AC Power Systems
for Business-Critical Continuity™

Liebert PBX+ UPS (5 kVA)

Applications :

Banking, Server, Storage device, Network instruments,VOIP, communication equipment, precision instrument and PC Banking.

Applicable load :

Small IDC room, Network room,Business operating room, lab and instrument room.

Product Features

- Output Isolation transformer
- Auto transfer facility
- DSP based true online UPS system
- Compatible with Engine generator
- Less foot print.
- Technology - IGBT based.

Mini Online UPS - Liebert PBX+ 5kVA

- **Reliability**
  - Double conversion online design
  - DSP full digital controlwith high output precision
  - Can withstand fluctuationof input mains voltage
- **Energy Efficiency & Low TCO**
  - Good Energy saving performance
  - Input power factor greater than 0.99
- **High Serviceability**
  - Main machine is separate from Battery.
  - Provide LCD, each kind of status / Fault information is visible.
- **Real Time Monitoring**
  - SNMP card to acquire UPS data and event.
- **Better battery life**
  - Wide Input voltge / frequency reduces discharging time.
  - Extra strong charging capacity
  - Main machine is separate from battery,which is good for battery life.

Liebert®

EMERSON™
Network Power

Technical Specifications
Liebert PBX+ 5kVA (4.5kW)

Input Parameters	
Nominal input voltage	230 Vac 1-Phase Line to neutral with 3-wire system (Earth wire)
Permissible input voltage range	161 Vac (-30%) to 276 Vac (+20%)
Nominal Input frequency	50 Hz
Permissible input frequency variation	+/- 10%
Input power factor	> 0.99 at 230 Vac input voltage and 4.5kW output load & V i/pTHD < 2%
Input Current Distortion - I - THD	<= 10% at 230 Vac input voltage , 4.5kW output load & Vi/pTHD < 2%
Generator rating (kVA)	20 kVA

Intermediate DC circuit parameters	
Nominal DC voltage at input of inverter	790 Vdc
Inverter DC bus Overvoltage trip	850 Vdc
Nominal Battery float voltage	270V (2.25V / Cell) for SMF 256V (2.24V / Cell) for LATB
Types of batteries supported	VRLA / SMF, LATB
End of discharge Battery bus voltage	SMF: 1.75V / Cell (210 Vdc for 20 Blocks) LATB: 1.8 V/Cell (205 for 19 Blocks)
Maximum battery charging current (with full o/p Power of 4.5kW)	10A - (for input voltage between 207V to 276V) 6.5A - (For input voltage between 185 to 206V) 5A - (For input voltage between 161 to 184C)
DC ripple	<1% rms, <=2% peak to peak
Maximum Battery back up time	Up to 4 hours.
Black Start	Available
No. of batteries (12V)	20 nos. - SMF, 19 nos. - LATB
Charging Time (to reach 90% of AH)	12 Hrs to 15 Hrs.
Battery Capacity (Adjustable)	7AH, 12AH, 18AH, 24AH, 40AH, 65AH, 100AH

Output Parameters	
Output power	5kVA / 4.5kW for entire AC I/P range
Output power factor	0.9 Lagging
Nominal output voltage	230 VAC
Output voltage regulation	+/- 2%
Output voltage distortion for 100% load	<=4% at linear load <=7% at non linear
Nominal output frequency	50 Hz
Output frequency tolerance in free run mode	+/- 0.5 Hz
Output frequency synchronisation range	47 Hz to 53 Hz
Output crest factor capacity	3:1
Transient response at 100% step load	40% peak recovering to 2% within 2ms
Inverter to bypass Load transfer time	<10ms
Overload capacity	105 - 130% overload for 10 minutes 130 - 150% overload for 10 secs. 150% overload for <100msec
UPS efficiency for 100% Linear load (AC-AC, with Battery on Float mode) at Nominal I/P voltage	83%
UPS efficiency for 50% Linear load (AC-AC, with Battery on Float mode) at Nominal I/P voltage	80%
On Battery Mode Efficiency at 100% Linear load	81%

Bypass Parameters	
Permissible Bypass voltage Range	- 20% / + 10% of set O/P voltage*
Permissible Bypass Freq. Range	47 Hz to 53 Hz

Mechanical parameters	
Protection grade	IP 20
Ventilation	Forced - Air cooled (Air entry at front UPS)
Cable entry	Back end - TOP
Colour / Panel finish	Dark structured grey
Sheet metal thickness	Nominally 1.6mm, 2mm as required at stress points
Height	Without Castor Wheels : 375 mm With Castor Wheels : 434 mm
Depth	706 mm
Width	445 mm (19")
Weight	88 Kg max

Environmental parameters	
Operating temperature range	0°C to 40°C
Storage temperature	-10°C to 70°C
Relative humidity	0-95% RH Non-Condensing
Maximum altitude with full rating	1000 Meters
Altitude de-rating	1% per100m between 1000m & 2000m
Acoustic noise with rated load at 1 meter	<= 65 dBA
Altitude de-rating	1% per 100m between 1000m & 2000m

Manual Bypass Switch : Optional
Communication - Optional
Remote parameter monitoring (HTTP) using OCWEB card:
*Set o/p voltage either 220V, 230V or 240V

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For disposal of Batteries Please visit the below link:
http://www.cpcb.nic.in/divisionsofheadoffice/hwmd/lead.pdf

Note: Specifications & Features may vary based on the condition.

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