

# EAC-S

## ADVANCED PROGRAMMABLE AC SOURCES



POSITIVE PROBLEM SOLVING **+ =**

The EAC-S is designed for exacting users who demand a high quality adjustable waveform. The distortion level at full power is a mere 0.1%.

Sine, triangular and square waves at up to 500Hz (2kHz option) can be selected. Operation at low frequencies all the way down to dc level is provided as standard. A DC offset can be combined with the AC voltage ensuring that almost any waveform can be created. The user can also preset the starting phase angle when the output is activated.

- + CV & CC Modes for Voltage and Current Limiting
- + Memory Function for Loading User Waveforms
- + Measurements Include CF, PF,  $I_{PEAK}$  &  $I_{EFF}$
- + Very Low Distortion Levels of 0.1%
- + DC Mode Operation

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## FURTHER DETAILS

The AC Source is loaded with a waveform for pre-compliance testing to the volts and interrupts standard EN 61000-4-11. Users can also create their own waveforms and load them into the unit via an SD card.

Another useful function is the external oscillator input. This enables complex waves to be set up on a signal generator and essentially amplified through the EAC-S. A host of measurement functions are available including true, apparent and reactive power along with average, effective and peak values for both voltage and current. The power factor and crest factor values are also displayed.

For remote control and automated test systems isolated analogue and computer interfaces are available. Higher voltage levels up to 700Vrms/1000Vdc can be specified from the options table. For non standard outputs or application specific modifications please contact our office.

## TECHNICAL DATA

GENERAL	
Input Voltage ( $P_{OUT} < 1500VA$ )	230VAC, 50 / 60Hz
Input Voltage ( $P_{OUT} > 1500VA$ )	3 × 400VAC, 50 / 60Hz
Safety	EN 61010
Emissions	EN 61000-6-3
Immunity	EN 61000-6-1
Output Power	See table
Output Voltage Range	See table
Max. Output Current	See table
Frequency Range	DC, 1 - 500Hz (1 and 2 kHz option)
Mains Regulation	0.1%
Load Regulation	0.1%
Distortion Factor at Maximum Power	0.1%
Transient Response Time at 400Hz	Typically 30µs for 10 to 90% load change
Transient Response Time at 50Hz	Typically 240µs for 10 to 90% load change
Transient Response Time at 10Hz	Typically 1.2ms for 10 to 90% load change
AC Voltage Setting Resolution	100mV via interface and front panel
DC Voltage Setting Resolution	100mV via interface and front panel
Current Setting Resolution	10mA via interface and front panel
Phase Angle Resolution	0.1° via interface and front panel
Frequency Setting Resolution	0.1Hz via interface and front panel
Accuracy of Setting and Readback	± 0.1% of full scale value
Output Frequency Range	0 - 500Hz (option 0-1kHz and 0-2kHz)
External Oscillator Input	± 10V at DC - 1000Hz (option EXT-OSZ)
Measurement Resolution Voltage	10mV via interface and front panel
Measurement Resolution Current	1mA via interface and front panel
Measurement Resolution Power	10mW via interface and front panel
Memory Card Format	SD/MMC (slot on front panel)
Isolated Analogue Interface	Option /ATI-5 (0-5V), ATI-10 (0-10V)
Computer Interfaces	Options /RS232 /RS485 /USB /CAN
Computer Interfaces	Options /Ethernet(LAN) /IEEE488.2 (GPIB)
Operating Temperature Range	0 to +40°C
Storage Temperature Range	-40 to +85°C
Cooling	Forced air

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### SELECTION TABLE

Part Number	Max Power	Output Voltage AC Mode	Output Voltage DC Mode	Output Current	Dimensions [ W × H × D]
EAC-S 250	250VA	0 - 300 Vrms	0 - 425Vdc	0 - 3A	19" × 4U × 435mm
EAC-S 500	500VA	0 - 300 Vrms	0 - 425Vdc	0 - 6A	19" × 4U × 435mm
EAC-S 1000	1kVA	0 - 300 Vrms	0 - 425Vdc	0 - 10A	19" × 6U × 435mm
EAC-S 2000	2kVA	0 - 300 Vrms	0 - 425Vdc	0 - 15A	19" × 6U × 435mm
EAC-S 3000	3kVA	0 - 300 Vrms	0 - 425Vdc	0 - 20A	19" × 10U × 435mm
EAC-S 4000	4kVA	0 - 300 Vrms	0 - 425Vdc	0 - 30A	19" × 16U × 600mm*
EAC-S 5000	5kVA	0 - 300 Vrms	0 - 425Vdc	0 - 35A	19" × 16U × 600mm*
EAC-S 6000	6kVA	0 - 300 Vrms	0 - 425Vdc	0 - 40A	19" × 16U × 600mm*
EAC-S 7000	7kVA	0 - 300 Vrms	0 - 425Vdc	0 - 50A	19" × 16U × 800mm*
EAC-S 8000	8kVA	0 - 300 Vrms	0 - 425Vdc	0 - 60A	19" × 20U × 800mm*
EAC-S 9000	9kVA	0 - 300 Vrms	0 - 425Vdc	0 - 70A	19" × 25U × 800mm*
EAC-S 10000	10kVA	0 - 300 Vrms	0 - 425Vdc	0 - 80A	19" × 25U × 800mm*

\*Delivered fitted in a cabinet

Different output ranges and application/user specific options are possible. Please contact ETPS Ltd to discuss your requirements.



## OPTIONS

CODE	DESCRIPTION
/F1000	Increased output frequency range 1 - 1000Hz
/F2000	Increased output frequency range 1 - 2000Hz
/EXT OSZ	External oscillator input. Accepts signal range of $\pm 20V$ , $\pm 360^\circ$ at DC - 1000Hz
/SD	Integrated SD Card memory reader
/ATE	No front panel control or display
/ATI-5	Isolated 0-5V analogue interface for all control and measurement functions
/ATI-10	Isolated 0-10V analogue interface for all control and measurement functions
/LT	IEEE 488.2 interface
/LTRS232	RS-232 interface
/LTRS485	RS-485 interface
/USB	USB interface
/LAN	Ethernet interface
/V500	Extended output voltage range 500Vrms / 700Vdc [current output reduces by 40%]
/V700	Extended output voltage range 700Vrms / 990Vdc [current output reduces by 50%]

Note: Your chosen unit can be specified with any combination of computer interfaces but only one analogue interface

## HIGHLIGHTED FEATURES

### SD MEMORY CARD

An integrated SD card provides a convenient low cost method of recording and editing complex waveforms, using simple WAV or script files via a PC.

### MODIFICATIONS

Existing platforms can be modified by ETPS's design specialists to meet unusual test needs. Voltage or current outputs can be tailored to suit your requirements.

### WAVEFORM CREATION

By analysing devices under a variety of operational waveforms, potential design faults can be identified before mass production commences. Most common waveforms are preinstalled, with the ability to edit both V and I output characteristics.

### INTERFACES

A variety of interfaces are available providing unrivalled flexibility for users. Each system can be configured with multiple interfaces.

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ETPS Ltd must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. ETPS Ltd specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. Please note that your actual unit may differ from those shown.



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ETPS engineer electronic power supply and testing systems. Our problem solving skills provide the spark of innovation to some of the world's leading technology brands.



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