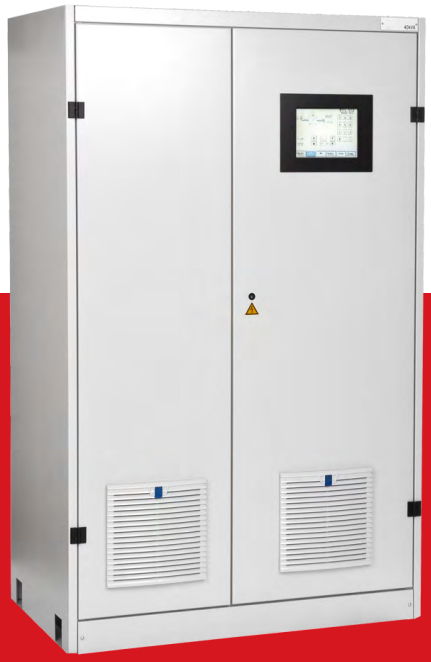
ELECTRONIC TEST & POWER SYSTEMS

EAC-ABI

SINGLE PHASE BIDIRECTIONAL GRID SIMULATOR



POSITIVE PROBLEM SOLVING

The EAC-ABI is a series of high power AC bidirectional grid simulators. Each unit is user programmable to operate as either an AC source or AC sink.

A true sinewave output is provided as standard. The four quadrant functionality of the system is particularly useful when researching and testing grid related products with bidirectional AC power flows. When operating as an AC sink the EAC-ABI regenerates excess sink energy back to the grid. The output frequency is adjustable in the range of 45 - 105Hz, ideal for simulating different mains from around the world. Different frequency ranges up to 805Hz are optional. An RS-232 and CAN interface are provided as standard.

- Three Phase Models Available on Request
- RS-232 & CAN Interfaces as Standard
- Extended Frequency Range Possible
- Built in Freestanding Cabinet
- TFT Front Panel Screen
- Systems up to 200kVA

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FURTHER DETAILS

Besides standard models, other nominal power levels and voltages can be user specified. Three phase and unidirectional versions are available on request. Each unit is built in its own freestanding cabinet. The high resolution TFT front panel displays a host of measurement and setting functions. An external operating panel is available so that the TFT screen can be operated remotely. This is particularly useful where the power system may be operating in a potentially hazardous environment, such as a test cell.

OPTIONS

CODE	DESCRIPTION
/F400	Increased output frequency range 95 - 420Hz
/F800	Increased output frequency range 195 - 805Hz
/IES	Interface for emergency stop
/ETHERNET	Factory fitted Ethernet interface
/ANALOGUE	Factory fitted 0 - 10V analogue interface
/EOP	External operation panel for remote control of the unit

TECHNICAL DATA

GENERAL	
Mains Input Voltage	3 × 400VAC ± 10%, 50/60Hz (other inputs available on request)
Output Voltage	See selection table
Standard Output Frequency	45 - 105Hz (other ranges optionally available)
Output Frequency Accuracy	± 0.1%
Rated Output Power	See selection table
Static Voltage Regulation	± 1% (fs)
Dynamic Voltage Regulation	± 4% at 100% load change (50/60Hz), ± 8% (800Hz)
Asymmetric Load Voltage Regulation	± 2% at 100% unbalanced load
Regulation Time	<25msec
Overload Characteristic	150% for 1 min / 125% for 10 min / 110% for 20 min
Short-Circuit Characteristic	2 × I_{NOM} for 5s according EN 50091, Part 1
Waveform	Sinusoidal
Distortion Factor at Linear Load	≤5% (typically 3%)
EMC	According to EN 50091-2
Permissible Power Factor	Power derating, if power factor deviates from 0.8 lagging
Crest Factor of the Load Current	≤2.3% (at 100% load)
Permissible Ambient Temperature	0 up to +40°C
Permissible Environment	3K3 according to IEC 60721 (max. 85% rel. humidity, none condensation)
Permissible Operating Altitude	1000m above sea level with rated load
Protection Class	IP20 according to IEC 60529
Paint Finish	RAL 7035
Cooling	Forced air cooling or convection cooling dependent on rated nominal system power

SELECTION TABLE

Part Number	Maximum Power	Voltage Range*	Current
EAC-ABI 10-150	10kVA	3 - 150Vrms	± 66.6A
EAC-ABI 10-300	10kVA	6 - 300Vrms	± 33.3A
EAC-ABI 10-600	10kVA	12 - 600Vrms	± 16.6A
EAC-ABI 15-150	15kVA	3 - 150Vrms	± 100A
EAC-ABI 15-300	15kVA	6 - 300Vrms	± 50A
EAC-ABI 15-600	15kVA	12 - 600Vrms	± 25A
EAC-ABI 20-150	20kVA	3 - 150Vrms	± 133.3A
EAC-ABI 20-300	20kVA	6 - 300Vrms	± 66.6A
EAC-ABI 20-600	20kVA	12 - 600Vrms	± 33.3A
EAC-ABI 25-150	25kVA	3 - 150Vrms	± 166.6A
EAC-ABI 25-300	25kVA	6 - 300Vrms	± 83.3A
EAC-ABI 25-600	25kVA	12 - 600Vrms	± 41.6A
EAC-ABI 30-150	30kVA	3 - 150Vrms	± 200A
EAC-ABI 30-300	30kVA	6 - 300Vrms	± 100A
EAC-ABI 30-600	30kVA	12 - 600Vrms	± 50A
EAC-ABI 40-150	40kVA	3 - 150Vrms	± 266.6A
EAC-ABI 40-300	40kVA	6 - 300Vrms	± 133.3A
EAC-ABI 40-600	40kVA	12 - 600Vrms	± 66.6A
EAC-ABI 50-150	50kVA	3 - 150Vrms	± 333.3A
EAC-ABI 50-300	50kVA	6 - 300Vrms	± 166.6A
EAC-ABI 50-600	50kVA	12 - 600Vrms	± 83.3A
EAC-ABI 60-150	60kVA	3 - 150Vrms	± 400A
EAC-ABI 60-300	60kVA	6 - 300Vrms	± 200A
EAC-ABI 60-600	60kVA	12 - 600Vrms	± 100A
EAC-ABI 80-150	80kVA	3 - 150Vrms	± 533.3A
EAC-ABI 80-300	80kVA	6 - 300Vrms	± 266.6A
EAC-ABI 80-600	80kVA	12 - 600Vrms	± 133.3A
EAC-ABI 100-150	100kVA	3 - 150Vrms	± 666.6A
EAC-ABI 100-300	100kVA	6 - 300Vrms	± 333.3A
EAC-ABI 100-600	100kVA	12 - 600Vrms	± 166.6A
EAC-ABI 120-150	120kVA	3 - 150Vrms	± 800A
EAC-ABI 120-300	120kVA	6 - 300Vrms	± 400A
EAC-ABI 120-600	120kVA	12 - 600Vrms	± 200A
EAC-ABI 160-150	160kVA	3 - 150Vrms	± 1066.6A
EAC-ABI 160-300	160kVA	6 - 300Vrms	± 533.3A
EAC-ABI 160-600	160kVA	12 - 600Vrms	± 266.6A
EAC-ABI 200-150	200kVA	3 - 150Vrms	± 1333.3A
EAC-ABI 200-300	200kVA	6 - 300Vrms	± 666.6A
EAC-ABI 200-600	200kVA	12 - 600Vrms	± 333.3A

* The value given is a line to neutral measurement.

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

“WE ARE POSITIVE PEOPLE”

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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POSITIVE PROBLEM SOLVING