

■ AC Power  
For *Business-Critical Continuity™*

**Liebert® APM, 45-90 kW/kVA**  
Highly Energy Efficient Row-Based, On-line UPS



MODULARITY. EFFICIENCY. FLEXIBILITY.

# An Adaptable UPS That Meets Increasing Power Requirements

Prevent power interruptions and ensure the future flexibility and efficiency of your data center infrastructure, with the Liebert APM UPS.

- Modular configuration
- Cost-efficient operation
- Flexibility to match increasing power demands
- Enterprise-level reliability

## MODULARITY

### Redundant intelligence and modular capacity ensure reliable operation.

Liebert FlexPower™ core assemblies incorporate distributed intelligence and scalable power in a common module. This technology allows configuration of a completely redundant power and control system, sized to match the capacity of the protected equipment. When power requirements change, capacity is easily added – without increasing the system footprint.

Using FlexPower core assemblies, the Liebert APM can scale from 15 to 45kW, or up to 90kW in 15kW increments within a single cabinet. This approach allows for right-sizing of the UPS, resulting in improved energy efficiency and reduced power expenditures.



**FlexPower™ core hardware assemblies** enable quick and easy capacity increases.

**Expand for capacity or redundancy in 15kW increments within a single cabinet** – 15kW to 45kW or 90kW. No additional floor space is required.

**FlexPower assemblies** may be added without powering down connected equipment.

**Distributed controls** – each FlexPower core assembly includes DSP controls, minimizing possibility of single point of failure

**Standalone static bypass module** – features independent controls in separate assembly to provide higher reliability

## EFFICIENCY

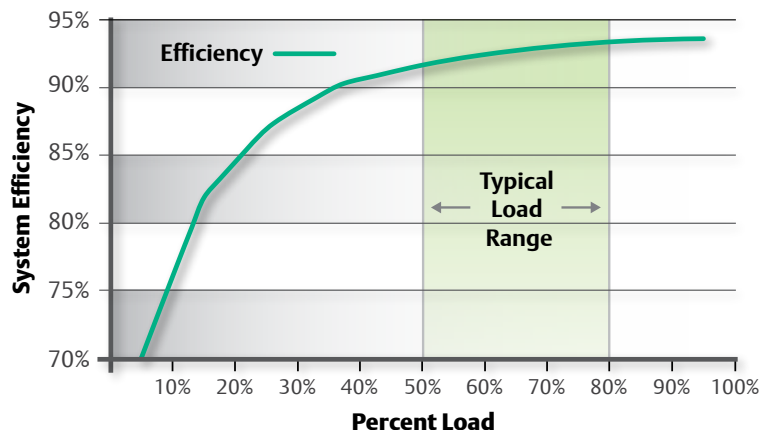
### Liebert APM offers efficiencies of up to 94% at typical load levels—among the highest in its class.

It is even more efficient when sized in accordance with present system needs, instead of purchasing larger capacity systems to anticipate future requirements.

### Lowest Total Cost of Ownership

- High-efficiency rating (up to 94%), with a virtually flat efficiency curve from 50-100% load, resulting in significant energy cost savings
- Buy only what you need for present usage, with the flexibility to add capacity as demand increases
- One-year warranty – provides full system coverage for one year

### Liebert APM Efficiency Curve



The 90kW APM UPS at full load with a 2% efficiency advantage over competitive UPS saves \$1800 annually (assuming \$0.10 per kW Hr)

## An Efficient Row-based UPS with the Reliability Features of an Enterprise UPS System

### FLEXIBILITY

Liebert APM supports dynamic environments and IT growth with options for communications, application and growth.

#### Flexibility

- Capacity can be expanded in 15kW increments using FlexPower™ assemblies
- 45kW model includes internal batteries; the 90kW model uses external battery cabinets
- Easy Installation – front service access, smaller footprint
- Matching bypass and distribution cabinet – increase reliability and safety by switching the protected load to bypass power for maintenance and service
- Top or bottom cable entry – enables installation on raised or non-raised floors



#### Simple and Comprehensive Monitoring

The menu-driven monitor panel on Liebert APM is large and easy to read. Multiple parameters are monitored; data is recorded, stored and easily viewable. Unit metering and status information is displayed in a logical format, and is selectable in multiple languages. The UPS also includes three Liebert IntelliSlot ports for web-based communications ability:

- Liebert IntelliSlot card IS-485EXI allows communication with Liebert SiteScan
- Liebert IntelliSlot card IS-WEBL allows communication with Liebert Nform
- Liebert IntelliSlot IS-IPBML offers Web Configuration, Telnet and Modbus IP for connectivity to a Building Management System
- Liebert IntelliSlot IS-485 L offers serial configuration and Modbus 485 connection to a Building Management System or Liebert SiteScan

### RELIABILITY

The Liebert APM ensures reliable operation through quality components, intelligent design, and the industry's largest local support network.

#### Higher Availability

- Redundancy and distributed intelligence features minimize single points of failure
- Internal power supply redundancy
- Distributed controls – each FlexPower core assembly includes DSP controls, minimizing possibility of single point of failure
- Standalone static bypass module – features independent controls in separate assembly to provide higher reliability



#### Enterprise-Quality Batteries Increase Reliability

Battery quality is key to the reliability of the UPS and to the availability of the protected equipment. Liebert APM provides the same reliable battery technology that supports enterprise UPS systems.

- Lower initial cost
- Better service life
- Fewer batteries = less maintenance, fewer cells to fail
- Battery warranty – 3 years full warranty, 7 years pro-rated
- Backed by the largest service organization in the industry
- Optional Alber BDSi in external battery cabinet ensures battery reliability by constantly monitoring each battery, allowing for proactive management

#### The row-based Liebert APM is ideally suited for:

- Small to medium-size data centers
- Server rooms
- Production areas
- Labs and testing facilities
- Telecommunications or process control centers

# Technical Specifications – Liebert APM UPS

<b>Power Rating – kW/kVA</b>	<b>15, 30, 45</b>	<b>15, 30, 45, 60, 75, 90</b>
<b>Frame Size</b>	<b>45kW</b>	<b>90kW</b>
<b>Input AC Specifications</b>		
Phase	3	
Power Factor	0.99 lagging minimum at full load	
Frequency Range	40-70 Hz	
Input Voltage	120/208, 127/220VAC, 60Hz, 3-phase, 4-wire plus ground	
<b>General Specifications</b>		
UPS Technology	On-Line, Double Conversion	
<b>Battery Specifications</b>		
Battery Test Type	Online	
Battery Technology	Valve-regulated lead acid battery; supplied by EnerSys	
<b>Output AC Specifications</b>		
Voltage	120/208, 127/220VAC, 60Hz 3-phase, 3- or 4-wire plus ground	
Frequency – Hz	60 Hz	
<b>Communications</b>		
Communications Options	Liebert IntelliSlot IS-485EXT, Liebert SiteScan, IS-WEBL, Liebert Nform	
<b>Physical Data UPS</b>		
Dimensions, W X D X H in (mm)	31.8x39.5x78.7 (800, 1000, 2000) Note: 12 inches of rear clearance required for cooling	
UPS Rating	Unit Weight lb (kg)	
15kW	919 (417)	705 (320)
30kW	994 (451)	780 (354)
45kW	1069 (485)	855 (388)
60kW	NA	930 (422)
75kW	NA	1005 (456)
90kW	NA	1080 (490)
<b>Physical Data Bypass Distribution Cabinet</b>		
Dimensions, W X D X H in (mm)	23.625 x 39.5 x 78.75 (600 x 1000 x 2000)	
Weight lb (kg)	902 (410)	
<b>Physical Data Battery Cabinet</b>		
Dimensions, W X D X H in (mm)	23.625 x 39.5 x 78.75 (600 x 1000 x 2000)	
Weight lb (kg)	1554 (705) with Hx150 batteries, 1693 (768) with HX205 batteries, 2101 (953) with HX300 batteries, and 2366 (1073) with HX330 batteries.	
<b>Environmental</b>		
Operating Temperature, °F (°C)	UPS: 32° to 104°F (0-40°C); Battery: 68° to 86°F (20-30°C)	
Relative Humidity	0% to 95%, non-condensing	
Operating Altitude	Up to 3,300 ft. (1,000m) without derating	
Acoustical Noise, db, at 39 in.	Less than 56 dBA typical, 3.3 ft. (1m) from the unit	
<b>Agency/Certification/Conformance</b>		
Listed to UL 1778 UPS standards, and CSA certified. Meets current requirements for safe high performance UPS operation.		
<b>Warranty</b>		
<b>Standard</b>	1 Year	

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