Model 3120-ASX

12kVA – High Performance AC Power Source

PACIFIC POWER SOURCE

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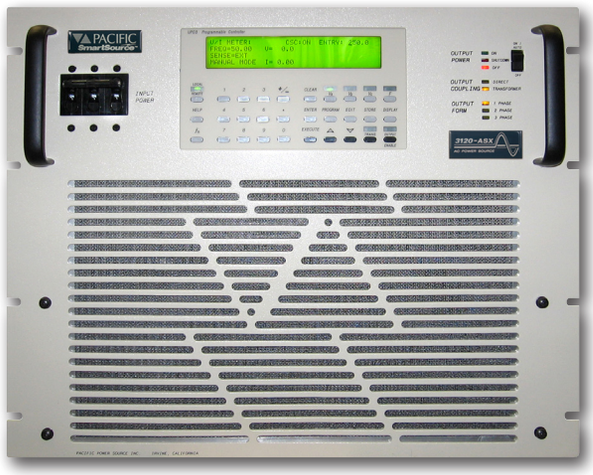
Single, Split, or Three Phase Frequency Converter

The Model 3120-ASX is Pacific's latest addition to its line of Manual and Programmable AC Power Sources. Power Conversion within the ASX Series is achieved by high frequency pulse width modulation, resulting in cool, quiet and efficient operation.

The 3120-ASX is ideal for AC test, frequency conversion, laboratory and bench-power applications.



AC TEST POWER

The 3120ASX is equipped with the UPC Programmable Controller, a powerful micro-controller used to create a fully integrated test system. It supplies a variety of power conditions to the device under test and meters/analyzes all output performance parameters.

FREQUENCY/VOLTAGE CONVERSION

The 3120-ASX is an excellent source of stable AC Voltage over the frequency range of 15 to 1,200Hz. The output frequency is quartz-crystal stabilized. Output voltages up to 600V are available.

PHASE CONVERSION

With the ability to provide single and three-phase outputs, the 3120ASX is the perfect choice to provide three-phase input to split (two-phase) or single-phase output power conversion.

Standard FEATURES of each system include:

- 22 Waveform Library – Arbitrary Waveform Generator
- 15 to 1,200Hz Operation – 5,000 Hz Small Signal Bandwidth
- Precision Voltage Programming – 0.05% with Continuous Self-Calibration (CSC) engaged
- Precision True-RMS metering of volts, amps, and power for displays and reporting
- RS-232 interface with SCPI
- 1 phase/3 phase Switch Selectable Output from front panel or bus command
- 99 steady state programs with associated transients for static and dynamic test applications

Available Options with each system include:

- GPIB (IEEE-488.2) Interface with SCPI
- Programmable Output Impedance
- Harmonic Analysis (FFT) and Waveform Synthesis
- Peak Inrush Capture and Waveform Analysis
- LabVIEW for Windows™ and LabWindows™ Instrument Drivers
- UPC Manager Software Suite
- Wide range of Output Magnetics for worldwide testing

UPC SERIES CONTROLLER

The latest additions to Pacific's family of UPC Controllers are the UPC-3M and UPC-3. The UPC Controller is a modular component of the ASX Series and is available in either Manual or Programmable Configurations.

All UPC Controllers include precise metering functions with data displayed via a 160-character LCD display. This, along with the 30-key front panel, provides the industry's most powerful and user-friendly controller.

The UPC-3 is available with either RS-232 or GPIB remote interface. Commands are structured in accordance with SCPI (Standard Commands for Programmable Instruments). The RS-232 serial port operates up to 38.4kBps. The GPIB interface is compatible with the IEEE-488.2.

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MODEL 3120ASX-UPC3 SUMMARY TABLE

MODEL	RATED POWER (VA)	OUTPUT FORM(Note 2)	OUTPUT VOLTS MAX(Note 3) V_{rms}	OUTPUT AMPS MAX(Note 6) (A_{rms})	OUTPUT AMPS(Note 4) (A_{Pk})	OUTPUT MAGNETICS	INPUT POWER FORM	PANEL HEIGHT	WEIGHT (LBS.)
3120-ASX	12,000	1Ø	135	96	300	EXT.	3Ø	15¾"-9U 40cm	215 Lbs. 97.5Kg.
		1Ø (SPLIT)	270	48	150				
		3Ø	135	32	100				

NOTES:
1. Rated output power is based on a combination of output voltage, current and load power factor. Values stated represent the maximum capabilities of a given model. Consult factory for assistance in determining specific unit capabilities as they might apply to your application.
2. Unit is operable as single phase with dual voltage range capability or as a three phase. Output voltage ranges and 1Ø/3Ø conversions are selected by front panel or bus commands.
3. Output voltage range is for standard unit. Vmax is output voltage with nominal input and full rated load applied. Other voltage ranges are available with the output magnetics option.
4. Peak repetitive pulse current for non-linear loads. Consult factory for overload ratings.
5. Three phase input with in-rush limiting: 208, 220, 230, 240, 380, 400, 416, and 480 VAC ± 10%.
6. Available current will vary with output voltage and power factor.

Power Source Specifications

OUTPUT FREQUENCY: 15 to 1,200Hz Full Power

LINE REGULATION: 0.1% Max For ±10% line change

LOAD REGULATION: 0.25% 15 to 400Hz
0.50% 400 to 1,200Hz
With external sense enabled
Improves to less than 0.1% with
Continuous Self-Calibration enabled

OUTPUT DISTORTION: 0.25% THD_{AVG} 15 to 200Hz
0.50% THD_{AVG} 200 to 1,200Hz

RIPPLE AND NOISE: -66dB

RESPONSE TIME: 60 microseconds typical, 10-90% load step.

Mechanical Specifications

The 3120-ASX is designed for operation in 19" equipment racks. Model is equipped with retractable handles for ease of transportation.

MOUNTING: Standard 19" rack

HEIGHT: 9U - 15.75" - 40cm

DEPTH: Approximately 24" (61cm), from front panel to the rear of the chassis.

COOLING: Front or side forced-air intake with rear exhaust. Automatic Fan Speed Control for low acoustic noise and extended fan life.

KEY FEATURES UPC SERIES CONTROLLER

PROGRAMMABLE OUTPUT IMPEDANCE: Dynamic output impedance (Z_O) is programmable Range varies with model, but usually results in a ±10% change in output voltage at maximum-rated load current. (UPC-3 Option).

PROGRAMMABLE CURRENT LIMIT: Programmable Current limit is provided on the UPC-3 controllers. Programmable range is from 0 to $I_{peak, MAX}$ of the power source.

WAVEFORM LIBRARY: The UPC-3 controller contains a waveform library that stores 22 executable waveforms in Non-volatile RAM. Waveforms 2-16 are editable via the front panel or bus command.

WAVEFORM SYNTHESIS: Provides waveform creation by entering the magnitude (% fund.) and phase angle for the 2nd through 51st harmonic (UPC-3 option).

WAVEFORM ANALYSIS: Reports voltage and current harmonic content as as a % of the fundamental and phase angle for the 2nd through the 51st harmonic. (UPC-3 option).

OUTPUT VOLTMETER: True RMS reading of each phase is measured independently. Line-to-neutral and line-to-line voltages are displayed.

OUTPUT AMMETER: True RMS reading of each phase. RMS and Peak Current, as well as Crest Factor are displayed.

OUTPUT POWER: Measures True Power (kW), Apparent Power (kVA) and Power Factor.

AUX. INPUTS: Each phase is algebraically summed with UPS waveform and amplified 25x to the direct coupled output.

AM INPUTS: ±10 VDC input for each phase modulates the output voltage ±100%.