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EAC-1P

Single Phase Linear AC Source

Description

This range of adjustable AC Power Sources are based on a Linear platform. A very clean sine wave is produced with a distortion factor of less than 0.3% at mains frequencies. The EAC-1P units also provide very fast response times for load step changes. The front panel is clearly laid out with separate displays for voltage, current, frequency and power. Quick and precise setting of 50, 60 & 400Hz is offered via push button. The adjustable frequency of up to 500Hz can be optionally extended to 2kHz. The source is fully programmable through a variety of computer interfaces. An isolated analogue interface for all control and measurement functions can also be specified. The unit can be built with a constant current mode allowing the current limit to be set. Besides AC mode the unit can also be built to operate as a DC Source. A DC offset can be added to the AC to recreate ripple effects.



- Adjustable Phase Angle at Voltage On
- CV And CC Mode Operation
- High Visibility Front Panel
- External Oscillator Input
- DC Mode Operation

Selection Table

Part Number	Max Power	Output Voltage	Output Current	Dimensions (Width x Height x Depth)
EAC-1P 250	250VA	0 - 270 Vrms	3 A	19" x 4U x 435mm
EAC-1P 500	500VA	0 - 270 Vrms	6 A	19" x 4U x 435mm
EAC-1P 1000	1kVA	0 - 270 Vrms	10 A	19" x 6U x 435mm
EAC-1P 2000	2kVA	0 - 270 Vrms	15 A	19" x 6U x 435mm
EAC-1P 3000	3kVA	0 - 270 Vrms	20 A	19" x 10U x 435mm
EAC-1P 4000	4kVA	0 - 270 Vrms	30 A	19" x 16U x 600mm*
EAC-1P 5000	5kVA	0 - 270 Vrms	35 A	19" x 16U x 600mm*
EAC-1P 6000	6kVA	0 - 270 Vrms	40 A	19" x 16U x 600mm*
EAC-1P 7000	7kVA	0 - 270 Vrms	50 A	19" x 16U x 600mm*
EAC-1P 8000	8kVA	0 - 270 Vrms	60 A	19" x 20U x 780mm*
EAC-1P 9000	9kVA	0 - 270 Vrms	70 A	19" x 20U x 780mm*
EAC-1P 10000	10kVA	0 - 270 Vrms	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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Options Table

Code	Description
/CC.....	Additional constant current mode allowing current limit setting
/DC.....	DC mode operation
/F1.....	Increased frequency range 1 - 1000Hz
/F2.....	Increased frequency range 1 - 2000Hz
/ATE.....	No front panel control or display. Analogue Interface provided as standard
/AI-5.....	0-5V Analogue Interface for all control and measurement functions
/AI-10.....	0-10V Analogue Interface for all control and measurement functions
/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
/LT+LTRS232.....	IEEE 488.2 and RS232 Interfaces with listener and talker functionality
/LT+LTRS485.....	IEEE 488.2 and RS485 Interfaces with listener and talker functionality
/CAN.....	CAN Interface with listener and talker functions
/USB.....	USB Interface with listener and talker functions
/ETH.....	Ethernet interface with listener and talker functions over a LAN
/V300.....	Extended output voltage range 300Vrms
/V500.....	Extended output voltage range 500Vrms (Current output reduces by 40%)
/V700.....	Extended output voltage range 700Vrms (Current output reduces by 50%)
/AR.....	Power output at rear panel
/SYNC.....	Mains synchronization
/CF2.....	Peak current 2 x Nom. (Cresfactor 2)
/CF3.....	Peak current 3 x Nom. (Cresfactor 3)
/CF4.....	Peak current 4 x Nom. (Cresfactor 4)
/EXT OSZ.....	External oscillator input (20V _{pp})

Technical Data

Input voltage.....	230VAC or 2 x 400VAC or 3 x 400VAC, 50/60Hz
Safety.....	EN 61010
Emissions.....	EN 61000-6-3
Immunity.....	EN 61000-6-1
Output power.....	see table
Power derating cos $\leq \pm 0.7$	14%/ $\Delta 0.1 \cos \phi$
O/p voltage range.....	see table
Max. o/p current AC.....	see table
Frequency range.....	1-500Hz (1 and 2 kHz option)
Frequency range (with DC option).....	DC-500Hz (1 and 2 kHz option)
Mains regulation.....	0.1%
Load regulation.....	0.2%
Transient response time.....	typically <10ms for 10 to 90% load change
Distortion factor.....	0.3% at 50Hz
Program accuracy AC.....	0.1%
Program accuracy DC.....	0.1%
Program accuracy current.....	0.2%
Program accuracy phase angle.....	0.5° (0-360°)
Program accuracy frequency.....	0.1%
Ext. oscillator input.....	20V _{pp} / DC - 1000Hz
Measurement rms voltage.....	0.2%
Measurement rms current.....	0.2%
Measurement power.....	0.2%
Analogue interface.....	Option /AI-5 (0-5V), /AI-10 (0-10V)
Isolated analogue interface.....	Option /ATI-5 (0-5V), ATI-10 (0-10V)
RS 232/RS 485 Interface.....	12 bit
IEEE488.2/GPIB Interface.....	12 bit
USB interface.....	12 bit
CAN interface.....	12 bit
Cooling.....	Internal fan
Operating temperature range.....	0 to 40°C
Storage temperature range.....	-40 to +85°C

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. The photograph illustrates a modified EAC with timer functions. Your chosen unit may differ from that shown.