Mechanical Overview

Front Panel Layout

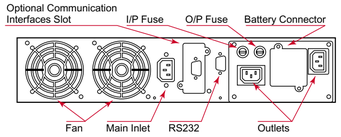
Battery Pack for FP 1000 / 1500 / 1600 or Power Electronic Boards for FP 2200 / 2500 / 3000 / 3200

Setting Buttons

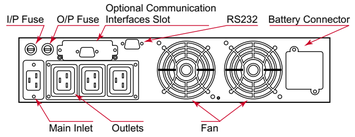
Graphic LCD

Input Breaker

Rear Panel Layout



FP Series UPS 1KVA ~ 1.6KVA



FP Series UPS 2.2KVA ~ 3.2KVA

Standard Accessories

Mounting Feet

Two (2) mounting feet for tower configuration are supplied with the FP Series UPS 1KVA to 1.6KVA. All other models 2.2KVA to 3.2KVA are self supporting.

Racking Ears

Standard 19 rack mounting ears are available for all FP Series UPS models.

Graphic LCD Display

Buzzer	When the buzzer in normal operation, the symbol will flash
Green Mode	When UPS is in Green Mode, the symbol will flash
Fault	UPS has failed and must be repaired
TEST	When UPS is conducting DC Test under AC Mode, the symbol will flash
Load	The higher the load, the more bars will illuminate
Inverter	When UPS is in Inverter Mode, the symbol will illuminate
PFC	When PFC is normal, the symbol will illuminate
Line	When utility power is normal, the symbol will illuminate
Charger	When Charger is in normal operation, the symbol will illuminate
Boost	When UPS starts Battery Booster, the symbol will illuminate
Battery	The higher the battery voltage, the more bars will illuminate Every bar represents 25 % of battery capacity
Fan (High speed)	In DC Mode
Fan (Medium speed)	In AC Mode
Fan (Low speed)	In By-Pass Mode

Intelligent Power Management Software

Cruiser

Users are able to customize various Cruiser controls such as warning method, alarm messages and several shortcut icons to easily access the most commonly used functions. Cruiser can send warning messages to a pager, via e-mail or over the LAN, thus providing an early warning system for power failures, system shutdown and a variety of other scenarios. It guarantees a faster response time, even when you are not in the office.

Features

- **Green mode supported**
- **PFC status display**
- **Cross platform supported**
- **UPS monitoring utility**
- **Scheduled system shutdown**
- **Graphic display of UPS status**
- **Warning notification via e-mail or pager**
- **Customized controls**
- **User-definable warnings**
- **Multi-language versions**
- **"Read & Write" functions when setting output voltage and frequency (Optional)**

Interface & OS Compatibilities

- **RS232**

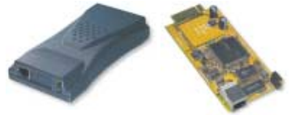
  Windows : Win95 , WinNT4.0 , Win98SE , Win2000 , WinMe , WinXP
  Linux : 7.0 ~ 7.3 , 8.0 ~ 8.4 , 9.0
  Mandrake : 8.2 , 8.3 , 8.4 , 9.0
  Novell : 4.x , 5.1

- **USB**

  Windows : Win98SE , Win2000 , WinMe , WinXP

Other major UPS monitoring software and SNMP / HTTP Cards compatible with all FP Series UPS (For more information, please contact AEC s global sales offices)

- **Internal or External Networking Card: Net Agent II or USHA PRO (SNMP, HTTP, PPP, TCP/IP, etc)**



- **UPSilon via RS232**

- **Rups via Contact Closure(DB9)**

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CATE41E
2003.11 1000

FP Series UPS

1KVA ~ 3.2KVA

True, Double-Conversion, On-Line UPS

In today's world where power requirements are increasing, utility power quality and reliability is decreasing. Normal everyday routines are constantly exposed to power problems such as power outages, sags, or surges. Any of these problems can spell disaster for the unprepared. Down time resulting from power problems costs industries billions of dollars over the course of a year. Industrial and commercial end-users need to be prepared when the power that they rely on is also a potential problem.

One way to protect critical systems from power outage and sags is the FP Series line of true on-line uninterruptible power supplies (UPS). FP Series UPS is designed for optimizing power quality with the ease of installation. The FP Series features:

. **Double Conversion**
. **Continuous battery charger and inverter for primary power path**
. **Constant battery connection to inverter and load**
. **Guarantee full power operation during power failure**
. **No voltage drop and zero transfer time**
. **Light weight unit**
. **Hot-swappable battery**
. **User-friendly Graphic LCD**

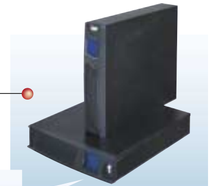
Applications

- **Computers**
- **Network Servers**
- **Workstations**
- **Wireless Communications**
- **Other Electronic Peripherals**

Features & Benefits

Flexible Mounting Orientation

Allows system integrators more flexibility in designing their backup power system to maximize space. With the rotatable LCD design, installers can mount the UPS vertically or horizontally.



User-Friendly Graphic LCD

This robust LCD display enables field service engineers to easily troubleshoot the UPS without opening the box, thus reducing downtime.

Single Voltage Battery Pack Design

A 48VDC standard battery pack design comprised of 4 x 12V7AH is used in all FP series UPS models and is interchangeable with each other.

Hot-Swappable Battery

The standard 48VDC battery pack allows installers to take the headache out of battery installation. Installers can now simply slide the used battery pack out of the unit and replace it with a new pack. All FP battery packs are interchangeable reducing the risk of system failures.

Light Weight Design

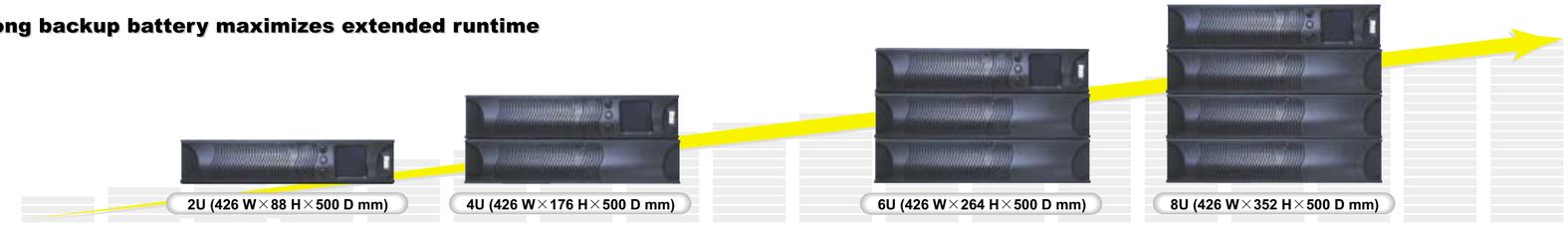
The FP model is specifically designed for field installation. The light weight design requires only a single installer to put the system in place. This will significantly reduce on-the-job injuries and installation fees.

User-Remote Interface

The off-site user can now test, set parameters, monitor power status, save file, and shutdown the system all via remote interface. The user-remote interface includes SNMP/HTTP Card, RS232, USB, DB9, and AS400 interface.

Specifications

Long backup battery maximizes extended runtime



** Each Battery Module is comprised of 2×48VDC Battery Packs in 2U box.*

Model Name	FP1000	FP1500	FP1600	FP2200	FP2500	FP3000	FP3200
Topology	True On - Line , Double Conversion						
On- battery Output Waveform	True Sine Wave						
Number of Phase	Single (1φ2W + G)						
Input							
Maximum Capacity (VA / W)	1000 VA / 700 W	1500 VA / 1050 W	1600 VA / 1120 W	2200 VA / 1540 W	2500 VA / 1750 W	3000 VA / 2100 W	3200 VA / 2240 W
Nominal Input Voltage	120 V or 230 V	120 V	230 V	120 V	230 V	120 V	230 V
Input Voltage Regulation	80 to 138 VAC or 160 to 276 VAC	80 to 138 VAC	160 to 276 VAC	80 to 138 VAC	160 to 276 VAC	80 to 138 VAC	160 to 276 VACc
Nominal Input Frequency	50 / 60 Hz + / - 5 Hz						
Input PFC	> 0.98 @ full load						
Input Short Protection	Circuit Breaker						
Output							
Nominal Output Voltage	100 /110 / 115 / 120 VAC or 208 / 220 / 230 / 240 VAC	100 / 110 / 115 / 120 VAC	208 / 220 / 230 / 240 VAC	100 / 110 / 115 / 120 VAC	208 / 220 / 230 / 240 VAC	100 / 110 / 115 / 120 VAC	208 / 220 / 230 / 240 VAC
Output Voltage Regulation	Rated Voltage + / - 2 %						
Output T.H.D	< 3 % @ Linear Load						
High Efficiency Mode (AC to AC)	> 86 %	> 86 %	> 86 %	> 88 %	> 88 %	> 88 %	> 88 %
Crest Factor	3 : 1						
Start on Battery	Yes						
Output Frequency	50 / 60 Hz (Autotracking)						
Overload Capability	Sustaining 50 sec@108% load ; 28 sec @110 ~ 120%load ; 15 sec @120 ~ 130% load ; 9 sec @140 ~ 145 %load ; Immediate Response @150% load						
Battery							
User Replaceable Battery	1 x 48 VDC Battery Pack	1 x 48 VDC Battery Pack	1 x 48 VDC Battery Pack	96V (2 x 48 VDC Battery Pack)	96V (2 x 48 VDC Battery Pack)	96V (2 x 48 VDC Battery Pack)	96V (2 x 48 VDC Battery Pack)
Typical Backup Time (Full / Half load)	8 / 25 minutes	7 / 18 minutes	7 / 18 minutes	8 / 20 minutes	8 / 20 minutes	6 / 17 minutes	6 / 17 minutes
Battery Type	Sealed VRLA 12V7AH ; Hot Swap						
Recharge Time to 90%	8 hours						
Extended Battery Cabinet	Extendible Battery Module in 2U high (Comprises 2 x 48VDC Battery Packs)						
Advance Warning Diagnostics							
Front Panel Indication	Front panel menu driven LCD monitoring and control panel for all functions						
Audible Alarms	DC Mode , Low Battery , Voltage / Frequency Error, Charger Fail , High Temp , Over Load , Fault , PFC Overload						
Communication Interface							
Communication port	RS- 232 Port (Standard) ; DB9 , AS400 , USB Cards (optional)						
SNMP Manageable	Yes						
Environmental							
Operation Temperature	0 - 40 ℃ (32-104 F)						
Storage Temperature	- 15 to + 50 ℃ (5-122 F)						
Relative Humidity	0 % to 95 % non - condensing						
Audible Noise (at 1 meter from surface of unit)	< 45 dBA @ 1 meter						
Mechanical							
Dimensions-Rackmount (W x H x D mm)	426 x 88 (2U) x 500 mm	426 x 88 (2U) x 500 mm	426 x 88 (2U) x 500 mm	426 x 176 (4U) x 500 mm	426 x 176 (4U) x 500 mm	426 x 176 (4U) x 500 mm	426 x 176 (4U) x 500 mm
Dimension-Tower (W x H x D mm)	88 x 426 x 500 mm	88 x 426 x 500 mm	88 x 426 x 500 mm	176 x 426 x 500 mm	176 x 426 x 500 mm	176 x 426 x 500 mm	177.8 x 482 x 510 mm
Weight (UPS / Battery Packs)	12 / 11.2 kgs	12 / 11.2 kgs	12 / 11.2 kgs	13.2 / 31.2 kgs	13.2 / 31.2 kgs	13.4 / 31.4 kgs	13.4 / 31.4 kgs
Total Weight	23.2 kgs	23.2 kgs	23.2 kgs	44.4 kgs	44.4 kgs	44.6 kgs	44.6 kgs
Conformance							
EMI / RFI Compatibility	FCC Class A or EN50091-2 Class B, EN55022B	FCC Class A	EN50091-2 Class B, EN55022B	FCC Class A	EN50091-2 Class B, EN55022B	FCC Class A	EN50091-2 Class B, EN55022B
Safety Certifications	UL or CE, TUV / GS	UL	CE , TUV / GS	UL	CE , TUV / GS	UL	CE , TUV / GS

** Specifications are subject to change without notice.*