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EAC-S Advanced Programmable AC Sources

Description

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. A variety of common waveforms are also available for checking units against various standards such as EN61000-6-1. 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.



- 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

Selection Table

| Part Number | Max Power | Output Voltage AC Mode/DC Mode | Output Current | Dimensions (Width x Height x Depth) |
|-------------|-----------|--------------------------------|----------------|-------------------------------------|
| EAC-S 250 | 250VA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 3 A | 19" x 4U x 435mm |
| EAC-S 500 | 500VA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 6 A | 19" x 4U x 435mm |
| EAC-S 1000 | 1kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 10 A | 19" x 6U x 435mm |
| EAC-S 2000 | 2kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 15 A | 19" x 6U x 435mm |
| EAC-S 3000 | 3kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 20 A | 19" x 10U x 435mm |
| EAC-S 4000 | 4kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 30 A | 19" x 16U x 600mm* |
| EAC-S 5000 | 5kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 35 A | 19" x 16U x 600mm* |
| EAC-S 6000 | 6kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 40 A | 19" x 16U x 600mm* |
| EAC-S 7000 | 7kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 50 A | 19" x 16U x 600mm* |
| EAC-S 8000 | 8kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 60 A | 19" x 20U x 780mm* |
| EAC-S 9000 | 9kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 70 A | 19" x 20U x 780mm* |
| EAC-S 10000 | 10kVA | 0 - 300 Vrms / 0 - 425Vdc | 0 - 80 A | 19" x 20U x 780mm* |

*Delivered fitted in a cabinet

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



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EAC-S

Advanced Programmable AC Sources

Options Table

| 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 $\pm 10V$, $\pm 360^\circ$ 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 with listener and talker functions |
| /LTRS232..... | RS232 Interface with listener and talker functions |
| /LTRS485..... | RS485 Interface with listener and talker functions |
| /CAN..... | CAN Interface with listener and talker functions |
| /USB..... | USB Interface with listener and talker functions |
| /LAN..... | Ethernet interface with listener and talker functions over a LAN |
| /V500..... | Extended output voltage range 500Vrms / 700Vdc (Current output reduces by 40%) |
| /V700..... | Extended output voltage range 700Vrms / 1000Vdc (Current output reduces by 50%) |

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

Technical Data

| | |
|---|---|
| Input voltage ($P_{out} < 1500VA$)..... | 230VAC, 50/60Hz |
| Input voltage ($P_{out} > 1500VA$)..... | 3 x 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 30 μ s for 10 to 90% load change |
| Transient response time at 50Hz..... | typically 240 μ s 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 $^\circ$ via interface and front panel |
| Frequency setting resolution..... | 0.1Hz via interface and front panel |
| Accuracy of setting and readback..... | $\pm 0.1\%$ of full scale value |
| Output frequency range..... | 0 - 500Hz (option 0-1kHz and 0-2kHz) |
| External oscillator input..... | $\pm 10V$ 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 $^\circ$ C |
| Storage temperature range..... | -40 to +85 $^\circ$ C |
| Cooling..... | Forced air |

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ET 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. ET 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.