

EAC-I Programmable AC Power Source

switchmode technology



DESCRIPTION

ET System electronic EAC-I Series of Programmable AC Power Source is compact in size and light in weight due to the use of the state of the art switch mode high frequency PWM technology. These AC Power Sources come with a built in PFC with universal input to provide a typical input power factor of 0.99 at full load, suitable for all the utility power outlets in almost all the countries. The output AC is of full rated current and is delivered in the voltage range of 135 V AC or 270 V AC, which is user selectable, using a push switch on the front panel.

Units of the EAC-I series measure automatically output voltage, effective current, average and peak current, effective power, idle power, apparent power, as well as power factor and crest factor. All these values simultaneously appear on the largecolor display. This also applies to the three-phase units but not all measured values can be shown at the same time. Instead the unit offers different overview screens, e. g. displaying all powers, all voltages or all values of an output. Therefore the user has a perfect overview at all times and must not connect additional measurement devices for most of the tasks, which supports efficient ways of working.

The EAC/S series is equipped with various interfaces, which provide universal connection options and enable the unit's control. Besides RS-232, RS-485, USB, IEEE 488 and LAN interface is available, plus, the AC sources provide galvanically isolated, self-calibrating 5 V or 10 V analog interfaces.

These units are available in five output power ratings of 500, 1000, 1500, 2000 und 3000 VA. However higher power models can be offered against specific requirements. It is ideally suitable for industrial product testing; power conversion, automatic test equipment, avionics and military applications for bench top or standard 19" rack mount applications.

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OVERVIEW

- Graphical display
- Measuring of: voltage, current, average and peak current, effective power, idle power, apparent power, power factor, crest factor
- Constant voltage and constant current modes
- Digital interface IEEE, RS-232/485, USB, LAN
- Galvanically isolated 0 – 5 V or 0 – 10 V analogue interface
- Compact size and light weight, standard 19" rack construction
- Stepless frequency setting from 45 Hz to 450 Hz
- Low Distortion
- Output voltage range selectable 135 V or 270 V AC
- Galvanically isolated input/output
- Automatic protection against overload, short circuit and over temperature
- Built in PFC to provide 0.99 input power factor and wide input range
- Conforms to EN55022, class A, safety standard EN60950

SPECIFICATIONS

Model	EAC-I 500	EAC-I 1000	EAC-I 1500
Input			
Voltage	90 V – 265 V AC, Single Phase		
Frequency	47 Hz - 63 Hz		
Power Factor	0.99 Typical @ Full Load		
Efficiency	85 % Typical		
AC Output			
Power	500 VA (400W)	1000 VA (800W)	1500 VA (1200W)
Voltage Range	0 – 135 Vrms AC or 0 – 270 Vrms AC selectable		
Resolution	0.1 V		
Accuracy	0.5 % of full scale		
Frequency	45 Hz to 450 Hz		
Accuracy	0.2 % of Full scale		
Resolution	0.01 Hz		
Current – Maximum			
a) at 0-135V Range	4.0 Amps	8.0 Amps	12.0 Amps
b) at 0-270V Range	2.0 Amps	4.0 Amps	6.0 Amps
Crest Factor	3:1		
Distortion	< 2 % THD @ 220 VAC, 50 Hz		
Load Power Factor	0.8 Lag to 0.8 Lead		
Line Regulation	±0.1 %		
Load Regulation	±1 %		
Efficiency	Better than 85 % at Nominal Input & Full Load		
Protections			
Overload/Short-circuit	Output Trip and Indication		
Over Temperature	Output Trip and Indication		
Input Side	Fast acting Fuse		
Controls & Indications			
Input Power ON/OFF	Rocker Switch with Indicator		
Display	Graphical Display, output voltage, current, frequency, power, Measuring of: voltage, current, average and peak current, effective power, idle power, apparent power, power factor, crest factor		
Voltage: Accuracy	±0.5 % of full Scale		
Resolution	0.1 V		
Current: Accuracy	±0.5 % of full Scale		
Resolution	0.01 A		
Power: Accuracy	± 2 % of full scale		
Resolution	1 W		
Fault Alarm	Common LED alarm for Fault conditions (Over load & over temperature)		
Output Control and Monitoring	Front panel and/or optional Analog 0 - +5V/+10V isolated/ Digital 12 bit: RS-232, RS-485, IEEE488, LAN, USB, SD card		
Mechanical & Environmental			
Dimensions	19" x 3 U x 620 mm		
Weight in Kg	24	25	27
Operating Temperature	0 – 45° C, peak 50° C		
Safety	EN60950		
EMC	EN55022 Class A		

SPECIFICATIONS

Model	EAC-I 2000	EAC-I 3000
Input		
Voltage	185 V – 264 V AC, Single Phase	
Frequency	47 Hz - 63 Hz	
Power Factor	0.99 Typical @ Full Load	
Efficiency	85 % Typical	
AC Output		
Power	2000 VA (1600 W)	3000 VA (2400 W)
Voltage Range	0 – 135 Vrms AC or 0 – 270 Vrms AC selectable	
Resolution	0.1 V	
Accuracy	1 % of full scale	
Frequency	45 Hz to 450 Hz	
Accuracy	0.2 % of Full scale	
Resolution	0.01 Hz	
Current – Maximum		
a) at 0-135V Range	16.0 Amps	24.0 Amps
b) at 0-270V Range	8.0 Amps	12.0 Amps
Crest Factor	3:1	
Distortion	< 2 % THD @ 220 VAC, 50 Hz	
Load Power Factor	0.8 Lag to 0.8 Lead	
Line Regulation	±0.1 %	
Load Regulation	±1 %	
Efficiency	Better than 85 % at Nominal Input & Full Load	
Protections		
Overload/Short-circuit	Output Trip and Indication	
Over Temperature	Output Trip and Indication	
Input Side	Fast acting Fuse	
Controls & Indications		
Input Power ON/OFF	Rocker Switch with Indicator	
Display	Graphical Display, output voltage, current, frequency, power, Measuring of: voltage, current, average and peak current, effective power, idle power, apparent power, power factor, crest factor	
Voltage: Accuracy	±2 % of full Scale, ±1 digit	
Resolution	1 V	
Current: Accuracy	±2 % of full Scale, ±1 digit	
Resolution	0.01 A	
Power: Accuracy	±5 % of full Scale, ±1 digit	
Resolution	1 W	
Fault Alarm	Common LED alarm for Fault conditions (Over load & over temperature)	
Output Control and Monitoring	Front panel and/or optional Analog 0 - +5V/+10V isolated/ Digital 12 bit: RS-232, RS-485, IEEE488, LAN, USB, SD card	
Mechanical & Environmental		
Dimensions	19" x 3 U x 620 mm	
Weight in Kg	34	39
Operating Temperature	0 – 45° C, peak 50° C	
Safety	EN60950	
EMC	EN55022 Class A	

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