



## 9 kVA to 60 kVA

DC, 15-1200 Hz

0-300 V<sub>AC</sub> L-N / 0-520 V<sub>AC</sub> L-L

0 - 425 VDC

### Standard Features:

- Three Phase, Split Phase and Single Phase Output Modes
- AC, DC and AC+DC Output Capability
- Constant Power Voltage Range to 300 Vac L-N / 520Vac L-L or 425 Vdc
- DC, 15 to 1200 Hz Frequency Range
- Phase Angle Programming
- Active Three Phase PFC input with Inrush Current Limiting
- Precise Output Voltage and Load Regulation
- Metering of Volts, Current, VA and True Power on all Phases
- Standard USB, LAN & RS232 Interfaces
- Sine, Square, Triangle, Clipped Sine and Arbitrary Waveforms Selections
- Output Transient Programming
- 99 Stored Programs with Associated Transients for Static and Dynamic Test Applications
- Large Color LCD and Easy Front Panel Menu Driven Operation
- Shuttle Allows Easy Slewing of Output Parameters
- Unique Sleep Modes Save Energy, Reduces Needless Heat Generation and Extends the Life of the Power Source



Patents Pending



### AFX Series

The AFX-Series represents a break-through in solid state power conversion that reduces the size and weight of programmable AC and DC power sources dramatically. Housed in 4U 19" rack mount chassis, the 3150AFX delivers an astounding 15,000 VA of output power. Made possible by extensive use of advanced digital signal processor control of all internal power stages, the AFX delivers the highest density programmable AC and DC power capability on the market today.

Convenient to operate from the front panel keypad or remote interface, the AFX Series models are ideal for AC Power simulation, automated testing, frequency conversion, laboratory, and bench-top power applications.

### Modular Higher Power Systems

By paralleling master and auxiliary AFX units, higher power systems can be configured easily to provide more than 15kVA of power. Pre-configured cabinet systems containing multiple AFX Master/Aux units are available as catalog items.

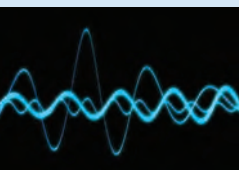


### The Leader in AC Power Technology

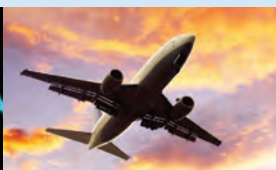
An early pioneer in the development of solid-state power conversion equipment, Pacific Power Source continues to develop, manufacture, and market both linear and switched mode AC Power Sources. Pacific's reputation as a market and technology leader is achieved through continuing investment in both research and development and world-wide customer support. With corporate owned offices in the United States, Germany, the United Kingdom and China, local personalized support is always nearby.



THE POWER OF EXPERTISE



FREQUENCY CONVERSION



AEROSPACE



R & D



MILITARY



MANUFACTURING



CUSTOM

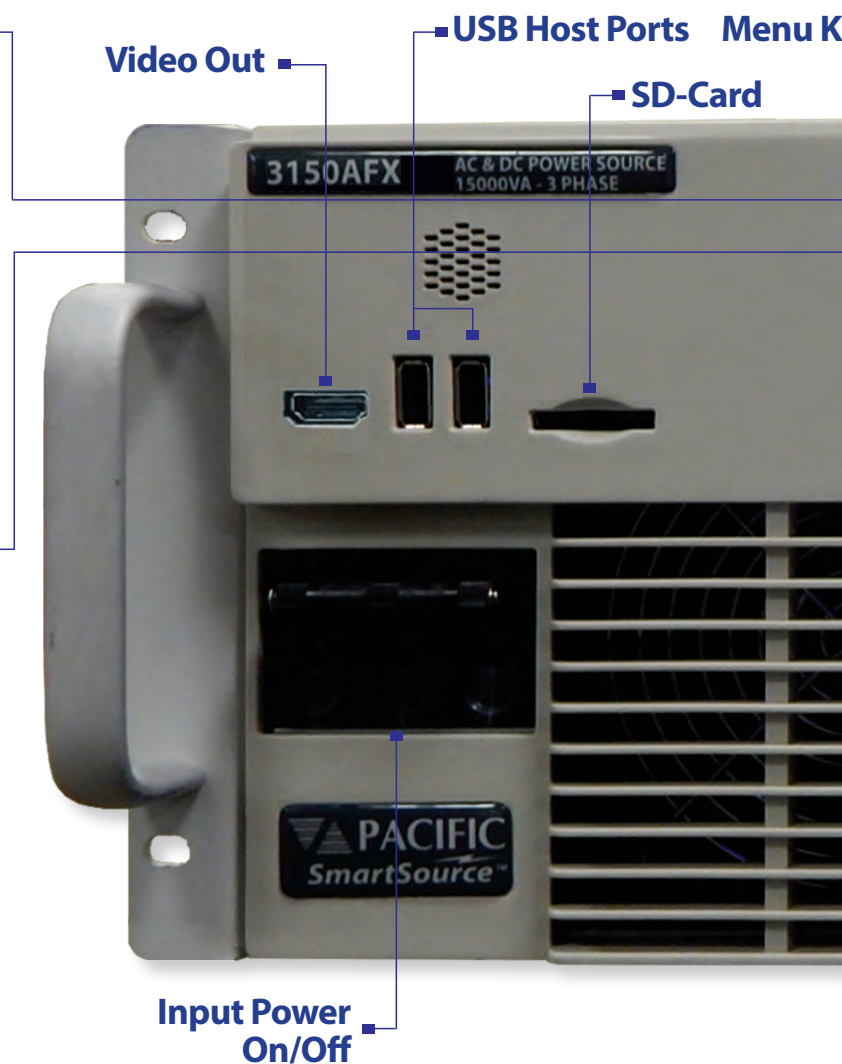
# Total Control, Metering and Analysis of AC or DC Power.

## Control

PROGRAM						Apply All
Freq.	400.00 Hz					
	Phase A	Phase B	Phase C			Unlink Phases
Phase	0.00	120.0	240.0	Deg		Protection
Volt. AC	115.00	115.00	115.00	V <sub>RMS</sub>		Peak Control
Volt. DC	0.00	0.00	0.00	V <sub>DC</sub>		Waveform
Curr. lim.	41.67	41.67	41.67	A <sub>RMS</sub>		
Pow. lim.	4.60	4.60	4.60	kW		
kVA lim.	5.00	5.00	5.00	kVA		
Ready Prog. MAN						LOC 3ph

## Metering

MEASUREMENTS 1 OF 2						Meas. Page 2
Freq.	400.00 Hz					Fault Status
	Phase A	Phase B	Phase C			Error and Event
Volt. L-N	115.00	115.00	115.00	V <sub>RMS</sub>		Real Time Plot
Current	25.67	25.67	25.67	A <sub>RMS</sub>		Individual Phase
Power	2.655	2.555	2.655	kW		
	V <sub>AB</sub>	V <sub>BC</sub>	V <sub>CA</sub>			
Volt. L-L	199.20	199.19	199.20	V <sub>RMS</sub>		
Ready Prog. MAN						LOC 3ph



## Automated Test Equipment Power for Defense Applications

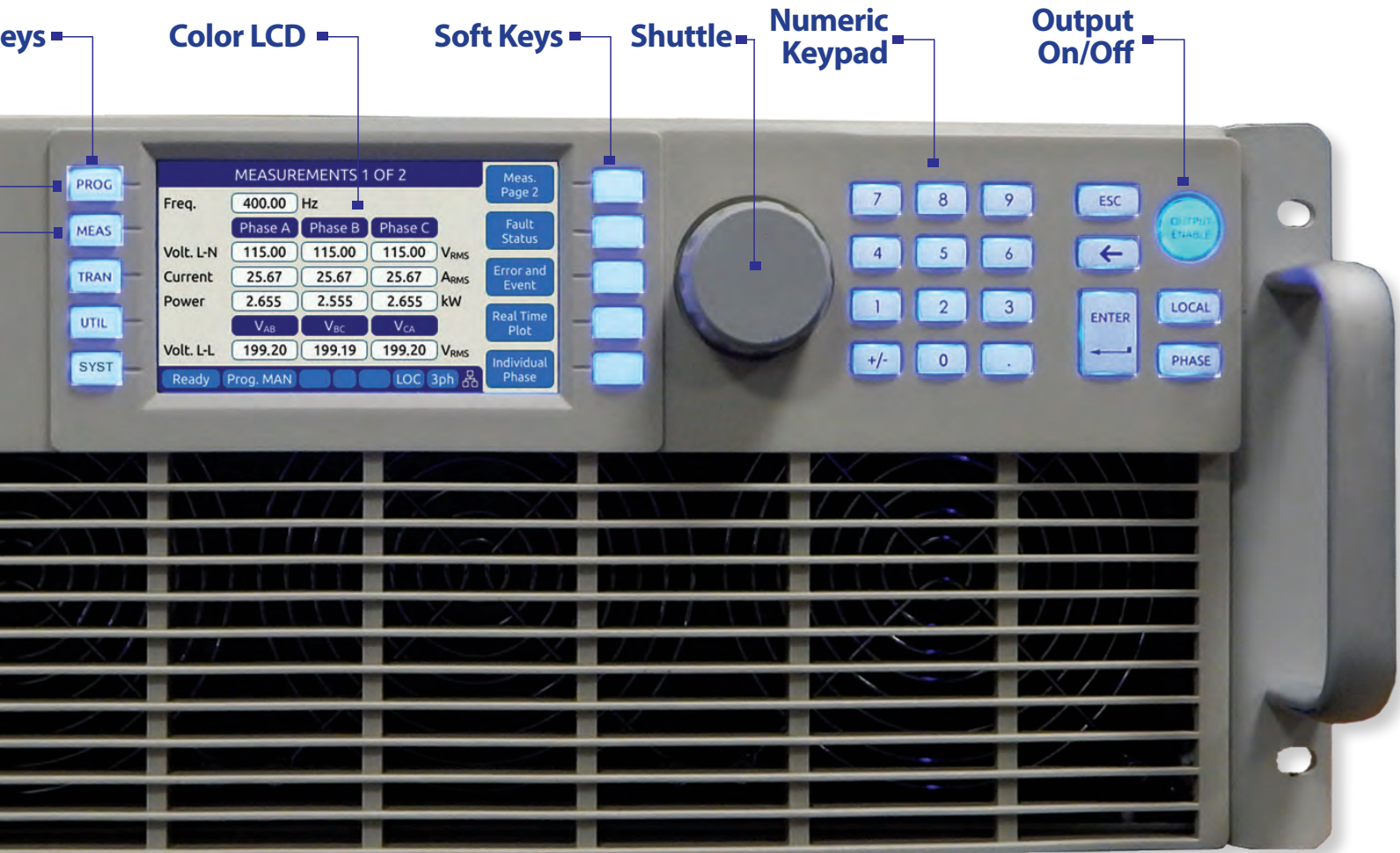
Growing demand for power to support increasingly complex avionics, radar and weapons systems means more power is needed in less available space. The new AFX Series addresses this need by offering power density three times higher than it's nearest competitor.

With extensive control over voltage, current, frequency, phase angles and transients, the AFX series is capable of handling complex Test Program Sets (TPS's) with minimal programming effort. It's AC and DC operating modes provide support for both AC and DC powered equipment providing greater flexibility.





# Simple, Intuitive Operation



## Commercial Avionics Power Test

The advanced digital power conversion technology used in the AFX Series Power Source results in higher power density than any other offering. A wide frequency range of 15Hz to 1200Hz supports both 400Hz fixed frequency as well as 360Hz to 800Hz wild frequency development and test. For DC power systems, multiple 270Vdc outputs can be used to simulate at 540Vdc aviation DC power bus.

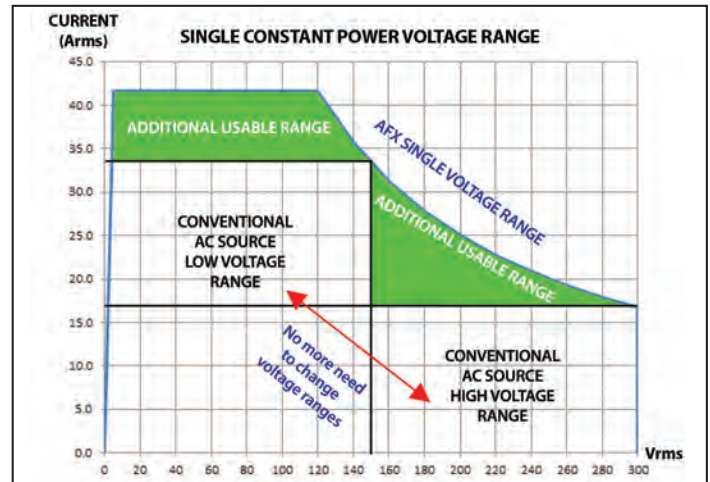
High power, three-phase power configurations are available to match ever increasing power test demands. As needs change over time, additional auxiliary units can be added easily to keep up with your test needs while protecting your original investment.



## 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 the figure to the right). 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.

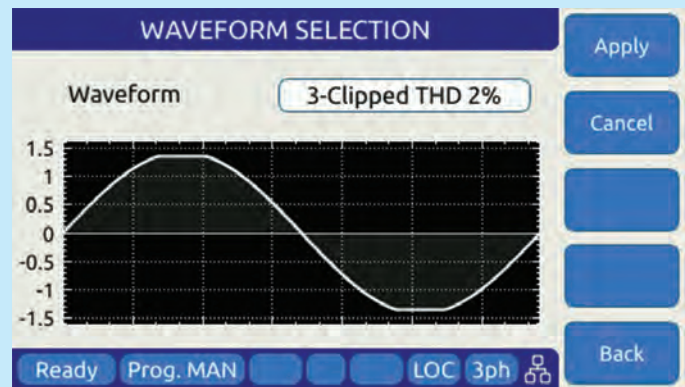
The same applies to DC mode of operation where a single 425Vdc voltage range is used to provide both high DC current and DC voltage.



Extended Operating Range along Constant 5 kVA per Phase Power Curve

## Selectable AC Waveforms

In addition to sinewave, the AFX Series offers multiple selectable AC waveforms such as clipped sinewave at various distortion levels, square, triangle and stepped squares. The user can also create arbitrary waveforms using Pacific Power's UPC Studio Windows software and download these to the power source. A graphical representation (preview) of each waveform is shown on screen so the user can be sure the correct waveform is applied to the unit under test.



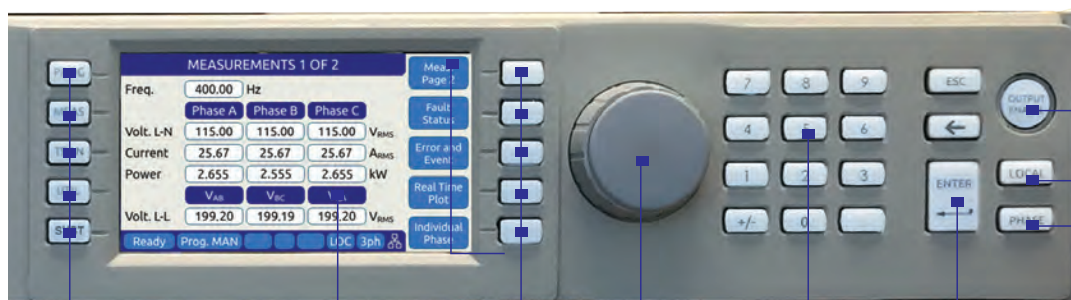
AC Waveform Selection - Vthd = 10%

## Powerful yet Easy to Use

Although AFX Series sources offer a wide range of operating modes and features, they are easy to operate through a large full color LCD display and soft key driven menus.

Top level menus are always available directly by pressing

any of the five menu keys on the left of the display. Entering setup data is accomplished using the numeric keypad or the shuttle. Operating status is shown on screen using various colors to distinguish between setting, measurements and operator warnings, or error messages.



Direct MENU Access Keys

Color LCD Display

Soft keys

Shuttle

Numeric Keypad

Output Enable

LOCAL Mode

Phase Select

ENTER Key



## AC Power Test Applications

Voltage and Frequency output transient sequences are easily created from the front panel using an intuitive spreadsheet style data entry method. Data may be entered for a specific phase or for all three phases at the same time.

Transient functions include ramps for slewing and programmable dwell times for each step. Transient sequences can be stored in non-volatile memory and easily edited as needed on screen.

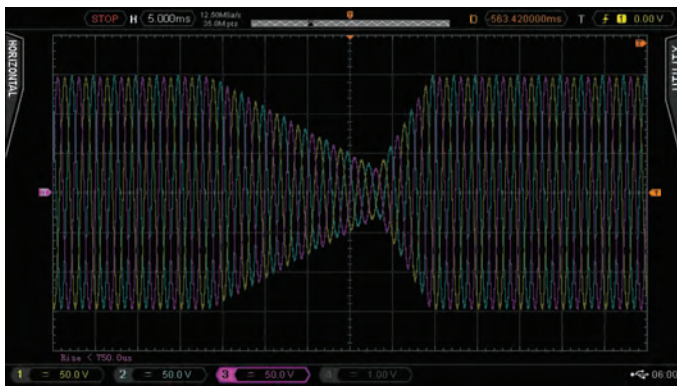
If preferred, transient programming and execution can be also be accomplished via the build-in web server using any browser over the USB or optional LAN interface, or using the provided Windows control software.

TRANSIENT VIEW					Add at the end
#	Freq	Volt AC	Volt DC	Dwell	Insert before
1	400.00	115.00	0.00	100.0	Delete
2	400.00	100.00	0.00	10.0	
3	400.00	115.00	0.00	100.0	
4	400.00	100.00	0.00	10.0	
5	400.00	115.00	0.00	100.0	
6	400.00	100.00	0.00	10.0	
7	400.00	115.00	0.00	100.0	
8	400.00	100.00	0.00	10.0	

Ready Prog. MAN LOC 3ph

Run Screen

Transient Screen in Data Entry Mode



AC Transient Output Captured on Digital Scope

TRANSIENT VIEW					Run
#	Freq	Volt AC	Volt DC	Dwell	Step
1	400.00	115.00	0.00	100.0	Step Mode
2	400.00	100.00	0.00	10.0	
3	400.00	115.00	0.00	100.0	
4	400.00	100.00	0.00	10.0	
5	400.00	115.00	0.00	100.0	
6	400.00	100.00	0.00	10.0	
7	400.00	115.00	0.00	100.0	
8	400.00	100.00	0.00	10.0	

Ready Prog. MAN LOC 3ph

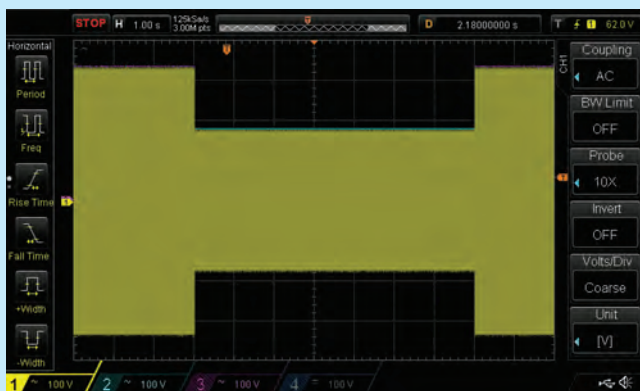
Run Screen

Transient Executing in Debug Mode

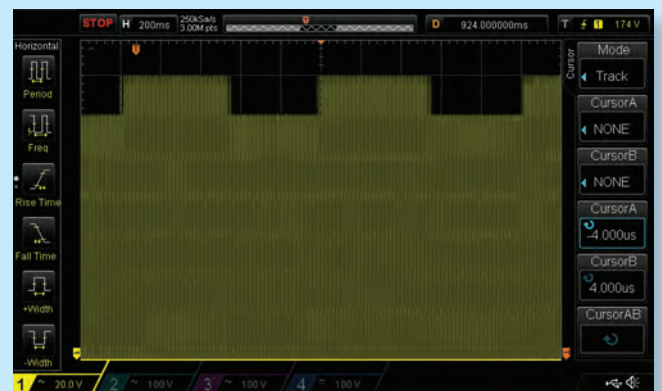
The AFX Series' rich feature set supports a wide variety of AC power test applications. With full control over voltage, current, frequency, power, slew rates and phase angles, no test requirement is too challenging for the AFX to handle. This includes AC power compliance testing, transformer testing, appliance testing, DC charger testing, UPS testing and more. With scalable power configurations, test needs can grow over time without having to re-invest in new AC power sources as auxiliary units can be added to an existing AFX system at any time. The scope images shown here capture several examples of AC power test waveforms generated by a 3150AFX.



Three Phase Unbalance Voltage Test Captured



Three Phase Voltage Drop Test Captured



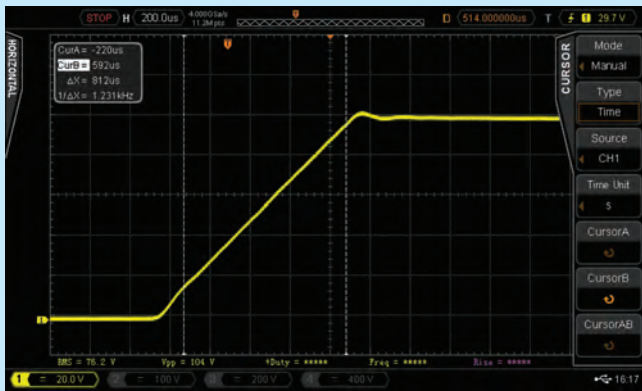
Voltage Modulation Test @ 1Hz Captured

## DC Power Test Applications

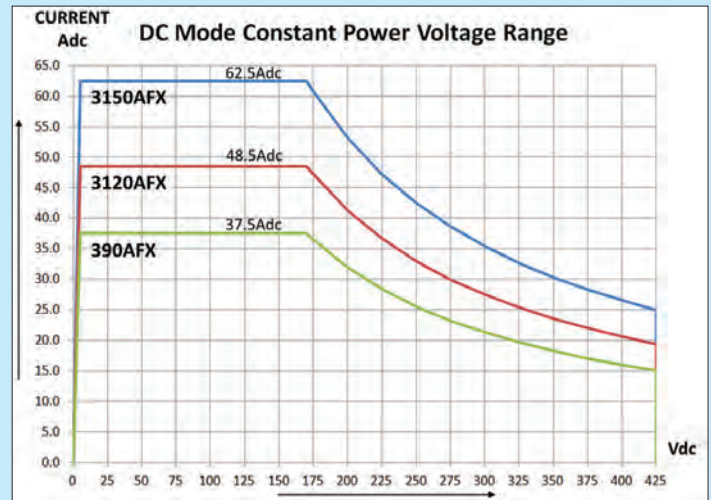
The AFX Series doubles as a DC power supply with either a single DC output (FORM1) or up to three individual bipolar (2-Quadrant) DC outputs. Available voltage range is 425Vdc and the same constant power range technology is used to provide a wide operating range for diverse DC voltage and current requirements. See Volt/Current Chart on the right.

Transient programming covers DC levels and slew rates as is the case for AC applications but there is no frequency to program.

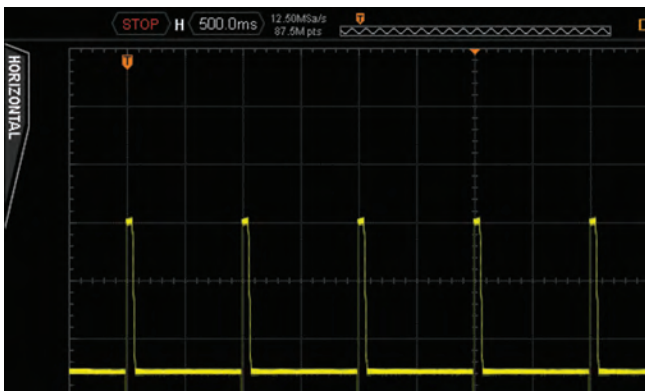
Programmable voltage slew rate settings may be used to control the rise and fall time of any DC voltage change. The scope images shown here capture examples of DC voltage ramps performed at a specific slew rate set on the 3150AFX.



DC Voltage Ramp Up @ 100Vdc/ms programmed slew rate Captured



DC current vs. Voltage for 390AFX, 3120AFX and 3150AFX in one phase mode



DC Voltage Transient Output Captured



DC Voltage Ramp Down @ 100Vdc/ms programmed slew rate Captured



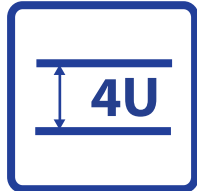


## Unique AFX Features & Benefits

The AFX Series is based on a truly revolutionary technology platform that enables functionality not previously 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

Featuring the highest power density available today, the AFX fits in small spaces allowing power upgrades of existing power test stations without the need to deploy more cabinets or floor space. In today's environment of space efficiency and optimal resource utilization, this is a significant benefit.



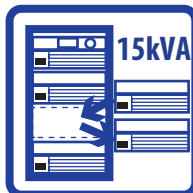
### Light Weight

The 15 kVA 3150AFX weighs in at less than 51 Kg offering an incredible 295 VA of power output per kilogram. This not only saves a significant amount of money on shipping cost, it also makes the power source easy to install in a cabinet or move from one bench to another. For facilities that have a maximum floor weight rating, higher power systems can be configured using multiple AFX units that any other AC power system available today without exceeding floor loading limitations.



### Small LRU Size

The unit size of a single AFX unit offers a Line Replaceable Unit size of only 15 kVA. This means enhanced flexibility in critical higher power uptime applications as the LRU replacement size is relatively small compared to typical 45 kVA or 60 kVA cabinet systems. The Mean-Time-To-Repair (MTTR) for an AFX system is low which ensures less down time and provides greater productivity while minimizing lost revenue.



### Single Voltage Range

The single 300V AC or 425V DC range of the AFX allows continuous operation of wide AC input EUTs without the need to switch voltage ranges on the power source. This means no loss of output during range changing. For applications where more than 150Vac or 212Vdc are required, there is no need to give up half the available AC or DC current as it typical of conventional power sources. For example, DO160, section 16 test 16.5.2.3.1 abnormal surge voltage to 180Vac L-N can support almost twice the current compared to other manufacturer's power sources of the same VA rating.



### Enhanced Protection Modes

Not only does the AFX offer programmable current limit protection mode, it goes far beyond this by adding:

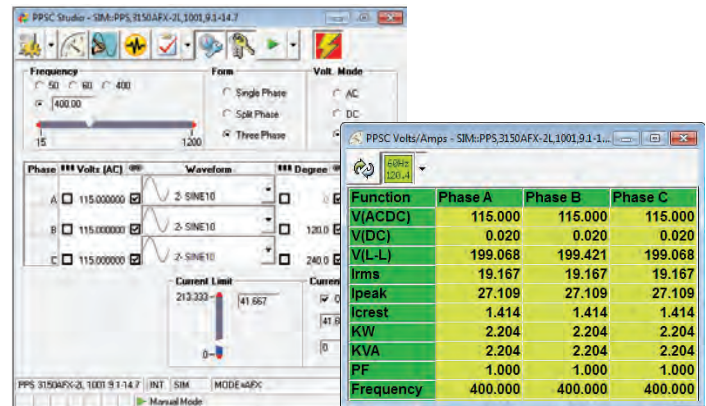
- Constant Voltage Protection
- Constant Current Protection
- Peak Current Protection
- True Power Protection
- Apparent Power Protection
- Over Voltage Protection
- Internal DC Bus Voltage Protection
- Over Temperature Protection



The power protection modes found on the AFX support unusual applications like Capacitor testing, Inductor testing or testing of EUT with a constant power input profile.

### Legacy Software Support

To ensure our customers retain their investment in test software, the AFX Series supports a UPC controller compatibility mode that allows legacy test software to run with a new AFX power source. This includes the ability to use the existing UPC Studio Windows control software and UPC Test Manager as well as the AFX specific PPSC Studio software.



### Energy Savings Modes

The unique two-stage sleep mode supported on the AFX not only save on energy costs, they also benefit the environment, ensure whisper quiet operation during periods of inactivity between tests, and prolong the life of the power source.



## Test System Integration

With a long standing history and reputation for supplying system integrators and primes with reliable, precision programmable AC power sources, we made sure to equip the AFX Series with key technologies that facilitate modern test system integration. Specifically, the AFX Series offer the following benefits to system integrators:

- LAN Interface with LXI<sup>1</sup> Compliance
- IVI<sup>2</sup> Compliant AC Source Class Instruments Driver
- Industry standard SCPI<sup>3</sup> command syntax for remote control
- Available auxiliary units to easily upgrade or expand systems for higher power requirements
- Space saving design allowing higher levels of integration and smaller system foot prints
- Software Compatibility mode with legacy PPS products

If you are a system integrator looking to expand your business, contact Pacific Power Source to discuss your requirements with our power application engineers.



## Embedded Web Server & LXI LAN Interface

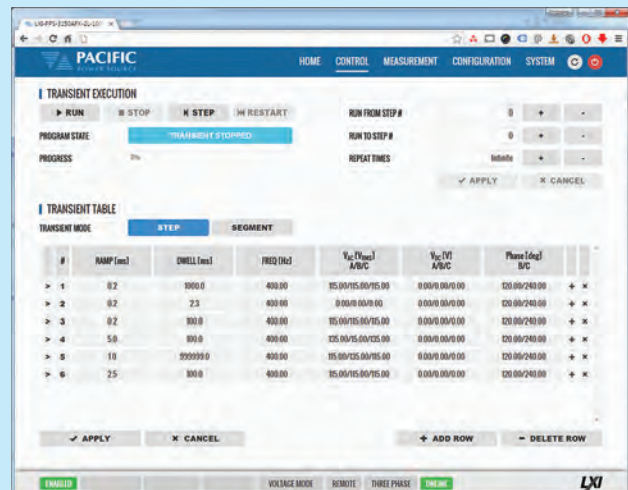
The AFX has a built-in web server that supports a user friendly user interface from any web browser like Google Chrome™, Mozilla Firefox™, Apple Safari™ or Microsoft Edge™. This feature can be used on AFX models with the LAB/Ethernet option and is also supported via the standard USB interface. Connect the AFX to your PC using a USB cable, install the provided virtual LAN driver and you are good to go.

The web server supports the following functions using a variety of clearly laid out screens:

- Home page with system information and interactive command line for sending SCPI<sup>3</sup> commands
- Program settings for steady state and measurement read-back for all phases
- Protection mode setting page
- Waveform selection page with graphical preview mode
- Transient data entry and Execution screen using spreadsheet style layout
- Real-time scalar measurements graphs
- Configuration settings page
- Program memory control page
- Faults and Events display pages
- User Limit settings page
- Interface setup page
- Calibration display page
- Firmware update page



Control and Measurements Page shows settings and read backs



Transient Edit and Execution Control Screen

**Note 1:** LXI = LAN eXtensions for Instrumentation. Refer to [www.lxistandard.org](http://www.lxistandard.org) for more information.

**Note 2:** IVI = Interchangeable Virtual Instrument. Refer to IVI Foundation at [www.ivifoundation.org](http://www.ivifoundation.org)

**Note 3:** SCPI = Standard Commands for Programmable Instruments. Refer to [www.ivifoundation.org/scpi](http://www.ivifoundation.org/scpi) for additional information.



## Available Model Configurations

AFX Series AC & DC Sources are available in several power levels. Models listed in the table below are rack mount or bench units. Cabinet systems are pre-wired for both input

and output power. For other configurations or power levels and cabinet options, contact factory. All models shown here require three phase AC input power.

MODEL	Phase Mode	Rated Power <sup>1</sup> AC / DC mode	Voltage Ranges Vac L-N / Vdc	Max. AC/DC Current 3 & 2 Phase Mode	Max. AC/DC Current 1 Phase Mode	Form Factor
<b>390AFX</b>	1, 2 & 3 Phase	9 kVA, kW / 6.3kW	0-300 Vac / 0-425Vdc	25.0 Arms / 13.9 Adc	75 Arms / 37.5 Adc	4U Chassis
<b>3120AFX</b>	1, 2 & 3 Phase	12 kVA, kW / 8.5 kW	0-300 Vac / 0-425Vdc	33.3 Arms / 16.7 Adc	100 Arms / 50.0 Adc	4U Chassis
<b>3150AFX</b>	1, 2 & 3 Phase	15 kVA, kW / 10.6 kW	0-300 Vac / 0-425Vdc	41.7 Arms / 21.0 Adc	125 Arms / 62.5 Adc	4U Chassis
<b>3180AFX</b>	1, 2 & 3 Phase	18 kVA, kW / 12.7 kW	0-300 Vac / 0-425Vdc	50.0 Arms / 27.8 Adc	150 Arms / 75.0 Adc	15U Cabinet
<b>3240AFX</b>	1, 2 & 3 Phase	24 kVA, kW / 17.0 kW	0-300 Vac / 0-425Vdc	66.7 Arms / 33.4 Adc	200 Arms / 100.0 Adc	15U Cabinet
<b>3300AFX</b>	1, 2 & 3 Phase	30 kVA, kW / 21.3 kW	0-300 Vac / 0-425Vdc	83.3 Arms / 41.7 Adc	250 Arms / 125.0 Adc	15U Cabinet
<b>3450AFX</b>	1, 2 & 3 Phase	45 kVA, kW / 31.5 kW	0-300 Vac / 0-425Vdc	125.0 Arms / 62.5 Adc	375 Arms / 187.5 Adc	27U Cabinet
<b>3600AFX</b>	1, 2 & 3 Phase	60 kVA, kW / 42.5 kW	0-300 Vac / 0-425Vdc	166.7 Arms / 83.3 Adc	500 Arms / 250.0 Adc	27U Cabinet

Note 1: Rated power shown is for Three Phase or Single Phase mode operation. For Split Phase mode, rated power is 2/3.

## Bench and Cabinet Configurations

The wide range of available power levels combined with the small form factor of the AFX Series allows these power systems to be deployed in small spaces if needed. This feature reduces required floor space and eliminates most load bearing floor issues that can be associated with raised floors. Systems above a 15 kVA power can be shipped pre-installed and pre-wired in standard 19" heavy duty steel cabinets with casters and levelers for ease of mobility. Cabinet level options such as Outlet sockets and Emergency Power Off (EPO) buttons can be ordered as options. Contact factory for available options and configurations.



AFX Series Bench Models 9 kVA to 15 kVA



AFX Series 18kVA to 30 kVA - 15U Cabinet



AFX Series 45 kVA - 27U Cabinet



AFX Series 60 kVA - 27U Cabinet

**Note:** Actual cabinet appearance may vary slightly from samples shown here.

## Technical Specifications

OUTPUT		Specification
<b>Voltage</b>		
Modes	AC, DC, AC+DC, DC+AC	
Range	AC: 0 - 300 Vac LN / 0 -520Vac LL DC: 0 - 425 Vdc	
Programming Resolution	0.01 V	
Accuracy	± 0.25% F.S.	
Waveforms	Sine, Square, Triangle, Clipped (THD)	
DC Offset	< 20 mV	
Harmonic Distortion (Vthd) <i>(full, resistive load)</i>	< 400 Hz, < 0.5% 400 to 800 Hz, < 1.0% > 1000 Hz, < 1.5%	
Output Noise (DC to 300kHz)	< 150 mV RMS	
Load Regulation	AC Mode: ± 0.02% (CSC Mode) DC Mode: ± 0.02%	
Line Regulation	< 0.1% for 10% Line Change	
Voltage Sense	External Sense, max. voltage drop 5% F.S.	
Voltage Slew Rate	Programmable, > 1.0V/us max.	
Output Isolation	550Vac	
<b>Frequency</b>		
Range	DC, 15.00 – 1200.0 Hz	
Programming Resolution	0.01 Hz	
Accuracy	± 0.01%	
<b>Current Limit - RMS and Peak Modes - 3150AFX</b>		
RMS Range	See model table page 9	
Crest Factor <i>(data shown for 3150AFX)</i>	2.5:1 @ 41.67 to 6.3:1 @ 16.67 (105Apk/phase)	
Programming Resolution	0.01 Arms	
Accuracy	± 0.5% F.S.	
Modes	Constant Current Mode or Output Trip	
<b>Phase Angle (In 3 and 2 Phase Mode)</b>		
Programmable Phase (B, C)	0 - 359.9°	

PROTECTION		Specification
Available Protections	Over Current fold-back or trip	
	Progr. Peak Current Limit	
	Power fold-back or trip	
	App.Power fold-back or trip	
	Over Voltage trip	
	Over Temperature trip	
OVP Programming Range	0 ~ 105% of voltage range	
AC Input Voltage	Over and Under Voltage, 15%	

SYSTEM FEATURES		Description
<b>DISPLAY</b>		
Type	Full Color, Touch LCD Display	
Size	4.3" Diagonal	
Resolution	480 x 272 pixels	
<b>USB</b>		
Host Ports	2 Front Panel, 1 Rear Panel, Type A	
<b>SD Card</b>		
Capacity	32 GB max.	
<b>Video</b>		
Output	Monitor Out, Front Panel	

TRANSIENTS		Specification
<b>Programming</b>		
No. of Entries	200 Steps / 400 segments	
Parameters	Voltage, Frequency, Phase B & C, Ramp Time, Dwell Time	
Dwell Time Range	0.0002 - 99999 sec	
Time Resolution	0.2 msec	
Edit Modes	Add at end, Insert before, Delete	
<b>Execution</b>		
Run Control	Run from step # to step # Run, Step, Restart, Stop	
Execution Modes	Normal, Debug	
<b>Program Storage</b>		
Non-volatile	100, Programs+ Transient	

MEASUREMENTS		Specification
<b>Voltage (Vrms)</b>		
Range	0 – 350 VLN / 0-600 VLL	
Resolution	0.01 V	
Accuracy	± 0.25% F.S.	
<b>Current (Arms)</b>		
Range	See model table page 9	
Resolution	0.01 Arms	
Accuracy <sup>1</sup>	± 0.5% F.S.	
<b>Current Crest Factor</b>		
Range	1.00 - 5.00	
Resolution	0.01	
Accuracy <sup>1</sup>	± 2.0% F.S.	
<b>Power (W)</b>		
Range	See model table page 9	
Resolution	0.01 W	
Accuracy <sup>1</sup>	± 1.5 % F.S.	
<b>Apparent Power (VA)</b>		
Range	See model table page 9	
Resolution	0.01 VA	
Accuracy <sup>1</sup>	± 1.5 % F.S.	
<b>Power Factor</b>		
Range <sup>2</sup>	0.00 - 1.00	
Resolution	0.01	
<b>Voltage (Vdc)</b>		
Range	0 – 440 Vdc	
Resolution	0.01 V	
Accuracy	± 0.25% F.S.	
<b>Current (Adc)</b>		
Range	See model table page 9	
Resolution	0.01 Adc	
Accuracy <sup>1</sup>	± 0.5% F.S.	

### Footnotes:

- 1: For RMS Currents above 2.0 A
- 2: For Power levels above 100 W



## Technical Specifications (continued)

AC INPUT	9 kVA	12 kVA	15 kVA <sup>5</sup>
Connection	4 Wire, L1, L2, L3 and PE		
Frequency	47 - 63 Hz		
<b>-2 AC Input Version</b>			
Input Voltage Range	208Vac – 240Vac ± 10%		
Nominal Phase Current <sup>1</sup>	33 Arms	43 Arms	54 Arms
Peak Inrush Current <sup>2</sup>	< 1.5 x Irms		
Input Power Factor	> 0.9		
Efficiency	> 85%		
<b>-4 AC Input Version</b>			
Input Voltage Range	380Vac – 480Vac ± 10%		
Nominal Phase Current <sup>3</sup>	18 Arms	24 Arms	30 Arms
Nominal Phase Current <sup>4</sup>	14 Arms	19 Arms	24 Arms
Peak Inrush Current <sup>2</sup>	< 1.5 x Irms		
Input Power Factor	> 0.9		
Efficiency	> 85%		

### Footnotes:

- 1: For nominal 208V input voltage      3: For nominal 380V input voltage  
 2: Irms = AC input current @ rated power      4: For nominal 480V input voltage  
 5: For systems above 15 kVA, input current is multiplied by the number of units

DIMENSIONS / WEIGHT	Specification
<b>Dimensions Bench Models up to 15 kVA</b>	
Height	7.0" / 178 mm (4U) See Note 1 below
Width	17.0" / 432 mm - w/o rack handles 19.0" / 483 mm - with rack handles
Depth	25.0" / 635 mm
<b>Weight Models up to 15 kVA</b>	
Net	111.2 lbs. / 50.4 kg

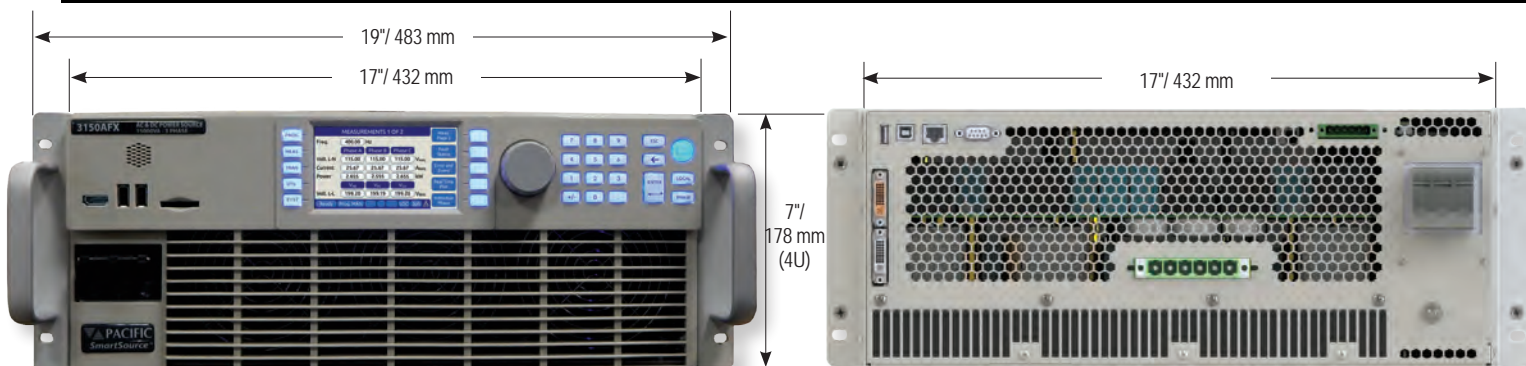
INTERFACES	Description
<b>Remote Control</b>	
USB	Device Type B
RS232	DB9, 9600 - 115200 baud
LAN	LXI compliant, Ethernet, RJ45
	LAN extensions for instrumentation
Output Relay	Remote Inhibit Input
<b>Remote Inhibit</b>	
Input	Rear Panel

ENVIRONMENTAL	Specification
Cooling	Variable speed fan cooled, front intake, rear exhaust
Audible Noise: At 1 meter distance	Standby: 46 dBA Full power: 85 dBA typical
Sleep Modes	Standby, All Power Stages off
<b>Temperature</b>	
Operating	0 to 40 °C / 32 to 104 °F
Storage	-20 to 70 °C / -4 to 158 °F
Humidity	< 80%, non-condensing
Altitude	2000 m / 6500 feet

REGULATORY	Specification
<b>Safety</b>	
Standard	IEC 61010-1:2010 (Edition 3)
<b>EMC</b>	
Emissions Standard	EN 55011:2009+A1:2010
Immunity Standard	EN 61000-4-2, -3, -4, -5, -6, -8, -11
Product Category	EN 61326-1:2013 (Measurement, Laboratory and Control Equipment)
Approvals	CE Mark, NTRL Nemko US/Canada



## Unit Dimensions<sup>1</sup>



The 3150AFX is designed for bench top or 19" equipment rack operation. Shown with included rack mount handles.

The AFX Rear Panel provides connections for AC Input, AC or DC Output, External Sense, I/O and remote control interfaces.

**Note 1:** Units can be zero-stacked in 19" EIA cabinet when using optional rack-slides. When using L-brackets, allow 1U space between units.

## Ordering Information

### Standard Models and Cabinets

Bench Models	Cabinet Systems <sup>1</sup>	Input Voltage ( $V_{IN}$ )	Auxiliary Models (No controller)
<input type="checkbox"/> 390AFX <input type="checkbox"/> 3120AFX <input type="checkbox"/> 3150AFX	<input type="checkbox"/> 3180AFX <input type="checkbox"/> 3240AFX <input type="checkbox"/> 3330AFX <input type="checkbox"/> 3450AFX <input type="checkbox"/> 3600AFX	<input type="checkbox"/> -2 208V - 240Vac, 3 $\phi$ $\pm$ 10%, 47-63Hz <input type="checkbox"/> -4 380V - 480Vac, 3 $\phi$ $\pm$ 10%, 47-63Hz  <div style="border: 1px solid black; padding: 2px; display: inline-block;">Interface</div> <input type="checkbox"/> L LAN, USB & RS232 Interface	<input type="checkbox"/> 390AFX-2NC / 390AFX-4NC <input type="checkbox"/> 3120AFX-2NC / 3120AFX-4NC <input type="checkbox"/> 3150AFX-2NC / 3150AFX-4NC

#### Order Example

- 3150AFX-2L
- Bench Model, 15 kVA, 3-Phase, AC Power Source with USB, RS232, LAN
  - 208Vac 3 Phase Input Voltage

#### Typical Delivery Items

- AC Power Source
- English Manuals in PDF Format
- Rack Mount Handles
- Certificate of Compliance

#### Available Accessories

- Output shorting adaptor for single phase output mode use. P/N 160086
- Paralleling Cable, 1 Ft. (Included with Aux models). P/N 778036
- Rack slides. P/N 703234

**Note 1:** Cabinet systems consist of one master unit and one or more auxiliary units integrated into a 19 inch EIA instrument grade cabinet. Includes input and output wiring to rear mounted compression terminal blocks. Shown with optional Emergency Power Off (EPO). Other cabinet options available. Customers that require the use of their own cabinets can order system packages without cabinet. Contact factory for ordering information.

### Software Options

Windows 10 Software - 64 Bit	Test Sequences - Avionics <sup>2</sup>	Test Sequences - Other <sup>2</sup>
<input type="checkbox"/> PPSC Studio Control Software <input type="checkbox"/> PPSC Test Manager	<input type="checkbox"/> ABD0100.1.8 - Airbus A380, AC & DC Power Groups <input type="checkbox"/> ABD0100.1.8.1 - Airbus A350, AC & DC Power Groups <input type="checkbox"/> AMD24C - Airbus A400M, AC & DC Power Groups <input type="checkbox"/> Boeing 787B3-0147 - B787, AC & DC Power Groups <input type="checkbox"/> MIL-STD704 - US DoD, AC & DC Power Groups <input type="checkbox"/> RTCA-DO160 Section B, AC & DC Power Groups	<input type="checkbox"/> IEC Test Suite - Includes IEC 61000-4-11, IEC 61000-4-14, IEC 61000-4-27, IEC 61000-4-28, IEC 61000-4-29p and IEC 61000-4-34  <input type="checkbox"/> MIL-STD 1399-300B - US DoD, Ship-board Power, AC Power Groups

**Note 2:** Test Sequence Options require PPSC Studio and PPSC Test Manager

## Service and Support

Pacific Power Source's customer support is second to none. Our Customer Support Program provides the training, repair, calibration, and technical support services that our customers value. In addition to receiving the right test equipment, our customers can also count on excellent support before, during and after the sale. With company owned support and service centers around the world, support is never far away. Complete calibration and repair services are offered at our US, European and Chinese manufacturing facilities (see contact info below). Calibrations are to original factory specifications and are traceable to NIST (National Institute of Standards and Technology).

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