6RL5-30-500-4	5kW	0 ~ 500 Vdc	0 ~ 30 Adc
	6RL5-20-750-4	5kW	0 ~ 750 Vdc	0 ~ 20 Adc
	6RL10-340-80-4	10kW	0 ~ 80 Vdc	0 ~ 340 Adc
	6RL10-140-200-4	10kW	0 ~ 200 Vdc	0 ~ 140 Adc
	6RL10-80-360-4	10kW	0 ~ 360 Vdc	0 ~ 80 Adc
	6RL10-60-500-4	10kW	0 ~ 500 Vdc	0 ~ 60 Adc
	6RL10-40-750-4	10kW	0 ~ 750 Vdc	0 ~ 40 Adc
	6RL15-510-80-4	15kW	0 ~ 80 Vdc	0 ~ 510 Adc
	6RL15-210-200-4	15kW	0 ~ 200 Vdc	0 ~ 210 Adc
	6RL15-120-360-4	15kW	0 ~ 360 Vdc	0 ~ 120 Adc
	6RL15-90-500-4	15kW	0 ~ 500 Vdc	0 ~ 90 Adc
	6RL15-60-750-4	15kW	0 ~ 750 Vdc	0 ~ 60 Adc
	6RL15-40-1000-4	15kW	0 ~ 1000 Vdc	0 ~ 40 Adc
	6RL15-30-1500-4	15kW	0 ~ 1500 Vdc	0 ~ 30 Adc
	6RL15-1000-80-4	30kW	0 ~ 80 Vdc	0 ~ 1000 Adc
	6RL15-420-200-4	30kW	0 ~ 200 Vdc	0 ~ 420 Adc
	6RL15-240-360-4	30kW	0 ~ 360 Vdc	0 ~ 240 Adc
	6RL15-180-500-4	30kW	0 ~ 500 Vdc	0 ~ 180 Adc
	6RL15-120-750-4	30kW	0 ~ 750 Vdc	0 ~ 120 Adc
	6RL15-80-1000-4	30kW	0 ~ 1000 Vdc	0 ~ 80 Adc
	6RL15-60-1500-4	30kW	0 ~ 1500 Vdc	0 ~ 60 Adc
	6RL15-40-2000-4	30kW	0 ~ 2000 Vdc	0 ~ 40 Adc

380Vac~ 480Vac Grid Connection Models

CURRENT SOURCES

GI Series

The GI Series AC Current Sources are available as 1 and 3 phase versions with current up to 50kA available.

- **1 and 3 phase**
- **Current: up to 50kA**
- **Power: up to 1MVA**
- **Frequency: 40-200Hz**
- Bandwidth: 800Hz
- Continuous or Pulsed Mode versions
- Up to 3 Current Ranges
- Optional Paralleling feature available
- Continuous or Pulse Mode
- 19" table-top version or cabinet system
- Open Design for direct Integration in Production Lines or Automated Test Systems
- Windows® compatible Software
- Standard: RS232, RS485, analog and digital In-/Outputs
- Optional: USB, LAN, Fiber Optic

	Power module	Output Current (Continuous Mode)	Output Current (Pulse Mode)
GI Series	500VA	10A	900A
	1200VA	50A	1300A
	2500VA	120A	2500A
	5000VA	240A	3500A
	7500VA	350A	5000A
	10kVA	500A	6000A
	15kVA	750A	8000A
	20kVA	1000A	10000A
	30kVA	2000A	15000A
	40kVA	4000A	20000A
	50kVA	5000A	30000A
	60kVA	6000A	
	80kVA	8000A	
	100kVA	10000A	
	120kVA	12000A	
	150kVA	15000A	
		20000A	

Modules can be combined as needed.
Other Models on Request.

ZENONE ELETTRONICA

GIS Series

The GIS Series AC&DC Current Sources are available as 1 and 3 phase versions with current up to 5000A available.

- **1 and 3 phase**
- **Current: up to 5000A**
- **Power: up to 200kVA**
- **Frequency: DC, 10-800Hz** with internal Controller or DC, 1500Hz with external Controller (optional 2500Hz)
- Bandwidth: 2500Hz
- up to 2 Current Ranges
- Optional Paralleling feature available
- Continuous or Pulse Mode
- 19“ table version or cabinet
- Open Design for direct Integration in Production Lines or Automated Test Systems
- Windows® compatible Software
- Standard: RS232, RS485, analog and digital In-/Outputs; optional: USB, LAN, Fiber Optic

	Output Voltage	Output Power	Output Current
GIS Series	5-9V	2kW	500A
		5kW	1000A
		10kW	2000A
		25kW	5000A
	10-19V	2kW	200A
		5kW	500A
		10kW	1000A
		20kW	2000A
	20-29V	2kW	100A
		5kW	250A
		10kW	500A
		20kW	1000A
		30kW	1500A
		40kW	2000A

	Output Voltage	Output Power	Output Current
GIS Series	30-49V	2kW	83A
		5kW	166A
		10kW	333A
		20kW	666A
		30kW	1000A
		40kW	1330A
	50-99V	5kW	100A
		10kW	200A
		20kW	400A
		30kW	600A
		40kW	800A
		60kW	1200A
		80kW	1600A
	100-199V	5kW	50A
		10kW	100A
		20kW	200A
		30kW	300A
		40kW	400A
		60kW	600A
		80kW	800A

Other Models on Request

ZENONE ELETTRONICA

M1001 Series

The M1001 Series from Adaptive Power Systems is a cost-effective harmonic power analyzer that is easy to use and provides excellent features.Designed using state-of-the-art Digital Signal Processing, this power analyzer supports gap-less measurement of voltage and current at sampling rates up to 409.6kHz. Multiple voltage and current ranges allow for optimal resolution and accuracy when making measurements providing support for a wide range of power test applications.

- **6 Voltage Ranges up to ±800Vpk / 500Vrms**
- **18 Current Ranges up to ±200Apk / 20Arms**
- **AC or DC Measurement Modes**
- **Numeric and Graphical Data Display Modes**
- **Voltage & Current Harmonics Measurements**
- **Current Inrush Measurements with Programmable On and Off Phase Angles**
- **Energy Star / IEC62301 Compliant Standby Power**
- **Bench Use or 2U Height, 1/2 Rack Mount**

MODEL	Vac Range	Vdc Range	Max AC Current	Max DC Current	Input Power	Height (mm/in)	Weight (Kg/lbs)
M1001	500 Vrms / 800 Vpk	800 Vdc	20 Arms / 200 Apk or Ext.	20 Adc or Ext.	100 ~ 230 Vac	89 / 3.5"	3.5 / 8.4

M2000 Series

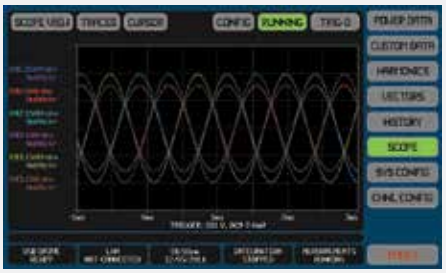
The M2000 Series precision power analyzers from Adaptive Power Systems consist of a four slot mainframe chassis that accommodates either AD type internal current shunt plug-in cards or AX type external CT or shunt cards. Any combination of cards can be used up to four total per chassis. For single phase applications, a pro-configured standard single card model M2001D or M2001X is available. For three phase power applications, the M2003D or M2003X offer three channels.

- **Accuracy, Bandwidth and Ease of Use**
- **Large Color Touch Screen Operation**
- **AC and DC Measurement Modes**
- **Multi-Channel Configurations**
- **Internal Shunt or External Current Transducer Channel Cards**
- **VTHD and ITHD Measurements**
- **Multiple Virtual Power Analyzer Configurations**
- **Energy Star / IEC62301 Compliant Standby Power**
- **Bench Use or 4U Height Rack Mount**

MODEL	Channels	Vac Range	Vdc Range	Max AC Current	Max DC Current	Input Power	Height (mm/in)	Weight (Kg/lbs)
M2001D	1	1000 Vrms / 1750 Vpk	1000 Vdc	20 Arms / 140 Apk	20 Adc	85 ~ 265 Vac	137 / 5.4"	3.2 / 7.0
M2001X	1	1000 Vrms / 1750 Vpk	1000 Vdc	Ext. CT or Shunt	Ext.	85 ~ 265 Vac	137 / 5.4"	3.2 / 7.0
M2003D	3	1000 Vrms / 1750 Vpk	1000 Vdc	20 Arms / 140 Apk	20 Adc	85 ~ 265 Vac	137 / 5.4"	3.2 / 7.0
M2003X	3	1000 Vrms / 1750 Vpk	1000 Vdc	Ext. CT or Shunt	Ext.	85 ~ 265 Vac	137 / 5.4"	3.2 / 7.0
M2000	Max. 4							

1 | M2000 Harmonics Display Mode

2 | M2000 Vector Display Mode



3 | M2000 Scope Display Mode

Our Suppliers

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