Model UPC32E and UPC12E
High Performance AC Power Source Controller

Programmable Controller with Export Control Firmware.

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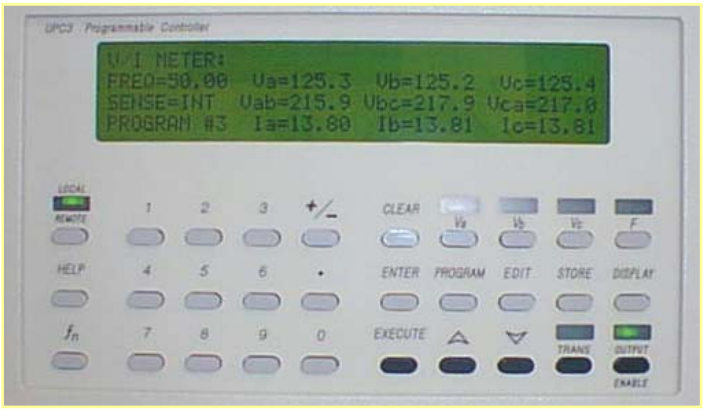

The latest additions to Pacific's family of UPC Controllers are the UPC-32E and UPC-12E. Power Sources equipped with the new "E" version firmware are capable of operating over the same frequency range as the standard unit, but with limits imposed on the level of frequency control. Precision amplitude and waveform control combined with excellent metering make the UPC ideal for AC test power, frequency conversion, laboratory, and bench power applications.

AC TEST POWER

The UPC is equipped with a powerful micro-controller to create a fully integrated test system. Each waveform stored in the UPC is encoded with 12 bit amplitude and 10 bit time resolution for each cycle. The waveform for each phase may be independently selected and varied in amplitude and phase angle with respect to phase A. It supplies a variety of power conditions to the device under test while metering and analyzing all output performance parameters.

FREQUENCY/VOLTAGE CONVERSION

The UPC Oscillator is an excellent source of stable AC Voltage over the frequency range of 20 to 5,000 Hz. The output frequency is quartz-crystal stabilized and controlled over four different ranges.

PHASE CONVERSION

With the ability to provide single and three-phase outputs, Pacific's AC Power Sources with the UPC32E controller are the perfect choice to provide 3 phase to split (2 phase) or 1 phase conversion.

Standard FEATURES of each system include:

- Waveform Library – Arbitrary Waveform Generator
- 20 to 5000 Hz. Operation
- Precision Voltage Programming – 0.05% with CSC engaged
- Precision True-RMS metering of volts, amps, and power for displays and reporting
- 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:

- Programmable Output Impedance
- Programmable Current Limit and Current Protect modes
- Harmonic Analysis (FFT) and Waveform Synthesis
- LabVIEW for Windows ™ and LabWindows ™ Instrument Drivers
- Wide range of Output Ranges for world-wide testing.

UPC SERIES CONTROLLER

The UPC Series controller is Pacific's high precision oscillator/arbitrary waveform generator for use with the AMX and ASX Series AC Power Sources. 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-32E 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-4888.2.

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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-32E Option).
PROGRAMMABLE CURRENT LIMIT:	Programmable Current limit is provided on the UPC-32E controllers. Programmable range is from 0 to $I_{peak, MAX}$ of the power source. Accuracy is ± 3.0%; Resolution is ± 0.05%
WAVEFORM LIBRARY:	The UPC-32E controller contains a waveform library that stores 16 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-32E 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-32E 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.
AM INPUTS:	±10 VDC input for each phase modulates the output voltage ±100%

Controller Specifications ("E" Version Units)

OUTPUT FREQUENCY: 20 TO 5,000Hz

FREQUENCY CONTROL: Control is restricted to no greater than 0.1% from 600Hz to 2,000 Hz.
600 to 999 Hz, system will round to closest 1 Hz integer
1000 to 5,000 Hz, system will round to closest 2 Hz integer.
Accuracy is ± 0.01% of full scale over the full range of ambient conditions.

FREQUENCY CONTROL RESOLUTION:

Range	Resolution
20.00 – 99.99 Hz	0.01 Hz
100.0 – 599.9 Hz	0.1 Hz
600 – 999 Hz	1.0 Hz
1000 – 5000 Hz	2.0 Hz

FREQUENCY DISPLAY SPECIFICATIONS

Range:	20.00 – 5000 Hz.	
Display Resolution:	10.00 to 99.99 Hz	0.01 Hz.
	100.0 to 599.9 Hz	0.1 Hz.
	600 to 5000 Hz	1.0 Hz
Accuracy	(over the full range of ambient conditions)	± 0.01% of full scale

NOTE: Listed specifications define supplemental features unique to the "E" version controller. Refer to the AMX-Series Brochure for complete UPC specification details.