

# LIEBERT® APS/FP10-ZM 5-20 kVA

Uninterruptible Power Supply for Transportation and Infrastructure Applications



## The Liebert® APS/FP10-ZM is a compact modular UPS designed specifically for transportation and infrastructure applications, featuring IP 32 and IP 54 certification options

Maximise availability and reduce MTTR with Liebert APS/FP-10ZM 20 kVA

The modular, scalable architecture of the Liebert APS/FP10-ZM is specifically designed to meet immediate load requirements as well as efficiently adapt to future needs, allowing expansion with the simple installation of additional power modules.

- 5 kVA / 4.5 kW single phase output power modules
- Double conversion efficiency: 92%
- Fully rated @ 40°C
- IP 20 protection as standard, IP 32 or IP 54 protection optional
- Remote diagnostic and preventive monitoring service available with LIFE™ to protect your critical assets 24/7



Liebert APS/FP-10ZM

### Features and Benefits

- Multiple communications options
- Site configurable as single or three phase input
- Hot-Swappable power modules, which minimise the time needed for repairs and optimise serviceability and availability
- Maximised system availability with redundant power modules reaching the maximum configuration of 20 kVA with an additional 10 kVA of redundancy
- Bespoke battery solutions that can be mounted internally or externally to the UPS
- Extended autonomy requirements can be achieved with additional charger module
- Large input voltage range, contributing to prolonged battery life

### Ideally suited for:

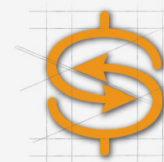
- Signalling
- Barrier Control
- Safety/Security Systems
- Ticketing
- Emergency Lighting
- Passenger Information Systems
- Communication
- Control Rooms

### Low total cost of ownership:

The Liebert APS/FP10-ZM 5-20 kVA UPS from Vertiv™ offers design and operational efficiencies that are unmatched in its class to deliver a low total cost of ownership.

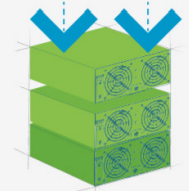
#### 1 CLASS-LEADING ENERGY EFFICIENCY

Up to 92% in double conversion mode.



#### 2 SCALABLE DESIGN

Allows addition of power capacity or extended back-up runtime, without additional floorspace - buy what you need now, and add capacity later.



#### 3 HIGH AVAILABILITY

With redundant operation, and Vertiv LIFE™ Services. Remote Diagnostic, real-time communication technology.



#### 4 MODULAR DESIGN

Enables easy maintenance and service, minimising time to repair.

## Technical Specifications

RATINGS	
Frame Rating (kVA/kW)	20/18
Power Module Rating (kVA/kW)	5/4.5
Maximum Number of Power Module per Frame	6*
INPUT DATA	
Nominal Input Voltage (V)	220/230/240; Single-Phase - 380/400/415; Three-Phase
Input Voltage Range without Battery Discharge at 70% Load (V)	140-280 Single-Phase; - 242-485 Three-Phase
Nominal Input Frequency (Hz)	50/60
Input Frequency Range (Hz)	40 to 70 auto-sensing
Input Power Factor (kW/kVA)	Single-Phase Input, >0.99 - Three-Phase Input, >0.95
Input Current Distortion, THDi (%)	<5
BATTERY	
Battery Cells per String	72
Maximum Charge Current (Full, Load) (A)	Power Module Internal Charger: 1.8 - Extra Charger Module: 10
Voltage Temperature Compensation	Yes
OUTPUT DATA	
Nominal Output Voltage (V)	220/230/240 Single-Phase
Voltage Regulation (%)	±3
Voltage Stability (100% Step Load) (%)	±7
Voltage Recovery Time (ms)	≤ 60
Output Voltage Distortion, THDv (%)	≤ 3, Linear Load, ≤ 5, non-Linear Load
Output Frequency (Hz)	50/60
Nominal Load Power Factor (kW/kVA)	0.9
Output Overload Capability (s)	130% for 60s; 150% for 10s - 200% for 1s; > 201% for 0.25s
DIMENSIONS & WEIGHT	
Unit Weight (empty frame) (kg)	145
Power Module Weight (kg)	8.2
Dimensions, W x D x H (mm)	440 x 850 x 970
GENERAL & ENVIRONMENTAL	
Operating Temperature, Continuous, without Derating (°C)	0 - 40
Double Conversion Efficiency (AC-AC) (%)	92
Eco Mode Efficiency (AC-AC) (%)	>98
Environmental	WEEE and ROHS2 (6 by 6), REACH Compliant
Acoustic Noise Level @ 1 Meter (dBA)	<55dB (<50% Load), <65dB (51-100% Load)
UPS Classification According to IEC EN 62040-3	VFI-SS-111
Protection Degree IEC60529	Standard: IP 20, Optional: IP 32 or IP 54
Colour	RAL 7021

\* Note: Only up to 5 power modules per frame if optional 10 A charger module is included