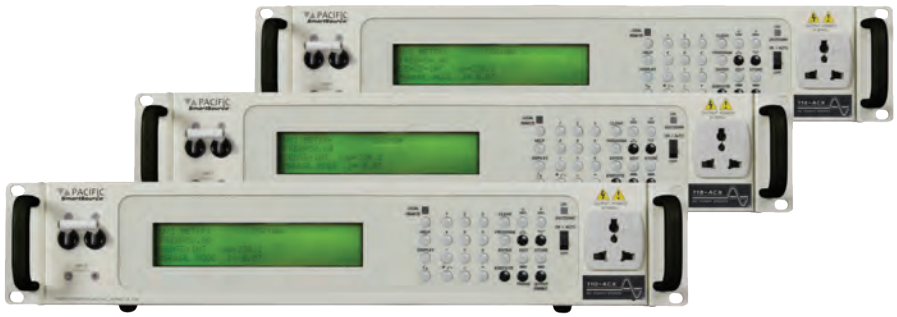
ACX Series

Single-Phase High-Density AC Power Sources

1000 VA
1500 VA
1800 VA

15-1200 Hz

150/300 VAC



Standard Features:

- Single Phase, Dual Range 150/300 VAC Output
- 15 to 1200 Hz. Full Power Operation – 5000 Hz small signal bandwidth
- Universal (115-240V, 1Ø, 50/60Hz.) PFC input with inrush current limiting
- 10A Universal Front Panel Output Receptacle and 20A Rated Rear Panel Output Terminals
- Precision Voltage Programming – 0.05% with Continuous Self-Calibration (CSC) engaged
- True-RMS metering of volts, amps, and power
- GPIB (IEEE-488.2) or RS-232 Interface
- Waveform Library – Arbitrary Waveform Generator
- Transient Programming
- 99 stored programs with associated transients for static and dynamic test applications
- UPC Studio Software Suite

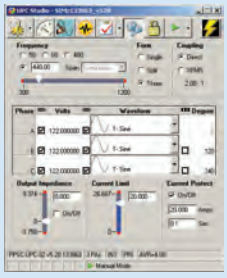
Available options:

- GPIB (IEEE-488.2) Interface
- Harmonic Analysis and Waveform Synthesis
- Peak Inrush Capture
- Country Specific AC Input Line Cord

UPC Manager Software Suite

Master the Power of the Wave!

UPC Manager Software gives you the tools necessary to quickly and easily operate your AC Power Source. With our intuitive graphical interface, control all areas of AC Power Source testing with simple presets, user prompts, test sequences, test plans and custom reports.



ACX Series

The ACX-Series consist of three compact, single-phase programmable AC power sources spanning a power output range from 1000VA to 1800VA. The 1800VA capable 118ACX represents one of the highest power density AC power sources available. All ACX models offer low acoustic noise levels, ease of installation and a wide range of features. Using state-of-the-art, high frequency, pulse-width-modulated (PWM) power conversion technology, ACX models offer a terrific value.

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

AC TEST POWER

All ACX models are equipped with a powerful micro-controller with the ability to operate as a fully integrated test system. They can supply a variety of power conditions and transients to the device under test while metering and analyzing all output performance parameters.

FREQUENCY/ VOLTAGE CONVERSION

The ACX models are excellent sources of stable AC Voltage over a frequency range of 15 to 1200 Hz. The output frequency is quartz-crystal stabilized. Output voltages up to 300 Vrms are supported.

UNIVERSAL PFC INPUT

Worldwide input voltages and power frequencies are accommodated by the wide range, power-factor-corrected (PFC), input power supply. Inrush current limiting permits operation in laboratories with soft or limited input service. Compliance to CE, CSA, and UL test standards adds confidence to the design and allows the product to be shipped anywhere in the world.

UPC1 CONTROLLER

The ACX Series provides the same advanced features as found in higher power Pacific Power Source models. Providing both manual and programmable control, the ACX is fully compatible with Pacific's UPC Studio and UPC Test Manager software.

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 high-performance PWM AC Power Sources. Pacific's reputation as a market and technology leader is best demonstrated by its continuing investments 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.

PACIFIC® POWER SOURCE

THE POWER OF EXPERTISE

FREQUENCY CONVERSION | AEROSPACE | R & D | MILITARY | MANUFACTURING | CUSTOM

Output Ratings by Model

MODEL	Rated Power[1] (VA)	Voltage Max[2] (Vrms l-n/l-l)	Current[3] (Rated / Max. Arms) 150V Range	300V Range	Output Frequency (Hz)
110ACX-UPC1	1000	0-150 / 0-300	11 / 16.5	5.5 / 8	15.00 - 1200
115ACX-UPC1	1500		16 / 24	8 / 12	
118ACX-UPC1	1800		20 / 30	10 / 15	

NOTES:
1. Rated output power is based on a combination of nominal output voltage, rated current and load power factor.
2. Vmax is maximum RMS output voltage with full rated load applied.
3. Available current will vary with output voltage and power factor. See "Output Rating Charts" below. Values shown in table are Rated RMS Current and absolute maximum RMS Current.

Output Specifications (applies to all ACX Models)

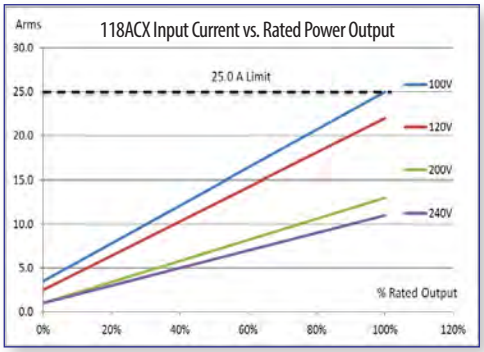
VOLTAGE	Range Resolution Accuracy	0 - 150 / 0 - 300 Vac 0.1 Vac ± 0.05% of command voltage referenced to internal voltmeter with CSC engaged.
LOAD REGULATION	15-200Hz 200-800Hz 800-1200Hz	< 1.5 % < 2.0 % < 3.5% *(Improves to < 0.1% F.S. with external sense and CSC[1] engaged)*
VOLTAGE DISTORTION (under full resistive load)	15-200Hz 200-800Hz 800-1200Hz	< 0.25% < 0.50% < 1.00%
FREQUENCY	Range Resolution Accuracy	15 to 1200 Hz 4 digits ± 0.01%
PEAK CURRENT	Max.	2x Rated Irms.
RESPONSE TIME	80 uSec. typical for 10%-90% Load Step	

Note 1: CSC = Continuous Self-Calibration. Provides for improved output accuracy by using internal voltmeter as a reference to adjust output voltage to obtain set voltage.

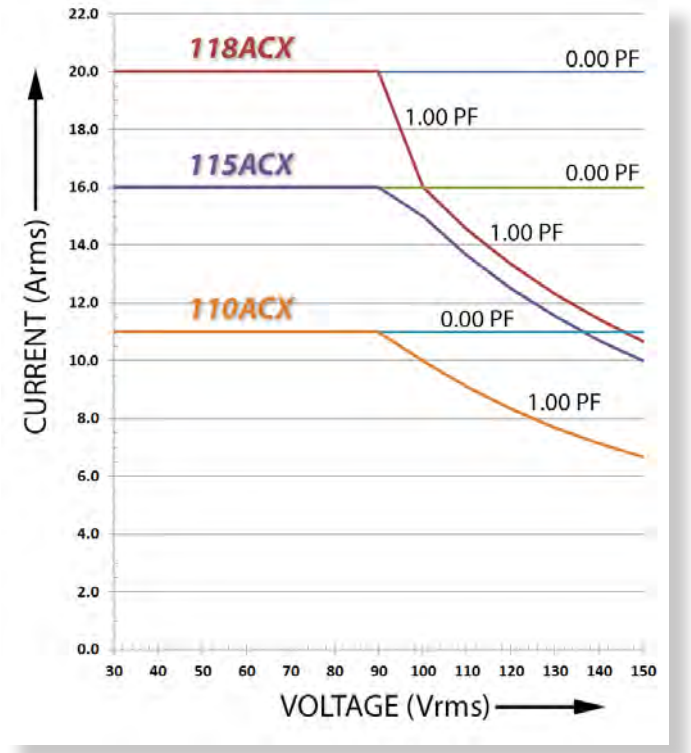
AC Input Specifications

INPUT VOLTAGE	1 Phase, 115 - 240 VAC ±10%	
INPUT FREQUENCY	47 - 63 Hz	
CURRENT (@ Full Rated Power)	110ACX 115ACX 118ACX	14A @ 120V, 7A @ 240V 19A @ 120V, 10A @ 240V 22A @ 120V, 11A @ 240V
POWER FACTOR	> 0.98 (Active Power Factor Correction)	

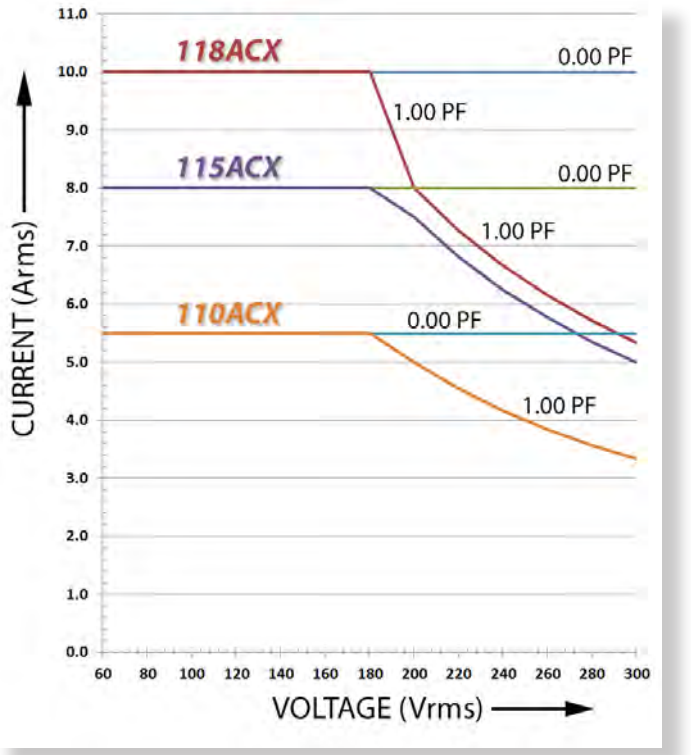
ACX units are equipped with a 30A, single phase Input circuit breaker and a 25A electronic input current limit. Input current demand will vary with model, input voltage and load. Care must be taken to ensure that load on the power source does not cause it to demand more input current than that provided by local mains.



Output Rating Charts



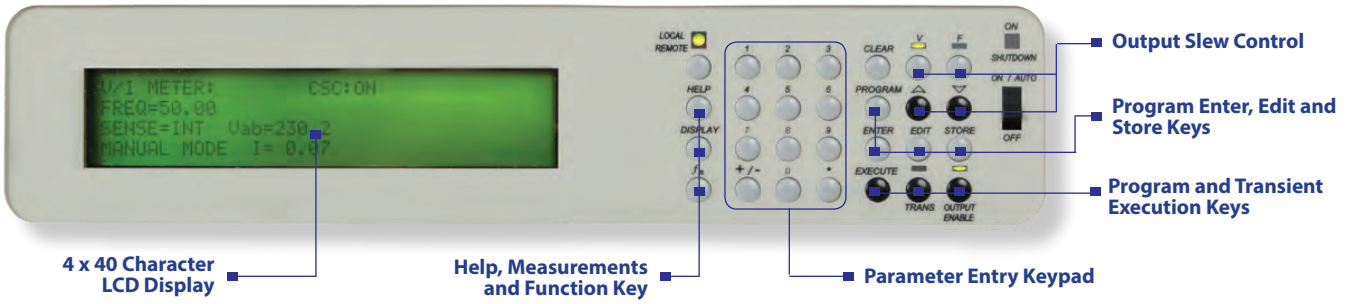
LOW VOLTAGE RANGE



HIGH VOLTAGE RANGE

NOTE: Rated continuous load current as a function of Power Factor and Output Voltage – Nominal Input Line. Short term overloads to 120% are permitted. Operating time before thermal shutdown or circuit breaker trip will vary from seconds to several minutes depending upon line and temperature conditions

Total Control, Metering, and Analysis of AC Power - Simple, Intuitive Operation



Unlike other manufacturers' products at this price point, the ACX Series are full featured programmable AC Power Sources. **The Universal Programmable Controller (UPC)** used in the ACX not only supports frequency and voltage programming, it also supports extensive transient programming, programmable voltage and frequency slew rates, arbitrary waveform generation and a full set of measurements, ***all standard***. Compare that to basic frequency capability and simple measurements on competing similarly priced AC power products.

Front Panel operation is made easy by the extensive keyboard and large backlit LCD display. All ACX models provide for selection of voltage range, voltage, and frequency.

Equipped with RS-232 Interface standard, GPIB is an available option. Commands are structured in accordance with SCPI (Standard Commands for Programmable Instruments) for easy of integration into ATE Systems.

UPC Controller Functions

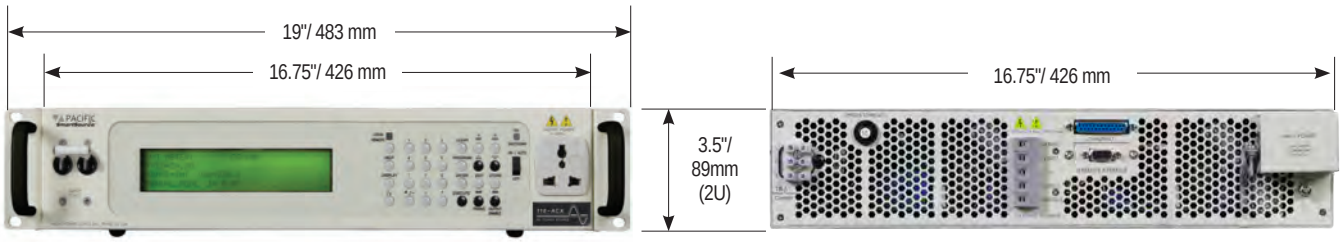
PROGRAMMING	Voltage, Frequency, Current Limit, Waveform	
VOLTAGE SENSE	Selectable Internal or External	
CURRENT LIMIT	CC Mode and CV Mode	
Constant Current Mode (CC)	Range Resolution Accuracy	0 .1 - 50 Arms 0.025 A ± 3.0% F.S.
Constant Voltage Mode (CV)	Range Resolution Accuracy	0 .1 - 50 Arms 0.025 A ± 3.0% F.S.
Programmable CV Trip Delay	Range Resolution Accuracy	0.1 sec – 109.22 mins 0.01 sec ± 0.01 sec
WAVEFORMS	Fixed Arbitrary Presets	Sine (#1) 21 Stored Waveforms (non-volatile) Triangle (#2), Square (#3), Pulse (#4)
	Free UPC Controller software provided to create and download arbitrary waveforms using remote control interface	
WAVEFORM SYNTHESIS (HAS Option)	Creates waveform by entering magnitude as % of fundamental and specified phase angle for 2nd through the 51st harmonic	
TRANSIENTS	Programs	99 programs, 50 segments each (non-volatile)
	Parameters	Voltage, Waveform, Frequency, Slew Rates, Dwell Time or Cycles, Repeat Count
REMOTE CONTROL	Standard	RS232 Serial, DB9 Baud Rates: 300 to 38400 Parity: None, Odd, Even
	Optional	GPIB, IEEE488.2

UPC Measurements

VOLTMETER	Range Resolution Accuracy	0 -354 Vrms 0.1V / 0.001V Front / Remote ± 0.2% F.S. + Cal Ref.
AMMETER	Range Resolution Accuracy	50 Apeak 0.01A / 0.001A Display/Remote ± 0.2% F.S. + Cal Ref.
POWER METER	Range Resolution Accuracy	10,680 W and VA 0.1 W / VA ± 1.0% F.S.
POWER FACTOR	-1.000 to +1.000	
CREST FACTOR	1.000 - 10.00	
VOLTAGE HARMONICS (HAS Option)	Reports Voltage waveform harmonic content and phase angle relative to the fundamental for the 2nd through the 51st harmonic as Total, Odd, and Even harmonic distortion	
CURRENT HARMONICS (HAS Option)	Reports Current waveform harmonic content and phase angle relative to the fundamental for the 2nd through the 51st harmonic as Total, Odd, and Even harmonic distortion	

UPC External Analog and Digital I/O

ANALOG AUX INPUT	Input summed with internal oscillator signal. Aux Input to Output Gain = 35
AMPLITUDE MODULATION	Modulation Depth ± 100% F.S. Vin = ± 10Vpk (20Vpk-pk)
REMOTE INHIBIT	Output Enable / Disable, Contact Closure
TRANSIENT	TTL Pedestal Output. True during Transient execution
DRM CLOCK OUT	TTL Output
SYNC OUT	Positive Zero Crossing (0°) TTL Output



***The ACX** is designed for bench top or 19"equipment rack operation. Shown with provided rack mount handles.*

***The ACX** Rear Panel provides connections for AC Input, AC Output, External Sense, I/O and RS232 or GPIB.*

General and Environmental Specifications

OPERATING TEMPERATURE	Full Power Derated	0° - 40° C / 32° - 104° 0° - 55° C / 32° - 131° < 600W
HUMIDITY	Relative	0 - 95%, non-condensing
COOLING	Forced air cooling, 240 CFM Variable fan speed control Side air intake, Rear exhaust	
MAX. ALTITUDE	3000 m / 10000 feet	
ENVIROMENT	Pollution Degree 2	
REGULATORY APPROVALS	Safety EMC	IEC 61010-1:2010, Ed 3 IEC 61326-1:2006
LISTINGS	CE Mark, NTRL CCL	

Available Options

/G	GPIB Interface. (replaces RS232)	
/HAS	Harmonics Analysis and Synthesis Option	
/IM	EUT Inrush Current Measurement Option	
Rack Slide	790010-003 (requires 2)	
UPC STUDIO	Windows Control Software. (no charge)	
UPC TEST MANAGER	Test Executive License Option for UPC Studio. Required to support Test Software Options	
TEST SOFTWARE	IEC-4XX	IEC 61000-4 AC Immunity
	Airbus	ABD0100.1.8, ABD0100.1.8.1
	Boeing	787B3-0147
	RTCA	DO160G
	Mil-Std	MIL704F

Mechanical Specifications

DIMENSIONS	H x W x D	89 x 426 x 600 mm 3.5" x 16.75" x 23.6" (Excluding rack handles and Safety covers)
RACK MOUNT	Designed to accept slide rails for mounting in a 19" Instrument Cabinet. Rack slides can be provided as a cost option.	
WEIGHT	Net Shipping	18.2 kg / 40 lbs 21 kg / 47 lbs
CONNECTORS Rear Panel	Input Power	Screw Terminal Block (L, N, G) Safety cover w/ strain relief (Optional regional line cords available)
	Output Power	Safety Terminal Block (Sense1, L1, N, L2, Sense2)
	AUX I/O	J5, DB25
	Rem. Inhibit	Screw Terminal (1, 2, 3)
CONNECTORS Front Panel	Output Power	Universal Socket 10A Max., Fused

Country Specific Line Cord Options

COUNTRY	PART NUMBER	COUNTRY	PART NUMBER
Argentina	775102	Israel	775107
Australia	775100	Italy	775109
Brazil	775101	Switzerland	775105
China	775104	UK / Ireland	775110
Continental Europe	775111	US, NEMA 5-15P	775114
Denmark	775106	US, NEMA 5-20P	775113
India	775108	US, NEMA 6-20P	775112

Ordering Information

Model	Controller	Options	Input Voltage (V_{IN})
☐ 110ACX ☐ 115ACX ☐ 118ACX	☐ UPC1	See List Above	☐ 115V - 240Vac, 1Ø ± 10%, 47-63Hz

Available Models

110ACX-UPC1
115ACX-UPC1
118ACX-UPC1

Order Example

115ACX-UPC1/G

- 1500VA, 1-Phase, AC Power Source with UPC1 programmable controller.
- Optional GPIB Interface
- 1 Phase Universal Input Voltage

Typical Delivery Items

- AC Power Source
- English Manuals on CD ROM
- Rack Mount Kit
- UPC Studio Software - (Download)
- UPC Interactive LabVIEW™ Libraries (Download)
- Certificate of Compliance
- CE Conformity Document

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