



Aerospace Test Solutions

Product Guide

Aerospace Test Solutions

Power Converters and
Compliance Testing



Aerospace Test Solutions

Applications:

- AC motors or inductive loads
- Power converters, power generators
- PDUs, auxiliary power
- EMC Immunity Testing



Commercial Airplanes



Military & Defense



eVTOL, Flying Taxis



Drones

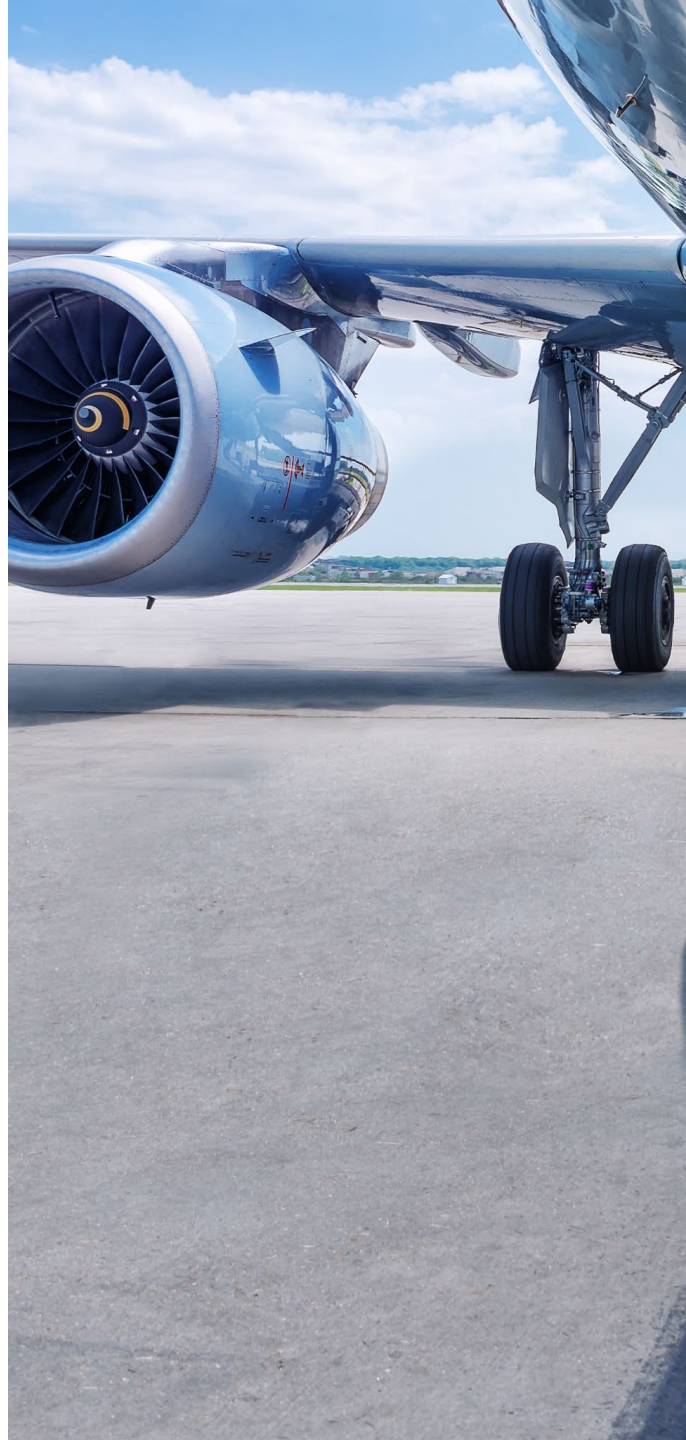


Ground Support



Space, Satellites

Smart Source Differentiation



AC/DC Power Source



Energy Efficient



High Frequency



High Power Density



Constant Power Range



High Current



Modular & Scalable Power



Flexible Control & Test
Sequence Options



High Frequency

Wide range of frequency for avionics applications. Great for applications 400Hz fixed or 360Hz to 800Hz wild frequency output. Up to 1200, 3000, 5000Hz options.



Constant Power Voltage Range

Seamless testing over a wide voltage range without power interruption. Test wide variety of products.



Programmable Output Impedance

Dynamic control over the output impedance of the AC Power Source.



SmartSource Suite Control

Embedded Real-Time Remote Control Platform to easily create, modify, and run test programs.



Programming Capability

Multiple control options, intuitive user interface, powerful waveform tools, and simplified set-up saves time.

Avionics pre-written standards test sequences



Safety & Protection Limits

Programmable Current, Real Power, Apparent Power, Over Voltage, Over Temperature Protection.



Smart Design

Continuous self-calibration. Extensive Analog and Digital I/O for ATE and system integration. Low acoustic noise. Fits in standard 19" racks.





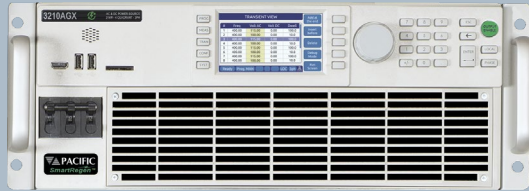
All-in-1 Regenerative Power Source and Load

Multi-Functional Test System for Testing Wide Range of Applications

AC/DC Voltage Source, Current Source, Power Supply, Load

- AC, DC, AC+DC
- Ultra Configuration Flexibility
- High Frequency Range
- Current Source Mode
- Load Option
- PHIL Option (AZX Series)

AGX Series



6kW up to 252kW

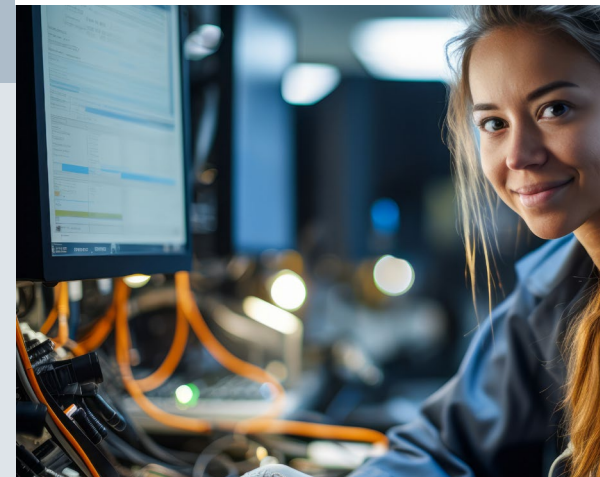
- Dual cabinets up to 252kW
- Voltage: 0-350 VAC L-N 1 ϕ / 0-606 VAC L-L 3 ϕ ; -500Vdc to +500Vdc
- 15 – 1200Hz; Extended Option -1 – 3000Hz
- High Power Density in Compact 4U Chassis

AZX Series



30kW up to 550kW

- 30, 45, 55kW, paralleled up to 550kW
- Voltage: 0-240 Vac L-N / 0-415 Vac L-L and 0-480 Vac-LN / 0-830 Vac-LL; 0-340 Vdc and 0-680 Vdc
- 15-1000Hz; Extended 1 – 10,000Hz
- 3 DSP controllers, PHIL Amplifier Mode Option





Energy Efficient AC or AC & DC Power Sources

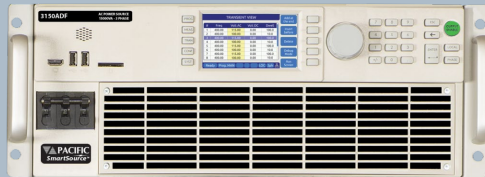
Ideal for testing aerospace, power conversion, data storage & computing servers, etc.

AC power sources with advanced hardware performance and flexible configuration.

- High Frequency
- Energy Efficient Sleep Mode provides > 85% efficiency
- Compact 4U Chassis
- Extensive Analog and Digital I/O for ATE



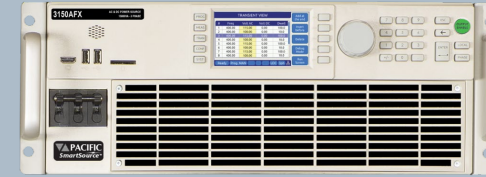
ADF Series (AC w/DC Option)



15kW; up to 150kW

- 45 – 500 Hz; Option: 15 – 1,200 Hz
- Voltage: 0 up to 300V L-N/520V L-L
- 1 Phase Model or 3 Phase Model
- Sine Waveform Only
- Measurements: Scalar

AFX Series (AC +DC)



6kW to 15kW; up to 180W

- 15 – 1,200 Hz; Extended: 1 – 3,000 Hz
- Voltage: 0 up to 333Vac L-N/576Vac L-L or 425Vdc
- 1, 2, 3 Phase Selectable, Forms 1-6 Available
- Phase programming, Transient Mode
- Sine, Square, Triangle, Clipped, Arbitrary Waveforms
- Programmable Impedance
- Scalar, Waveform Capture, Harmonic Analysis





General Purpose AC Power Sources

Ideal for general purpose testing and frequency conversion.

Very High Frequency, Stable, Reliable, Low Power AC Source

- AC Only, 1 Phase / 3 Phase Switch Selectable
- Extensive Analog and Digital I/O for ATE
- Programmable Output Impedance (R+L)
- Protection Limits

LMX Series - LINEAR



500 VA up to 30kVA

- 500 VA to 6000 VA; Parallel up to 30kW
- Voltage: 0 up to 600VAC; Transformer Option
- 15 – 5,000Hz
- Low-Distortion, High Fidelity, Output Waveforms
- Reproduce Oscillating Waveforms with Very Small Bandwidth
- Parallelable Power, Upgrade Later if Desired

LSX Series



1500 VA to 6000 VA

- 1.5 kVA to 6kVA
- Voltage: 0-135 VAC range or a 0-270 VAC; Transformer option
- 15 – 1200Hz
- High Power Switching Technology
- Efficient Operation in Light Compact Design





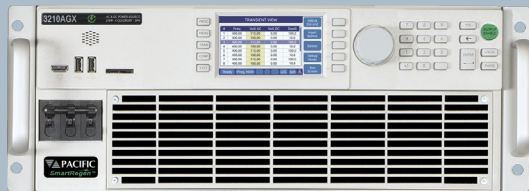
Regenerative Electronic Loads

Ideal for AC & DC Loading Applications

High Power Regenerative 4 Quadrant Load

- AC, DC
- Ultra configuration flexibility
- Exceptionally High Current
- Harmonics with Inter-harmonics Option
- **RLC Circuit Emulation Modes (ELZ Series)**
- **PHIL Option (ELZ Series)**

RLS Series



6kW up to 252kW

- 6kW up to 168kW; Dual cabinets up to 252kW
- Voltage: 0-350 VAC L-N 1 ϕ / 0-606 VAC L-L 3 ϕ ;
-500Vdc to +500Vdc
- 15 – 1200Hz
- High Power Density in Compact 4U Chassis

ELZ Series



30kW up to 550kW

- 30, 45, 55kW; Parallel cabinets up to 550kW
- Voltage: 5~220Vac & 5~440Vac; 0~335Vdc & 9~650Vdc
- 15-1000Hz; Extended 1 – 10,000Hz
- 3 DSP controllers, PHIL Amplifier Mode Option





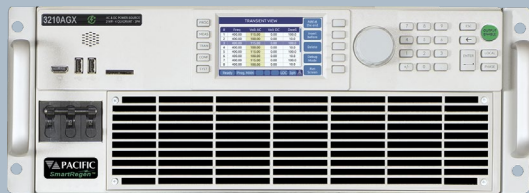
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- Voltage: 0-350 VAC L-N 1 ϕ / 0-606 VAC L-L 3 ϕ ;
-500Vdc to +500Vdc
- 15 – 1200Hz
- High Power Density in Compact 4U Chassis

ELZ Series



30kW up to 440kW

- 30, 45, 55kW; Parallel cabinets up to 440kW
- Voltage: 5~225Vac & 5~440Vac; 0~335Vdc & 0~650Vdc
- 15 – 1000Hz; 1 – 15Hz Mode
- 3 DSP controllers, PHIL Amplifier Mode Option





High Power Density & Scalable Power

- ✓ **Small footprint**
- ✓ **Modular and scalable power** for evolving test requirements
- ✓ **Easy reconfiguration** for flexible setups
- ✓ **Reduced downtime** during repairs or maintenance of individual modules

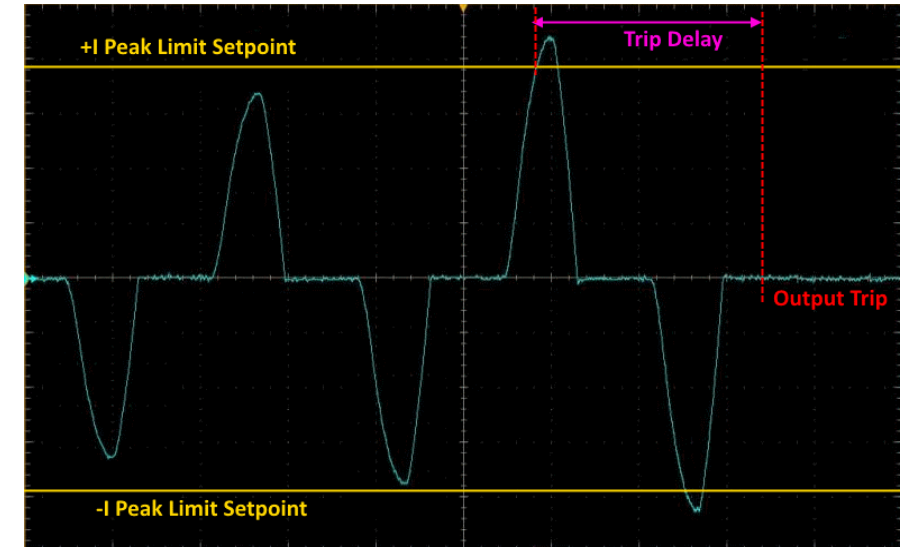




Safety and Protection Limits

Shuts OFF power to EUT if protection limits are exceeded
User Programmable Delay

- Programmable Protections Limits for:
 - RMS Current
 - Peak Current
 - Over Voltage
 - Under Voltage
 - True Power (Watt)
 - Apparent Power (VA)
 - Frequency Over / Under Limits
- Safety
 - Galvanic Isolation between mains and outputs
 - Galvanic Isolation individual output phases



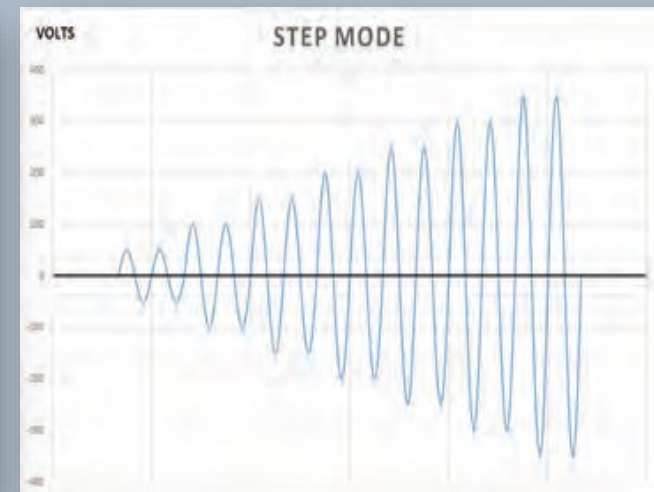
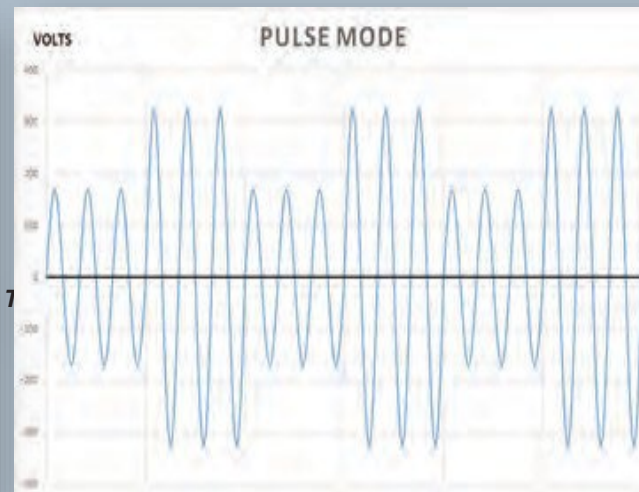
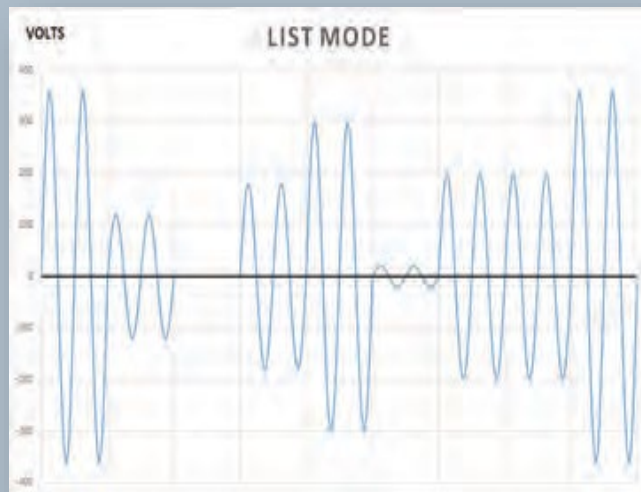
Peak Current Protection

PROGRAM				Apply All	
Freq.	400.00	Hz		Link Phases	
	Phase A	Phase B	Phase C		
Phase	0.00	120.0	240.0		Deg
Volt. AC	115.00	114.50	115.50	V _{RMS}	Protection
Volt. DC	0.00	0.00	0.00	V _{DC}	
Curr. lim.	41.67	41.67	41.67	A _{RMS}	Peak Control
Pow. lim.	4.60	4.60	4.60	kW	
kVA lim.	5.00	5.00	5.00	kVA	Waveform
Ready	Prog. MAN			LOC ABC	



Powerful Measurement and Waveform Tools

- ✓ **Built-in** digital measurement system & waveform digitizer
- ✓ **Fast transients**
- ✓ Simulate **all types of power disturbances**: voltage dips, interruptions, variations, frequency sweeps, variations, harmonics and inter-harmonics
- ✓ **Advanced measurements and waveforms (AFX Series)**: 10 Standard, Sine, Square, Triangle, Clipped
- ✓ Supports **LIST, PULSE and STEP** modes
- ✓ **200+** User-Defined Arbitrary Waveforms

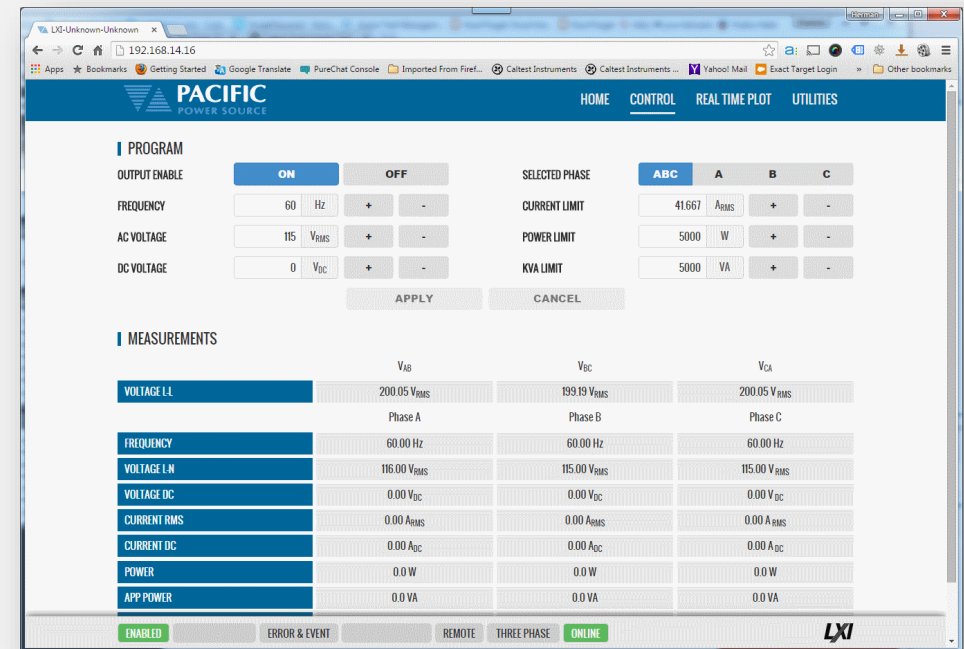
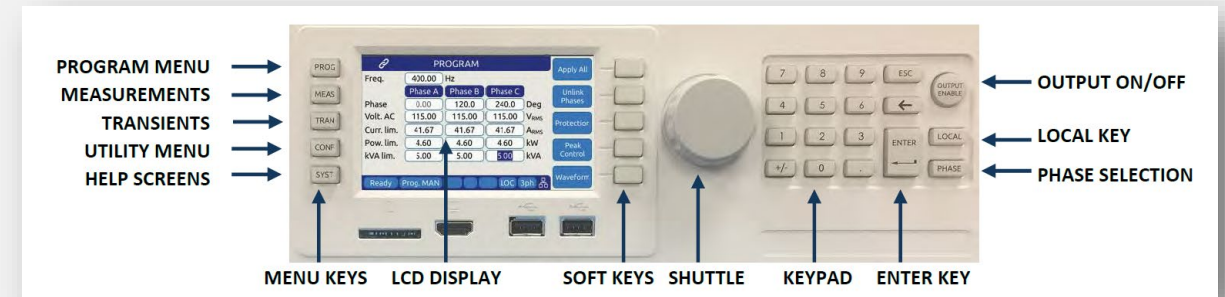




Multiple Control Options

Powerful yet Easy to Use

- ✓ Intuitive Menu and Soft-key Driven Operation
- ✓ LCD Color Screen Touch Panel
- ✓ Shuttle Knob, Numeric Entry Pad
- ✓ LAN, GPIB, RS232 & USB Interfaces, CAN/CAN FD/ModBus (Optional)
- ✓ Supports external touch screen via Video output/USB connections
- ✓ **SmartSource Suite** – Embedded Web Server for Both LAN and USB Interface





SmartSource Suite

Proprietary Web Browser Interface
with Full On-Premise or Remote Control

Run Tests in Real-Time

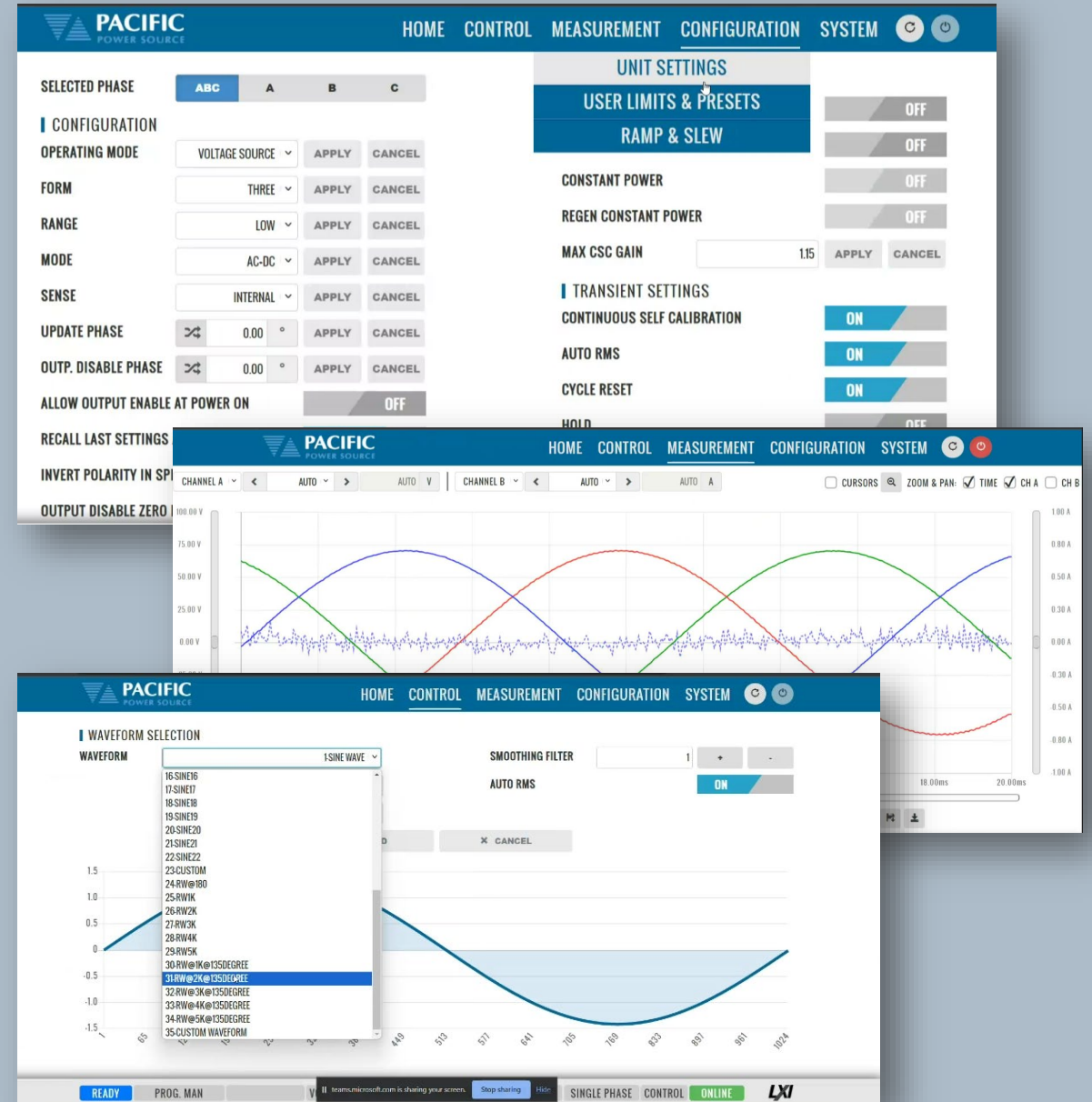
- Create, save & store test parameters
- View individual steps & measurements
- View test results on multiple windows

Full Control Anytime, Anywhere

- Embedded software, no drivers required
- No resource burden on the user
- Secure access from any device via user's wireless or ethernet cable access

Increase Productivity

- Say good-bye to Windows and VISA Drivers
- Save time with intuitive user interface
- Optimize testing with built-in program tools
- Easily create sophisticated test sequences





Avionics Test Sequences

Easily test to avionics standards with our test sequence option.

- 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 16, AC & DC Power Groups



Aerospace Test Solutions Overview



	All-in-1 Power Source, Current Source, Load	AC/DC Electronic Load	AC/DC Power Source	AC Power Source		
	AZX 30 to 440kW AGX 6 to 252kW	ELZ 30 to 440kW+ RLS 6 to 252kW	AFX 6 to 180kW	ADF 6 to 180kW	LSX 1.5 to 6kW	LMX .5 to 30kW
	Regenerative		85% Energy Efficient		Low Power	Linear
AC, DC, AC+DC	AC, DC, AC+DC	✓ AC, DC	AC, DC, AC+DC	AC, (DC Option) (Economy model)	AC Only	AC Only
Aerospace & Defense	✓	✓	✓	✓	✓	✓
Regenerative, Bidirectional	✓	✓				
PHIL Option	AZX only	ELZ only				
High AC Frequency	AZX: 15 – 1000Hz; Extended Mode 1 – 10,000Hz AGX: 15 – 1200Hz; Extended Option -1 – 3000Hz	ELZ: 15 – 1000Hz; Extended Mode 1 – 10,000Hz RLS: 15 – 1200Hz; Extended Mode -1 – 3000Hz	15 – 1,200 Hz; Option:1 – 3,000 Hz	45 to 500 Hz (Option F; 15 to 1200 Hz) Ideal for facility avionics 400Hz	15 – 1200Hz	Up to 5000Hz
Linear Technology – Low Noise & Distortion						✓



The PPS Advantage



High Performance & Reliability



Best-in-Class User Experience



Versatility & Future-Proofing



Customized System Solutions



Fast Lead Times



Application Expertise



Excellent Customer Service





Worldwide Sales & Support Centers



North America

Irvine, CA, USA
Phone: +1(949) 251-1800
Fax: +1(949) 756-0756
info@pacificpower.com

Europe

Kappelrodeck, Germany
Phone: +49 7842 99722-20
Fax: +49 7842 99722-29
info@pacificpower.eu

UK & Ireland

Phone: +44(0)1483 302 700
Fax: +44(0)1483 300 562
info@caltest.co.uk

China

Shanghai, China
Phone: +1(949) 251-1800
info@ppst.com.cn