

Industry Leading AC & DC Power Test & Measurement Solutions



Our Brands



ALL-IN-1 REGENERATIVE AC/DC POWER SOURCE

Regenerative > 90%, Bidirectional

PACIFIC POWER SOURCE

AZX-Series: Regenerative AC & DC Power Sources, Load + PHIL

- » Single and Three Phase
- » 30kVA, 45kVA or 55kVA, Parallel up to 550kVA
- » 15Hz-1000Hz; Extended 1 - 10,000Hz
- » AC, DC, AC+DC, DC+AC
- » Constant Power Dual Voltage
- » AC Voltage Ranges: 0-240 V L-N / 0-415 V L-L, and 0-480 V-LN / 0-830 V-LL
- » DC Voltage Ranges: 0-340 Vdc and 0-680 Vdc
- » Sine & Arbitrary Waveforms
- » **AC Current Source**
- » **AC & DC Load Mode**
- » **Optimized for PHIL**
- » Full Galvanic Isolation
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform



AZX-Series



AGX-Series

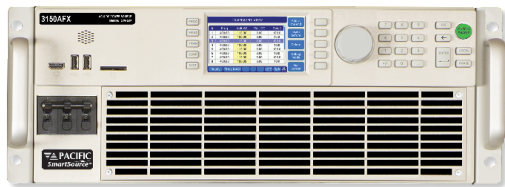
PACIFIC POWER SOURCE

AGX-Series: Regenerative AC & DC Power Sources

- » Single, Split or Three Phase
- » AC, DC, AC+DC, DC+AC
- » 6kVA to 21kVA in 4U
- » Parallel up to 252kVA
- » 15-1200Hz (1-3000Hz extended)
- » Single Voltage Range with Constant-Power, 0-350Vac / ±500Vdc
- » Full Galvanic Isolation
- » AC & DC Load Option
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform

PROGRAMMABLE AC & DC POWER SOURCES

19" RACK MOUNT



AFX-SERIES



CPS120E-3U 2000VA AC & DC Power Source

PACIFIC POWER SOURCE

AFX-Series: Highest Power Density AC & DC Power Source

- » Single and Three Phase
- » 6kVA up to 180kVA
- » 15-1200Hz (1-3000Hz extended)
- » AC, DC, AC+DC, DC+AC
- » Single voltage range with Constant-Power, 0-333Vac / 425Vdc
- » Sine & Arbitrary Waveforms
- » Harmonic waveform synthesis, analysis
- » Programmable output impedance
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform

ADAPTIVE POWER SYSTEMS

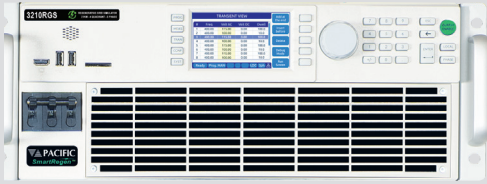
CPS100S Series: AC&DC Power Sources

- » Compact, 2U, 3U and 4U Rack mount Power Sources
- » Single and Three Phase modes
- » 600VA up to 5000VA
- » DC, 15-1000Hz
- » AC, DC, AC+DC, DC+AC
- » Dual voltage ranges with Constant-Power, 0-150Vac / 0-300Vac, 0-212Vdc / 0-424Vdc
- » Sine & Arbitrary Waveforms
- » USB, RS232, RS485 Interfaces standard
- » LAN or GPIB Optional

2-IN-1 REGENERATIVE GRID SIMULATORS (4-QUADRANT)



Regenerative > 90%, Bidirectional



RGS-Series

PACIFIC POWER SOURCE
RGS-Series: Regenerative Grid Emulators

- » Single, Split or Three Phase
- » 12kVA to 21kVA in 4U
- » Parallel up to 252kVA
- » AC, DC. Optional AC+DC, DC+AC
- » 15-200Hz
- » Single voltage range with Constant-Power, 0-350Vac / ±500Vdc
- » Full Galvanic Isolation
- » AC & DC Load Option
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform

PACIFIC POWER SOURCE
GSZ-Series: Regenerative Grid Simulators + P-HIL

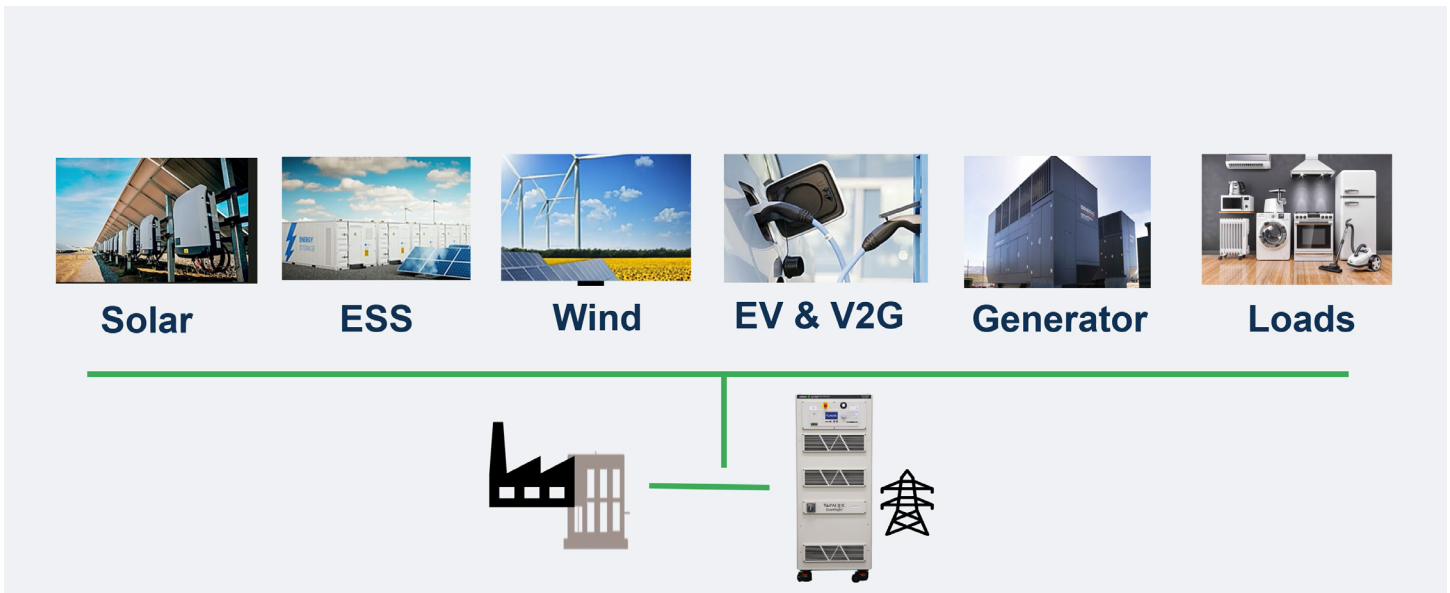
- » Single and Three Phase
- » 30kVA, 45kVA or 55kVA, Parallel up to 550kVA
- » 15Hz-200Hz
- » AC, DC. Optional AC+DC, DC+AC
- » Constant Power Dual Voltage Range
- » AC Voltage Ranges: 0-240 V L-N / 0-415 V L-L, and 0-480 V-LN / 0-830 V-LL
- » DC Voltage Ranges: 0-340 Vdc and 0-680 Vdc
- » Sine & Arbitrary Waveforms
- » Full Galvanic Isolation
- » **Optimized for PHIL**
- » AC & DC Load Option
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform



GSZ Series

What is a Grid Simulator or Emulator?

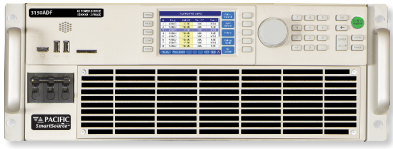
Pacific Power Source's Regenerative Grid Simulator, also known as an Emulator, emulates utility power. Its Bi-directional power capability is ideal for testing the impacts of e-mobility and grid-tied devices on the grid. If you need to emulate loads as well, our grid simulators have a 2-in-1 Source + Load option capabilities.



Test Applications

EV Charging, On Board Chargers (OBC), Wallboxes, V2G, V2H, V2X, and EV Charging Cables; Solar PV/Grid-Tied Inverters; Energy Storage Systems (ESS), Smart-Grid Simulation; UPS Products and PDUs; IEC Compliance, and more.

PROGRAMMABLE AC-POWER SOURCES



ADF-Series

PACIFIC POWER SOURCE ADF-Series: High Power AC Sources

- » 19" Rack Mount
- » Single or Three phase models
- » 15kVA up to 180kVA
- » 15-500Hz (45-1200Hz option)
- » Single voltage range with Constant-Power, 0-300Vac / 425Vdc
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform



FVC-Series

ZENONE ELETTRONICA FVC-Series: 3 Phase Voltage and Frequency Converter

- » 3-phase with 1 or 2 ranges
- » 5-1000kVA
- » up to 1000VLL
- » 40-200Hz
- » RS232/RS485, USB, LAN

LOW POWER AC SOURCES



LSX-Series

PACIFIC POWER SOURCE LSX-Series: 1,2 & 3 Phase AC Sources

- » Single, Split or Three Phase models
- » 1500VA up to 6000VA
- » Voltage: up to 600Vrms (T Option)
- » 15-1200Hz
- » Sine & Arbitrary Waveforms
- » LAN (LXI), USB, GPIB, RS232
- » **SmartSource Suite** Remote Control Platform



CGS100-Series

ADAPTIVE POWER SYSTEMS CGS100-Series: 1-Phase Source with AC- or DC-Output

- » Single phase; only sinewave
- » 1- Φ : 500VA, 1250VA, 2000VA or 4000VA
- » AC or DC Output
- » DC, 40-500Hz
- » Voltage:
 - AC: 0-155Vac and 5-310Vac
 - DC: 0-210Vdc and 5-420Vdc



FC300-Series

ADAPTIVE POWER SYSTEMS FC300-Series: Compact Single Phase Frequency Converters

- » Single phase; only sine wave
- » 500VA and 1000VA
- » 45-450Hz
- » Dual Voltage Range: 0-155V or 0-310V, 1 phase

LINEAR AC-POWER SOURCE



LMX-Series

PACIFIC POWER SOURCE LMX-Series: 1,2 & 3 phase Linear AC

- » Low Noise, Low Distortion
- » Linear Technology
- » 15-5000Hz
- » 500VA to 30kVA
- » up to 600Vrms (T Option)
- » Sine & Arbitrary Waveforms
- » LAN (LXI), USB, GPIB and RS232
- » **SmartSource Suite** Remote Control Platform

WHY LINEAR?

- » The linear LMX Series power sources are unmatched in their ability to produce high crest factor, low-distortion, high fidelity output waveforms required by the most demanding AC Test Power applications.
- » Stand-alone models range from 500 VA to 6 kVA. Larger chassis may be paralleled to create systems that range from 8kVA to 30 kVA.

PROGRAMMABLE DC-POWER SUPPLIES

5 kW up to 1MW / 2000V



DCS Series-DC Power Supplies



DCB Series-Bi-directional DC Power Supplies



DCS and DCB Series-Parallel Cabinet DC Power

ADAPTIVE POWER SYSTEMS DCS-Series: 3U & 4U DC Power Supplies

- » 19" Rack Mount
- » up to 15kW in 3U, 30kW in 4U
- » Voltage and Current Doubling Technology using Auto Ranging
- » 80V up to 2000V
- » Parallel up to 480kW

ADAPTIVE POWER SYSTEMS DCB-Series: 3U & 4U Bi-directional DC Power Supplies/Loads (Regenerative)

- » up to 15kW in 3U, 30kW in 4U
- » Voltage and Current Auto Ranging
- » 80V up to 2000V
- » Regenerative when sinking current
- » Three phase 480V, 50/60Hz AC input
- » Parallel up to 1MW

1 & 2-QUADRANT DC-POWER SUPPLIES

6.7 kW up to 4MW / 1200V

Regenerative DC Power Supplies



AL3000-Series



AL3000R-Series



ZENONE ELETTRONICA AL3000-Series: High-power DC-power supplies

- » up to 4MW, 5000A
- » up to 1200V
- » Operating modes: CV, CC, CP
- » Modular architecture, possible parallel connection
- » Special versions available on request

ZENONE ELETTRONICA AL3000R-Series: Regenerative high-performance DC-power supplies

- » up to 4MW, 5000A
- » up to 1200V
- » Regenerative
- » Quick rise times < 1ms
- » Operating modes: CV, CC, CP, CR
- » Modular architecture, can be connected in parallel
- » Multichannel options
- » RS232, RS485, analog inputs, digital I/O, Safety-Circuit; Optional LAN, USB, fiber optic
- » Resistor simulation 0-1000Ω, 1mΩ resolution
- » Special versions available on request
- » Options: ISO-Guard, redundant Safety circuit, output relay

4 QUADRANT REGENERATIVE AC & DC LOADS

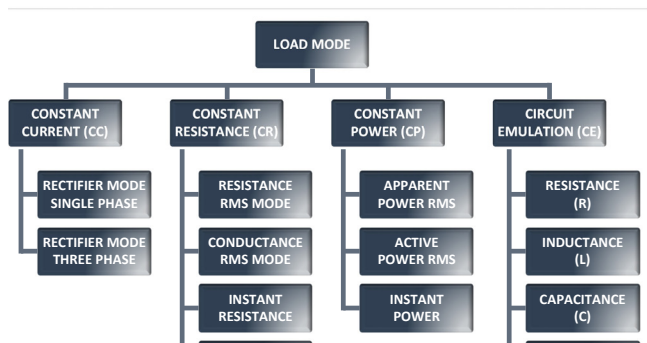


ELZ-Series

Higher Power Load up to 550kW

PACIFIC POWER SOURCE
ELZ Series: AC-& DC Load with P-HIL

- » Single, Split & 3 Phase Load Modes
- » 30kVA, 45kVA or 55kVA, Parallel up to 550kVA
- » **AC Voltage Ranges:** 5 - 220V_{LN}/ 9 - 380 V_LL, and 5 - 440 V_{LN} / 9 - 760 V_LL
- » **DC Voltage Ranges:** 0 - ±335 VDC, and 9 - ±650 VDC
- » 15Hz-1000Hz; Extended 1 - 10,000Hz
- » Optimized for Power Hardware in the Loop
- » **AC Modes:** Constant Current, Constant Power & Apparent Power, Constant Resistance, Constant Voltage, CC+CR, CC / CS Rectifier Mode 1Ø & 3Ø
- » **DC Modes:** Constant Current, Constant Power, Constant Resistance, Constant Voltage, CR+CC
- » Plus additional **Circuit Emulation Mode**
- » Analog control via RMS-values or real-time waveforms, Small signal bandwidth up to 5kHz
- » Full Galvanic Isolation
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform



Features	CC Mode	CR Mode	CP Mode	CE Mode
User Waveform	✓	✓	✓	
Rectifier Waveform	✓	✓	✓	
Current Harmonics	✓			
Current Inter Harmonic	✓			
Sync Mode	✓	✓	✓	✓
Transient Programming	✓	✓	✓	
AC, DC & AC+DC Mode	✓	✓	✓	✓
Analog Input Programming	✓	✓	✓	

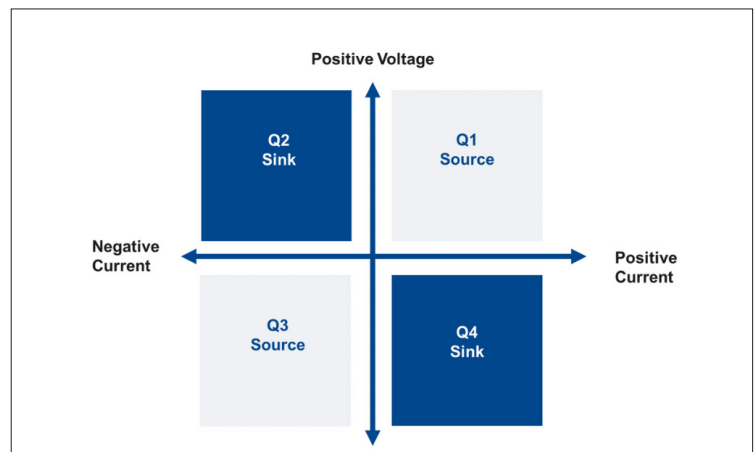
Available ELZ Load Operating Modes



RLS-Series

PACIFIC POWER SOURCE
RLS-Series: Regenerative AC+DC Load

- » Single, Split or Three phase models
- » 6kVA up to 252kVA
- » 15-1200Hz
- » Input Voltage: 30-350Vac / ±500Vdc
- » Full Galvanic Isolation
- » **AC Modes:** Constant Current, Constant Power & Apparent Power, Constant Resistance, Constant Voltage, CC+CR, CC / CS Rectifier Mode 1Ø & 3Ø
- » **DC Modes:** Constant Current, Constant Power, Constant Resistance, Constant Voltage, CR+CC
- » LAN (LXI), RS232, USB, GPIB
- » **SmartSource Suite** Remote Control Platform



Bidirectional, Regenerative 4 Quadrant Load (Both ELZ and RLS Series)

REGENERATIVE DC LOADS

3.1 kW up to 480kW / 1500V



6RL Series



6RL Series - 4U



ADAPTIVE POWER SYSTEMS

6RL Series: Regenerative DC loads 3U Height

- » up to 2000V
- » 3.1kW to 15kW in 3U Rack Mount
- » up to 510A
- » Parallel in Master/Slave Mode
- » Energy recovery up to 94%
- » 208Vac or 380Vac~480Vac Grid Connection models
- » Also see APS DCB Series Source/Sink DC Power Supply & Load Combination

ADAPTIVE POWER SYSTEMS

6RL Series: Regenerative DC loads 4U Height

- » up to 2000V
- » 30kW in 4U Rack
- » up to 1000A
- » Parallel in Master/Slave Mode
- » Energy recovery up to 94%
- » 208Vac or 380Vac~480Vac Grid Connection models
- » Also see APS DCB Series Source/Sink DC Power Supply & Load Combination

HIGH POWER DC & LED LOADS

1800W up to 480kW / 1500V



5L Series 5L

ADAPTIVE POWER SYSTEMS

5L Series: Compact DC loads

- » up to 1800W
- » up to 60V
- » up to 360A
- » 19"- Racks
- » Optional interface: USB, RS232, GPIB, LAN



5D Series

ADAPTIVE POWER SYSTEMS

5D Series: LED loads

- » 1800W or 3600W
- » up to 600V
- » 12A or 24A
- » 19"- Rack Mount or Cabinet
- » Optional interface: USB, RS232, GPIB, LAN



APS 5P-Series and 5V-Series

ADAPTIVE POWER SYSTEMS

5V Series: DC loads

- » up to 14400W
- » up to 500V
- » up to 5000A

5P Series: DC loads

- » up to 14400W
- » up to 60V
- » up to 1000A

Both:

- » 19"- Rack Mount or Cabinet
- » Optional interface: USB, RS232, GPIB, LAN



APS 5VPxA-Series



APS 5VPxC-Series

ADAPTIVE POWER SYSTEMS

5VPxA & 5VPxC Series: DC loads

- » 5kW to 60kW
- » Parallel to 300kW
- » up to 1250V
- » up to 2000A
- » Cabinets on Casters

AC & DC ELECTRONIC LOADS

Up to 33,75 kVA / 350V

Tabletop and 19"-versions



3C Series



3D Series

ADAPTIVE POWER SYSTEMS 3C Series: AC&DC-Loads

- » up to 22.5kVA/kW 1 ϕ or 67.5kW 3 ϕ
- » Five models with 1875 to 3750 VA/W in 4U
- » up to 350Vac, 500Vdc
- » up to 112.5A
- » DC, 40-440Hz
- » Single and Three Phase Load Configurations
- » LAN, USB, RS232, GPIB
- » PC-Software AC&DC Load Control

ADAPTIVE POWER SYSTEMS 3D Series: AC&DC-Loads

- » 1875W / 1875VA or 3700VA, 1 ϕ
- » 280Vac, 400Vdc
- » 18.75A

3C Series Model overview			
Model	Max. Pwr (VA or W)	Max. Volt (Vac/Vdc)	Max. Current (A)
3C018-18	1875	350 / 500	18.75
3C028-18	2800	350 / 500	18.75
3C028-28	2800	350 / 500	28.0
3C038-28	3750	350 / 500	28.0
3C038-38	3750	350 / 500	37.5
3C056-56	5600	350 / 500	56.0
3C075-75	7500	350 / 500	75.0
3C112-112	11250	350 / 500	112.5
3C150-112	15000	350 / 500	112.5
3C188-112	18750	350 / 500	112.5
3C225-112	22500	350 / 500	112.5

DC ELECTRONIC LOADS

Up to 33,75 kVA / 350V

Modular Plug-in versions



4 Series

ADAPTIVE POWER SYSTEMS 4 Series: Modular DC loads

- » up to 400W
- » up to 500Vdc
- » up to 80A
- » Modular (up to 8 channels per chassis)
- » PC-Software available
- » Mainframes for 1, 2 or 4 modules

Model series	max. power	max. voltage	max. current
1-Channel modules	75-300W	60-500V	12-60A
2-Channel modules	250/50W, 120/120, 40/40	80/80 V	60/6, 24/24, 3/3 A
LED modules	300W	500W	24A



41S Series



41T Series Turbo

ADAPTIVE POWER SYSTEMS 41S Series: Economy DC loads

- » 250W, 350W or 700W
- » 80V or 500V
- » 15A, 30A, 50A, 70A or 140A
- » 1/4 or 1/2 rack wide or bench top
- » Standard interface: USB & RS232

Model	Power	Voltage	Current
41S0850	0-250 W	0-80 V	0-50 A
41S0870	0-350 W	0-80 V	0-70 A
41S5015	0-350 W	0-500 V	0-15 A
41S08140	0-700 W	0-80 V	0-140 A
41S5030	0-700 W	0-500 V	0-30 A

ADAPTIVE POWER SYSTEMS 41T Series: Half Rack DC loads

- » 800W, 1600W in TURBO mode
- » 80V or 500V
- » 40A or 160A
- » 19" Half Rack with or bench top
- » Optional interface: USB, RS232, GPIB, LAN

Model	Power	Voltage	Current
41T08160	0-800 W	0-80 V	0-160 A
41T5040	0-800 W	0-500 V	0-40 A

AC & DC CURRENT SOURCES

50,000 AMPS, 1 MVA



GI2K-Series

ZENONE ELETTRONICA**GI2k-Series: AC Current Sources**

- » Single and Three Phase
- » up to 50,000 Amps
- » up to 1 MVA
- » 40~200 Hz
- » Continuous or Pulsed Mode
- » Up to three Current Ranges
- » Possible to be connected in parallel
- » Standard: RS232, RS485, Analog and Digital I/O
- » Optional: USB, LAN, Fiber Optic



GIS2K-Series

ZENONE ELETTRONICA**GIS2k-Series: AC & DC Current Sources**

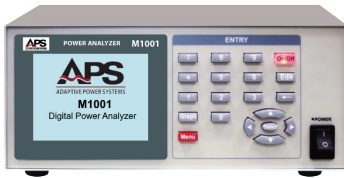
- » Single and Three Phase
- » up to 5000 Amps
- » up to 200kVA
- » DC, 10~800 Hz, Optional 2500Hz
- » Bandwidth: 2500Hz
- » Continuous or Pulsed Modes
- » Up to two Current Ranges
- » Standard: RS232, RS485, Analog and Digital I/O
- » Optional: USB, LAN, Fiber Optic

CURRENT SOURCE APPLICATIONS

- » Continuous current generators for thermal testing and long-term test of circuit breakers
- » Pulse generators for magnetic trip tests of circuit breakers
- » Testing and calibration of amperemeters and power meters
- » Trip test of fuses
- » Heating tests

Zenone Elettronica is able to produce current sources in a wide variety of designs and customized solutions. Many combinations of power and current are possible. Open frame versions for the direct integration in production lines and automated test systems are also available.

SINGLE OR MULTI-CHANNEL POWER ANALYZERS



M1001 Single-Channel Power Analyzer



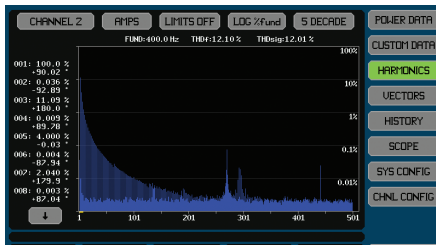
M2000 Multi-Channel Power Analyzer

ADAPTIVE POWER SYSTEMS M1001 Single-channel Power Analyzer

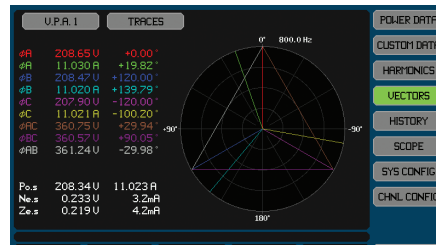
- » 6 Voltage Ranges up to $\pm 800\text{Vpk}$ / 500Vrms
- » 18 Current Ranges up to $\pm 200\text{Apk}$ / 20Arms
- » AC or DC Measurement Modes
- » Numeric and Graphical Data Display Modes
- » Voltage & Current Harmonics Measurements
- » VTHD and ITHD Measurements
- » Power ON/OFF Cycling with Programmable On and Off Phase Angles
- » Bench Use or 2U Height, 1/2 Rack Mount

ADAPTIVE POWER SYSTEMS M2000 Multi-channel Power Analyzer

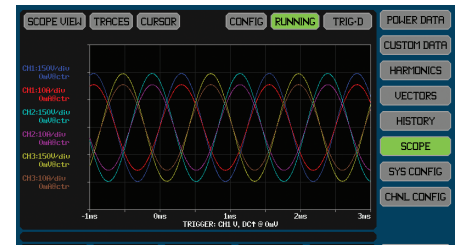
- » Accuracy, Bandwidth and Ease of Use
- » Large Color Touch Screen Operation
- » Up to four Channels
- » Internal or External Current Shunt Cards
- » Numeric and Graphical Displays
- » Energy Star / IEC62301 Compliant Standby Power Measurement mode
- » Ultra-quiet Fan-less Operation
- » Bench Use or 4U Height 19" Rack Mount



1 | M2000 Harmonics Display Mode



2 | M2000 Vector Display Mode



3 | M2000 Scope Display Mode

SYSTEM SOLUTIONS IN ONE-STOP

NEED A CUSTOM SOLUTION?

PPST provides custom, integrated solutions to give you a comprehensive system that suits your project requirements. For example, if you need a combination of our AC Power Sources, loads, and advanced power analyzers, we can package the solution together in a custom cabinet. We directly support and service all of our brands, worldwide.

- » Virtual or In person Training
- » Custom Solutions
- » Integrated Racks
- » Rentals
- » Calibration
- » One-Stop Service & Support

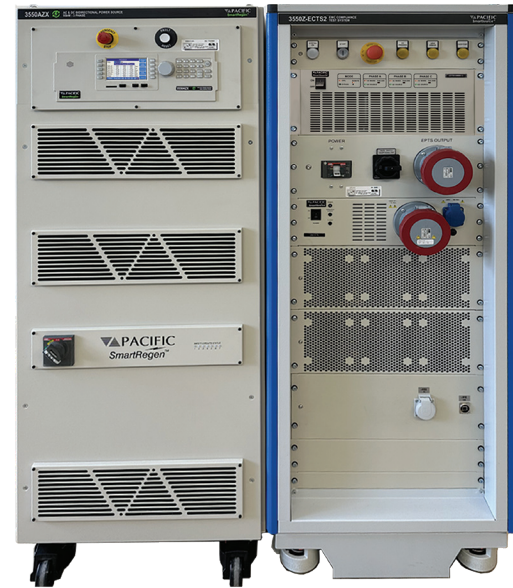


HARMONICS & FLICKER TEST SYSTEMS

PACIFIC POWER SOURCE

IEC Harmonics, Flicker & Immunity Test Systems - ECTS2 Series REGENERATIVE Systems Available

- » Single and three phase, 6kVA up to 110kVA
- » Wide Range of Power Levels Available
- » Lumped Flicker Impedance for Flicker Testing
- » EMC Test Software for Harmonics, Flicker and Immunity
- » IEC compliance test sequences included
- » Create and save custom test sequences
- » Detailed test reports to documents EUT compliance
- » Full Compliance per:
 - » IEC 61000-3-2 & -3-11 Harmonics
 - » IEC 61000-3-3 & -3-12 Flicker
 - » IEC 61000-4-13 Inter-harmonics
 - » IEC 61000-4-14 AC Voltage Fluctuations
 - » IEC 61000-4-17 DC Ripple
 - » IEC 61000-4-28 Frequency Variation
- » Transfer Switch Option for IEC 61000-4-11, 4-27, 4-29, and -4-34
 - » IEC 61000-4-11 AC Voltage Dips, Interruptions and Variations
 - » IEC 61000-4-27 AC Voltage Unbalance three phase
 - » IEC 61000-4-29 DC Voltage Dips, Interruptions and Variations
 - » IEC 61000-4-34 AC Voltage Dips, Interruptions and Variations



IMMUNITY TEST SYSTEMS

PACIFIC POWER SOURCE

Immunity Test Systems - EPTS Series REGENERATIVE Systems Available

- » Single and three phase, 6kVA up to 72kVA
- » Wide Range of Current Levels Available
- » Meets required 1 ~ 5 usec rise/fall time for IEC61000-4-11/34
- » Up to 0-400 VAC L-N / 690V L-L Test Voltage
- » AC Bias Input: 120Vac or 230Vac, 50/60Hz
- » EMC Test Software for AC voltage dips, interruptions and variations
- » Test Files for IEC61000-4-11, -4-27 and -4-34 Included
- » Create and save custom test sequences
- » Detailed test reports to documents EUT compliance
- » Full Compliance per:
 - » IEC 61000-4-11 AC Voltage Dips, Interruptions and Variations
 - » IEC 61000-4-13 Inter-harmonics
 - » IEC 61000-4-14 AC Voltage Fluctuations
 - » IEC 61000-4-17 DC Ripple
 - » IEC 61000-4-27 AC Voltage Unbalance three phase
 - » IEC 61000-4-28 Frequency Variations
 - » IEC 61000-4-29 DC Voltage Dips, Interruptions and Variations
 - » IEC 61000-4-34 AC Voltage Dips, Interruptions and Variations



Immunity Test System

WORLDWIDE SALES, SERVICE, AND SUPPORT



Over 50 Years of Reliable Experience

PPST Solutions is headquartered in Irvine, California, at our 33,000 square ft. R&D and manufacturing facility. Our reputation as a market and technology leader is best demonstrated by our continuing investments in both R&D and world-wide customer support. Our brands deliver complementary, best-in-class solutions to meet a wide range of test requirements.

Innovate the way you test.

PPST has over 50 years of reliable experience and a loyal customer-base because of our differentiated products, service, and people. Our extensive team brings together thought leadership, expertise, and passion to develop cutting edge power test solutions to enable the future of electrification, today. As an early pioneer in the development of solid-state power conversion equipment, our continued growth and success is centered on driving customer value.

Core Values

- High Performance, Safety & Reliability
- Best-in-Class User Experience
- Versatility & Future-Proofing
- Customized System Solutions
- Fast Lead Times & Rental Options
- Application Expertise
- Excellent Customer Service & Technical Support

Our Brands



PPST Solutions
Sales: USA, Canada, Mexico,
South America

Irvine, CA, USA
Tel: +1 888-239-1619
Fax: +1 949-756-0838
Mail: info@ppstsolutions.com
www.ppstsolutions.com

Sales: Europe
Caltest Instrument, GmbH

Kappelrodeck, Germany
Tel: +49(0)7842-99722-00
Fax: +49(0)7842-99722-29
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PPST Shanghai

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sales@ppst.com.cn