

Power Is ON<sup>®</sup>



# Product Portfolio



# Product Introduction Line Interactive UPS

## Key Features

- Compact size, Plug & Play
- Built in AVR & surge suppressor
- Cold start function, Auto restart
- Overload & Battery drain protection
- LED status indicator
- Quasi sine wave
- Inbuilt RS232 port for communication in BP1000 onwards
- Optional USB port & Auto shutdown Software



## Battery Configuration:

BP650: 1x12V (7Ah or 9Ah)

BP1000/1200: 2x12V (7Ah or 9Ah)

BP1500: 2x12V (9Ah)

BP2200: 24V (2x9Ah, 4x9Ah & Ext. Battery Option)

# UPSX Series (1-3kVA): (UPSX1101 / UPSX1102L4 / UPSX1103L4 / UPSX1103L8)

## Key Features

- PWM Topology using MOSFET
- Wide Input AVR Range
- Overload & Short Circuit Protection
- Battery Deep Discharge Protection
- 10A (Standard) & 20A (Optional) Large Charging ability for connecting external Batteries



## Battery Configuration:

UPSX1101L1: 12V/24V DC

UPSX1102L4: 24/36/48V DC

UPSX1103L4: 24/36/48V DC

UPSX1103L8: 72/96V DC

# **Product Introduction – 1 Phase UPS (Transformer-less UPS)**

---

## MF Series 1:1 (1-3kVA)

### Key Features

- True online double conversion PWM technology
- IGBT based Rectifier & Inverter
- Pure sine wave output
- Compatible with Isolation transformer
- Crest Factor 3:1
- High input power factor  $\geq 0.99$
- Static bypass and cold start
- Online double conversion efficiency up to 94%
- Multiple communication SNMP, USB & RS232

### Battery Configuration:

MF1101L3 – 3 nos.

MF1101L4 – 4 nos.

MF1102L4 – 4 nos.

MF1103L6 – 6 nos.

MF1103L8 – 8 nos.



## Key Features

- True online double conversion PWM technology
- High input power factor  $\geq 0.99$
- Unity Output PF ( $kVA = kW$ )
- Static bypass and cold start
- Compatible with Isolation transformer
- ECO mode operation
- Flexible DC link voltage (192-240V DC),  
Optional (120-240V DC)
- Up to 4 units can be paralleled
- Online double conversion efficiency up to 94%
- Multiple communication  
SNMP, USB, RS232, Modbus & PF

## Battery Configuration:

MFP1105L16 : 16-20 nos.

MFP1106L16 : 16-20 nos.

MFP1110L16 : 16-20 nos.



# **Product Introduction – 1 Phase UPS (Transformer based UPS)**

## PB Series 1:1 (5-15kVA) with inbuilt Transformer

### Key Features

- True Online Double Conversion UPS
- Inbuilt Output isolation transformer
- Wide input voltage range (160-280V AC)
- User friendly digital LCD display
- Cold start function
- SNMP/RS232 Communication Interface (Optional)

### Battery Configuration:

5/6kVA : 10/16 nos.

10/15kVA : 16 nos.

Charging Current: 10A standard



## MFX Series 1:1 (1-3kVA) MFPX Series 1:1 (5-10kVA) with inbuilt Transformer

### Key Features

- True online, double conversion PWM technology
- High input power factor  $\geq 0.99$
- Static bypass and cold start
- Inbuilt Transformer
- ECO mode operation
- Flexible batteries 16-20pcs (above 3kVA)
- Online double conversion efficiency up to 94%
- Multiple communication  
SNMP, USB, RS232, Modbus, PFC

### Batteries:

- 1kVA - 3 nos.
- 2kVA – 4 nos.
- 3kVA - 6/8 nos.
- 6 & 10kVA – 16/18/20 nos.



Control Panel  
up to 50 items. Set by LED



Power Is  $\mathcal{N}$



# **MP Series (1:1) 1-10KVA Online UPS (Rack Mount/Tower RT)**

# MP Series (1:1) 1-20KVA Online UPS

## Key Features

- Online double-conversion UPS
- Input power factor  $\geq 0.99$
- Output power factor 0.9
- Wide input voltage (110Vac – 300Vac)
- ECO mode for energy saving
- Online double conversion efficiency up to 94%
- Flexible batteries for 6kVA, 10kVA & 20kVA  
In 6kVA, Space for Internal Battery: 16x7Ah or 9Ah
- Emergency power off function (EPO)
- Adjustable charging current via LCD or software  
(1A~6A) Standard & (20A) Configurable  
for 6kVA, 10kVA & 20kVA models

## Batteries:

1kVA (External Battery) : 3 nos. (2U)

1kVA (Internal Battery) : 3x7Ah/9Ah (3U)

3kVA (Internal/External Battery) : 8x7Ah/9Ah (3U)

6,10 & 20kVA : 16-20 nos. (4U)

Power Is ON<sup>®</sup>

**BPS**<sup>®</sup>  
Strategic Power Solutions



In 6kVA, Space for Internal Battery:  
16x7Ah



# **Product Introduction**

## **3 Phase In 1 Out UPS**

### **(Transformer-less UPS)**

## Key Features

- True online, double conversion PWM technology
- 10, 15 & 20kVA in 3:1 configuration
- High input power factor  $\geq 0.99$
- Static bypass and cold start
- Isolation transformer compatible
- ECO mode operation
- Online double conversion efficiency up to 94%
- Flexible batteries 16-20pcs
- Up to 4 units can be paralleled
- Multiple communication  
SNMP, USB, RS232, Modbus, PFC

### Flexible Batteries:

10 to 20kVA – 16/18/20 nos.



## Key Features

- True online, double conversion PWM technology
- 10, 15 & 20kVA in 3:1 configuration
- kVA=kW, Unity PF
- High input power factor  $\geq 0.99$
- Input THDi  $< 3\%$
- Static bypass and cold start
- Online double conversion efficiency up to 94%
- Isolation transformer compatible
- ECO mode operation
- Up to 4 units can be paralleled (Inbuilt Paralleling)
- Multiple communication  
SNMP, USB, RS232, Modbus, PFC
- Support Common battery bank
- 3:1 can be configured as 1:1

## Flexible Batteries:

10 to 20kVA – 16-20 nos.(standard) & 32-40 nos. (opt.)



# **Product Introduction**

## **3 Phase In 1 Out UPS**

### **(Transformer based UPS)**

## Key Features

- True On-Line Double-Conversion PWM Topology
- Inbuilt Isolation Transformer
- Up to 4 units can be paralleled
- Static bypass and cold start
- Wide Input Voltage Range: 208~480V AC

## Battery configuration:

10-20kVA : 16 nos.

30kVA : 20 nos.



## Key Features

- True online, double conversion PWM technology
- High input power factor  $\geq 0.99$
- Static bypass and cold start
- Inbuilt transformer
- ECO mode operation
- Online double conversion efficiency up to 94%
- Flexible batteries 16-20pcs
- Multiple communication  
SNMP, USB, RS232, Modbus, PFC

### Flexible Batteries:

10 to 20kVA – 16/18/20 nos.



# Product Introduction – 3 Phase UPS (Transformer-less UPS)

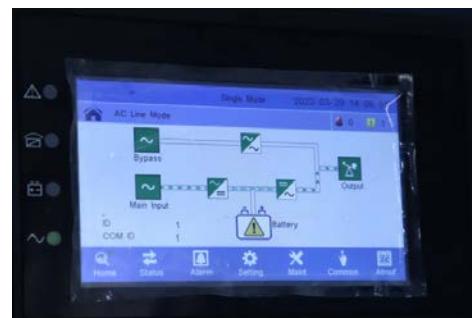
---

## Key Features

- True online 3 Level IGBT Rectifier & Inverter Topology
- Unity output power factor ( $kVA=kW$ )
- Input THDi <3%
- Emergency power OFF (EPO)
- Multiple communication SNMP+USB+RS232
- Flexible battery 32-40pcs
- Colour touch screen display
- 3:3 Phase configuration can be configured as 3:1 or 1:1
- Online double conversion efficiency up to 95%

### Flexible Batteries:

10/20/30kVA : 32~40 nos. (Configurable)



## Key Features

- True on-line double conversion topology
- Available ratings 30-90kVA
- Modular UPS configuration, module capacity 30kVA
- ECO mode operation for energy saving
- Input PF  $\geq 0.99$
- Online Efficiency: up to 95%, ECO Mode: 99%
- Common or separate battery bank configurable
- Paralleling up to 4 Units
- Multiple communication SNMP, RS232, Modbus, PFC



## Flexible Batteries:

30/60/90kVA: 32-40 nos.



## Key Features

- True online 3 Level IGBT Rectifier & Inverter Topology
- 0.9 output power factor for 10-30kVA
- Unity output power factor for 40-250kVA (kVA=kW)
- Online efficiency of 96.5%
- ECO mode operation for energy saving, efficiency >99%
- Emergency power OFF (EPO)
- Multiple communication SNMP+USB+RS232
- Input phase sequence correction & power from mains without utilizing battery
- Parallel operation up to 4 units
- 7 inch colour touch screen display



### Flexible Batteries:

10/20/30kVA : 16-20 nos. (Standard) & 30-50 nos. (opt.)  
40-250kVA : 30-50 nos. (Configurable)



# Product Introduction – 3 Phase UPS (Transformer based UPS)

---

### Key Features

- Available ratings 5, 10, 15, 20 & 30kVA
- True on-line double conversion design
- Inbuilt Isolation Transformer at output
- IGBT based charger, improved input PF >0.9
- High charger capacity for long back-up up to 2-10 hrs.
- Front LCD display
- Charging Current: 1-10A Standard & 20A Optional  
(High rating optional)



### Batteries:

- |             |                   |
|-------------|-------------------|
| 5kVA        | : 16 batteries    |
| 10-20kVA    | : 16/20 batteries |
| 20/25/30kVA | : 30 batteries    |

# EPX+ Series (3:3) 10-160kVA-200-300-400KVA

## Key Features

- Most suitable for all kinds of load
- Advance DSP control / IGBT charger(opt.)
- Inbuilt Isolation transformer.
- High output PF 0.9
- Efficiency >94%, ECO mode 99%
- N+X parallel redundancy up to 6 Units
- High MTBF (>2,00,000 hrs.)
- Intelligent self-diagnosing function
- 7" colour Touch Screen Display
- Multiple communication SNMP, RS232, Modbus

## Flexible Battery:

10-160kVA: 30-34 Nos. (Configurable)



**More than 5000 pcs. Deployed in the field.  
Most rugged model**

## Key Features

- Online double conversion 3-Level IGBT Topology
- Built-in transformer
- Output PF 1.0 (Rating >30kVA)
- Low input THDi, <3%
- Efficiency >95%, ECO mode efficiency up to 99.0%
- Emergency power OFF (EPO)
- Input Phase sequence reversal protection and Still Power from Mains without going to battery mode.
- Multiple communication SNMP, RS232, RS485
- Parallel operation up to 4 units
- User friendly LCD display

## Flexible Battery:

10-30kVA: 16-20Pcs (opt. 30-50 nos.)

40 to 250kVA: 30 -50 nos.



## Key Features

- True online 3 Level IGBT Rectifier & Inverter Topology
- Available ratings  
120/160/200/250/300kVA/400KVA/500KVA
- Inbuilt galvanic isolation transformer
- Input power factor  $\geq 0.99$
- High efficiency upto 95.7%
- Input Phase sequence reversal protection and  
Still Power from Mains without going to battery mode
- Output power factor 0.9, Low input THDi  $\leq 3\%$
- Emergency power OFF (EPO)
- High MTBF ( $> 200,000$ Hrs) and Low MTTR
- Multiple communication SNMP+USB+RS232
- Parallel operation up to 6 units



7" LCD Display



## Flexible Battery:

120-500kVA: 48-52 nos.

## Key Features

- Most suitable for all kinds of load
- Advance DSP control / IGBT charger (Optional)
- 12-Pulse SCR based rectifier for rugged operation
- High output PF 0.9
- N+X parallel redundancy up to 6 Units
- High efficiency upto 95.5%
- High MTBF (>2,00,000 hrs.)
- Intelligent self-diagnosing function
- 7" colour Touch Screen Display
- Multiple communication SNMP,
- RS232, Modbus

## Batteries:

500 & 600kVA – 40 nos.  
800kVA – 50 nos.



## Key Features

- Robust & reliable design for Industrial load applications
- DSP Technology Guarantees High Performance
- Input Power Factor  $\geq 0.99$
- Efficiency up to 96.6%, ECO mode up to 99%
- Regenerative load, High CF Load Handling Capability
- LCD Graphic display
- Load based fan speed control
- N+X Parallel redundancy upto 8 units
- Phase sequence protection, still mains operation
- Flexible DC voltage range (40~48 nos.)
- Bottom cable entry (Standard), Top cable entry (Optional)
- 8no parallelable, expandable upto 8MW

## Flexible Battery:

300-1000kVA: 40-48 Nos.



# **Modular & Rack Mount/Tower UPS**

## **GTRT 10-60KVA**

---

## Key Features

- 3 level IGBT rectifier & inverter topology
- 3U Rack and Tower Convertible
- 5 Inch Color Touch screen Display
- Dual Input Design
- AC/AC efficiency up to 96.5%
- Output power factor 1.0
- Supports common battery bank
- Standard: RS232, USB, RS485, EPO, Dry Contact & Parallel port
- Optional: SNMP Card, Wi-Fi Card, GPRS Card, SMS alarms
- Paralleling capability upto 4 units
- Frequency converter mode
- Can be configured as 3 Phase In / 1 Phase Out or 1 Phase In / 1 Phase Out as per the requirement

## Batteries:

10-30kVA: 32-40 Nos. (Configurable)



# Modular UPS - PS Series

Power Is  $\mathcal{N}$

**BPS**<sup>®</sup>  
Strategic Power Solutions

## PS12 (1:1, 3:3 or 3:1)

Cabinet: 4 Slots

Power Module: 4/6/10/12kVA

7inch LCD  
Display



## PS15 (3:1)

Cabinet: 5 Slots

Power Module: 6/10/15kVA



## PS32 (3:3)

Cabinet: 5/10 Slots

Power Module: 16/20/25/30/32kVA



## PS40 (3:3)

Cabinet: 3/4/6/8/10 Slots

Power Module: 16/20/25/30/32/40kVA



## PS50 (3:3)

Cabinet: 4/6/10/20 Slots

Power Module: 50kVA



# Key Features

Power Is  $\mathbb{Q}^N$

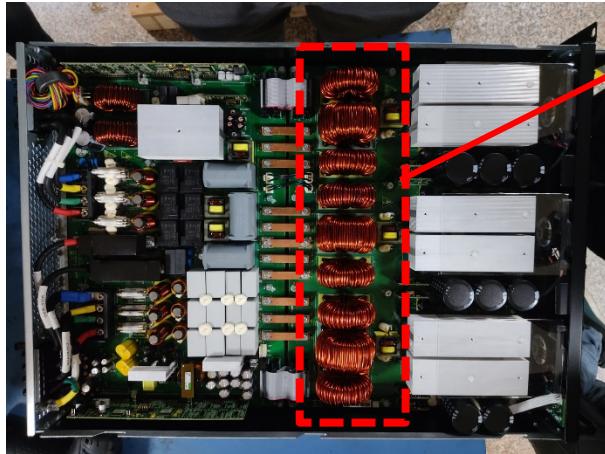
 **BPS**<sup>®</sup>  
Strategic Power Solutions

Model	PS12 (up to 48kVA/Cabinet)	PS15 (up to 60kVA/Cabinets)	PS32 (up to 300kVA/Cabinet)	PS40 (up to 400kVA/Cabinet)	PS50 (up to 1000kVA/Cabinet)
Picture					
Topology	3-Level IGBT based Online Double Conversion UPS	3-Level IGBT based Online Double Conversion UPS	3-Level IGBT based Online Double Conversion UPS	3-Level IGBT based Online Double Conversion UPS	3-Level IGBT based Online Double Conversion UPS
Power Module	4/6/10/12kVA	6/10/15kVA	16/20/25/30kVA	16/20/25/30/32/40kVA	50kVA
Cabinet	4 Slots	5 Slots	5/10 Slots	3/4/6/8/10 Slots	4/6/10/20 Slots
Power Factor	Input: $\geq 0.99$ Output: 0.9	Input: $\geq 0.99$ Output: 1.0	Input: $\geq 0.99$ Output: 1.0	Input: $\geq 0.99$ Output: 1.0	Input: $\geq 0.99$ Output: 1.0
Efficiency	Online Mode: $\geq 95\%$ ECO Mode: $\leq 99\%$	Online Mode: $\geq 96.5\%$ ECO Mode: up to 99%	Online Mode: $\geq 96.5\%$ ECO Mode: up to 99%	Online Mode: $\geq 96.5\%$ ECO Mode: up to 99%	Online Mode: $\geq 96.5\%$ ECO Mode: up to 99%
Battery Flexibility	32~40	30~50	30~50	32~40	30~50
LCD Display	Cabinet: 7 inch Module: 4 inch	Cabinet: 7 Inch	Cabinet: 7 inch	Cabinet: 10 inch	Cabinet: 7 inch
LiB Configuration	Available	Available	Available	Available	Available
Parallelizing	NA	Up to 4 racks	Up to 6 racks	Up to 4 racks	Up to 6 racks

# PS Series - Power Module

Power Is  $\mathbb{Q}^N$

**BPS**<sup>®</sup>  
Strategic Power Solutions



Vertical arrangement of coils  
for better airflow



W x d x h : 440 x 620 x 130  
(3U)  
Weight : 34 Kg

# Centralized Monitoring Module



1. 1&2 hot-swappable redundant UPS parameters & display settings Board
2. Hot-swappable Dry contact card
3. Hot-swappable Monitoring & communication port

## Redundant Power supply boards

### Unique feature :

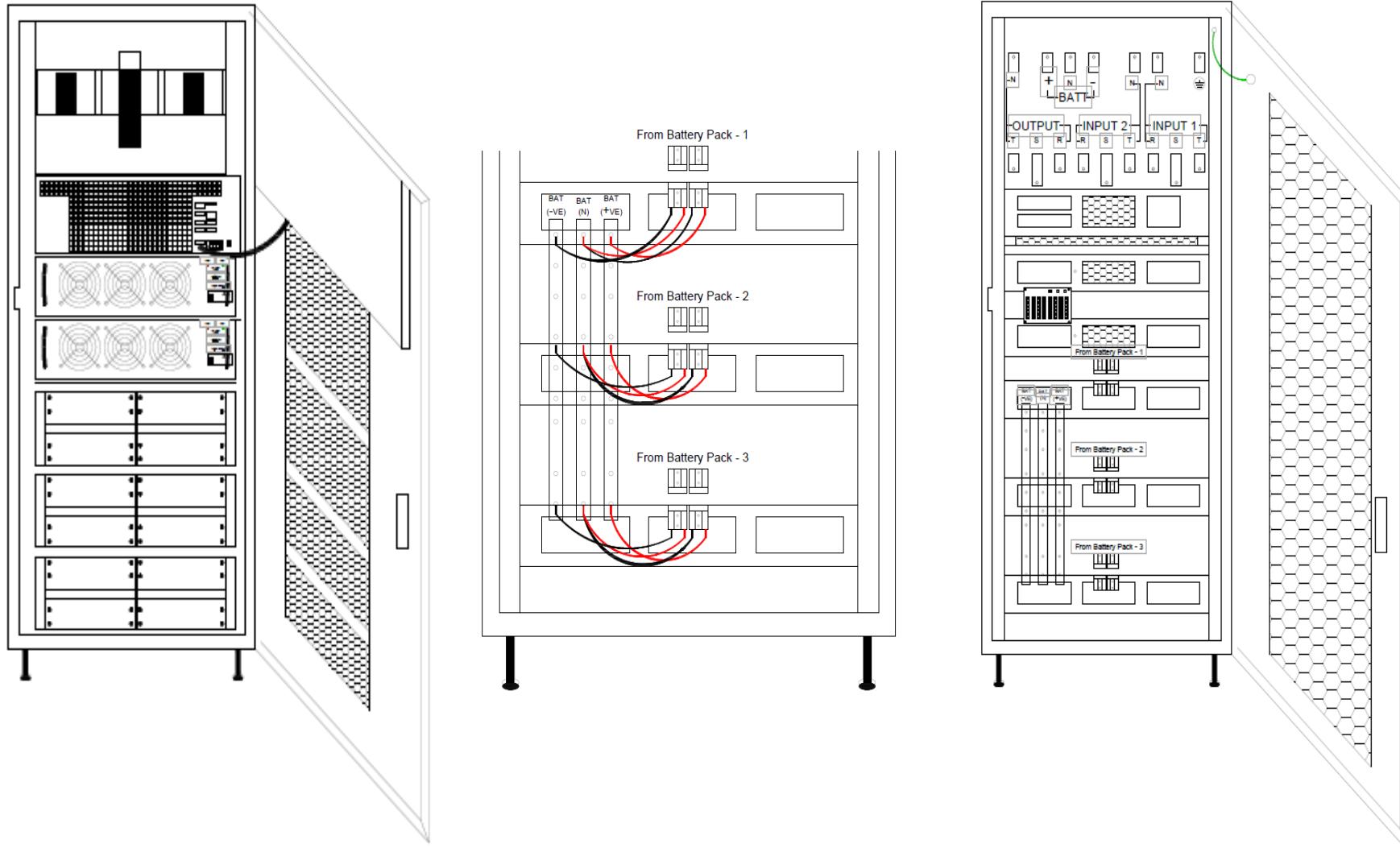
In PS Series modular UPS, communication centralized Module has two redundant setting and display board. In case of one goes to fault the other board will work as standby. The faulty board is hot swappable which can be replaced without shutdown of UPS. All power modules are having independent control boards and if one module fails, the other modules takes over the power and the same faulty power modules are hot-swappable for uninterrupted power. Also, it has having redundant power supply boards.... So, **100% redundant feature unique with BPE**.

ECUx2	- Hot Swappable
Dry contacts	- Hot Swappable
Monitor	- Hot Swappable



7 inch Touch Screen Display

# Modular Battery With PS UPS



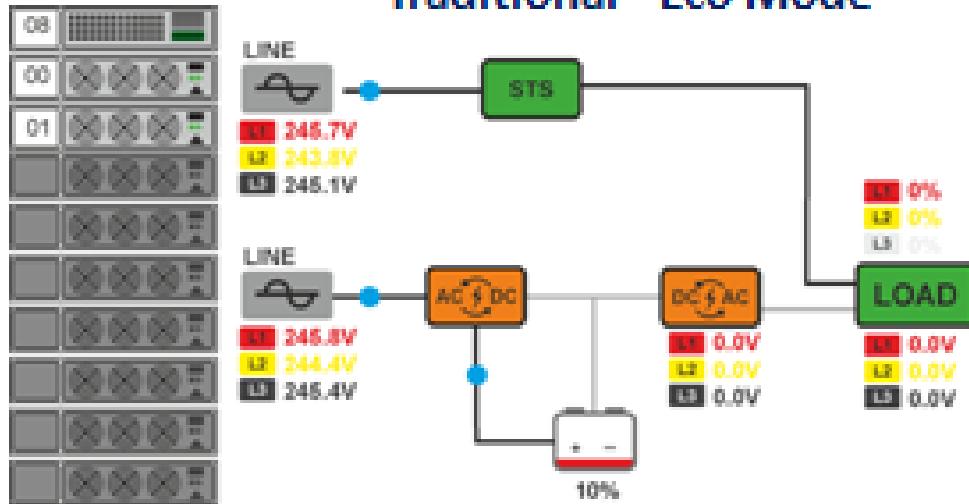
\*Inbuilt batteries with 7Ah & 9Ah

# Energy High Saver Mode (EHS)

Power Is ON

**BPS**<sup>®</sup>  
Strategic Power Solutions

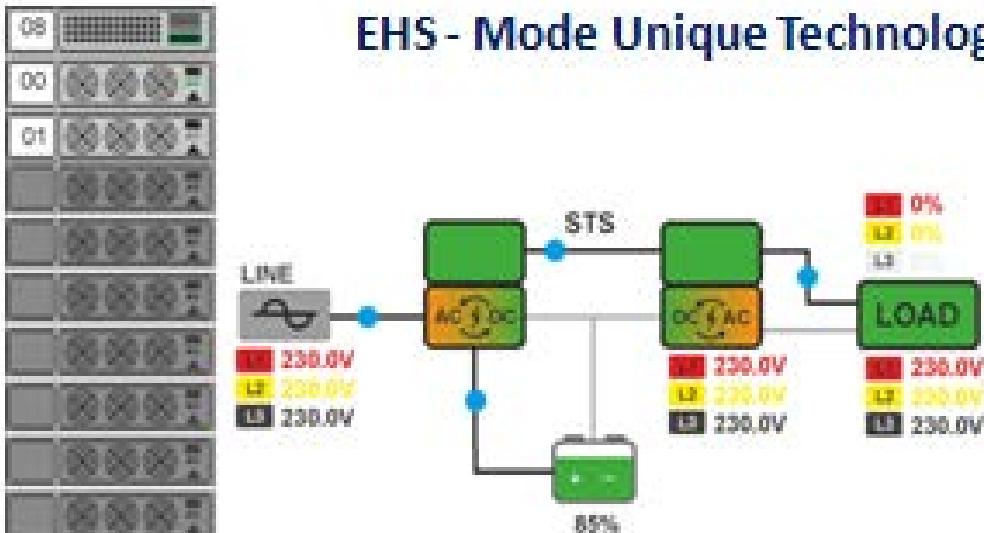
## Traditional - Eco Mode



**ECO mode (Efficiency  $\geq 99\%$ )** - Mains power

travels from input to output through static bypass path. Here the inverter is ON but not connected to the load circuit. The static bypass path (mains power) transfers to battery / inverter mode within 2-4ms when there are some disturbances at the input mains power.

## EHS - Mode Unique Technology



**EHS mode (Efficiency  $\geq 98.4\%$ )** – Inverter as well as Rectifier are in fully ready state and in sync with load and mains power to ensure the power transfer to inverter / battery mode instantly.

This meets the requirements of all mission critical applications, which do not tolerate any power break under any circumstances. Also, rectifier helps in improving input harmonics & power factor of the system.

# Industrial Grade UPS (Oil, Gas & DCS Application)

## EP IND Series 10kVA to 600kVA

### Key Features

- Most suitable for all kinds of load
- Advance DSP control
- SCR/ IGBT /12Pulse Rectifier
  - As per Industry requirement
- 3Phase in 3phase out, or 3phase in Single Phase out
- 12-Pulse SCR based rectifier for rugged operation
- High output PF 0.9
- N+X parallel redundancy up to 6 Units
- 220V DC for Power system & 348V DC or optional DC
  - voltage can be designed as per spec.
- All kind of Battery solution NICD, Lithium, etc...
- High MTBF (>2,00,000 hrs.)



Power Is ON

**BPS**<sup>®</sup>  
Strategic Power Solutions

# **Centralized Monitoring System**

**(Multiple-sites UPS / Environment  
Monitoring Management Platform)**

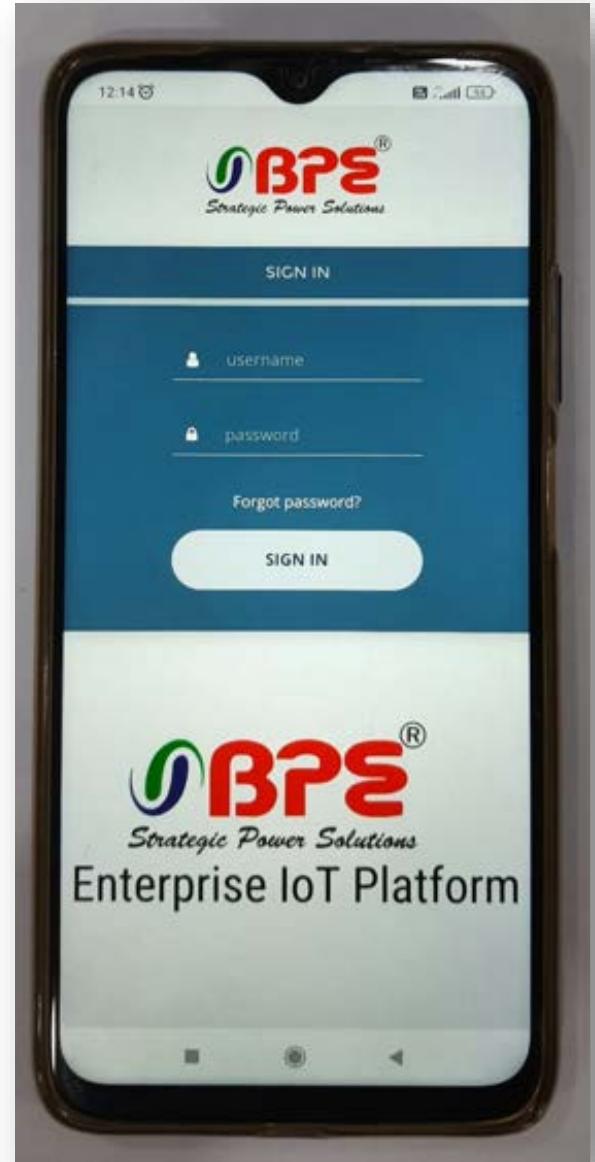
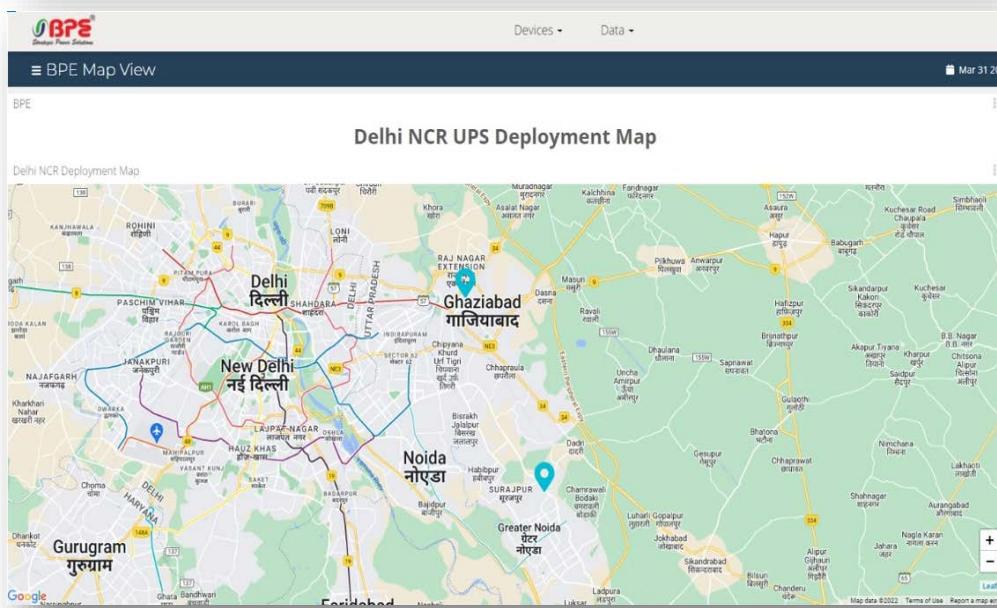
# What is CMS?

Summary UPS shall have Centralized UPS Monitoring & Management system for real-time device monitoring and notification enabling quick assessment of events as they occur in the UPS systems. Simplify management of the physical infrastructure using a centralized repository accessible from anywhere on the network through a powerful and easy to use console application. The Centralized UPS Monitoring & Management system shall have following features:-



# IoT enabled BPE UPS

Power Is ON



# IoT enabled PS Series UPS

Power Is ON

**BPS**<sup>®</sup>  
Strategic Power Solutions



# **Battery Monitoring System For SMF VRLA Batteries**

## Main Devices

Mainly 3 type of devices are required for the Intelligent Battery Monitoring system:-



Battery cell sensor



Intelligent Gateway



Battery String Sensor

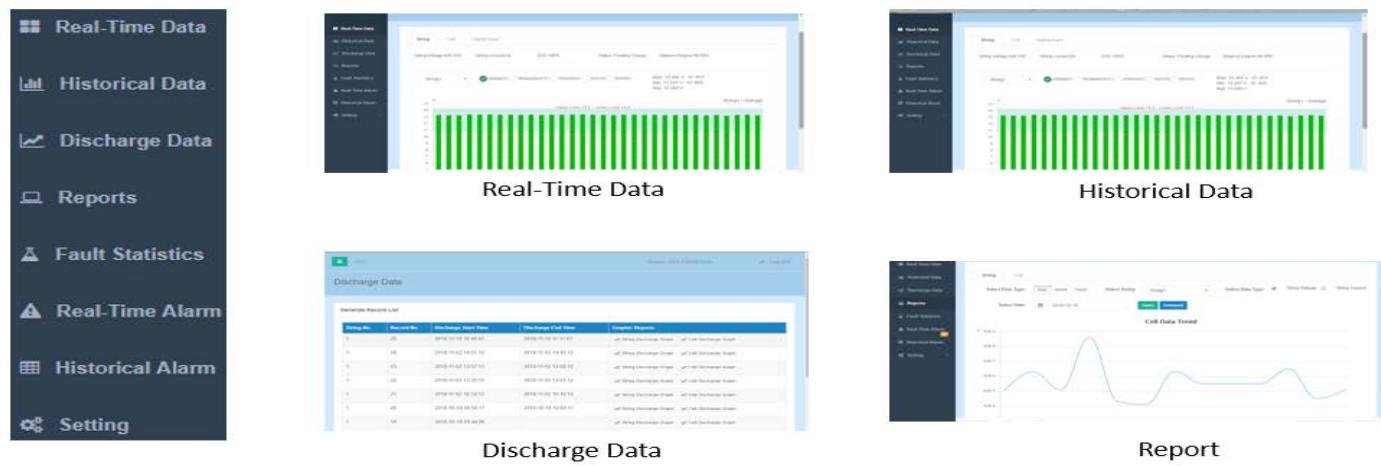
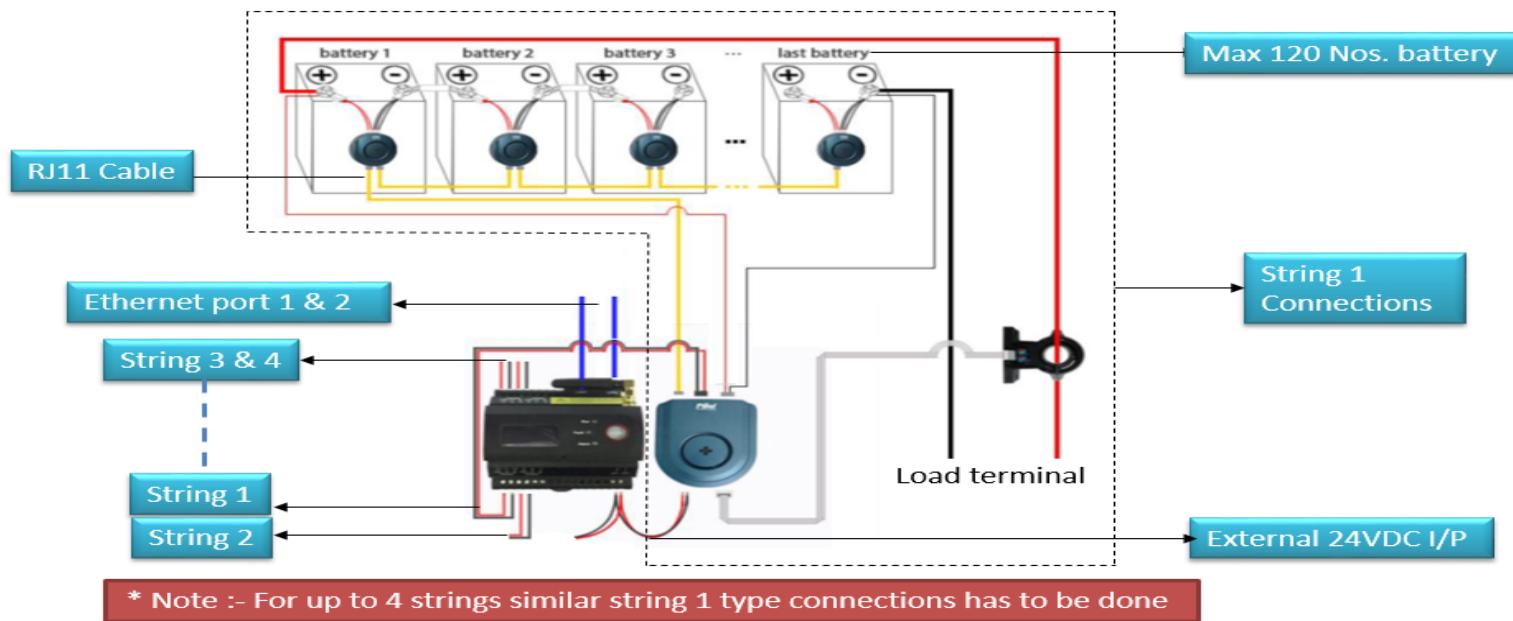
Various type of alarms :-

- 1) String current high
- 2) String current low
- 3) String voltage high
- 4) String voltage low
- 5) String SOC low
- 6) Cell voltage high
- 7) Cell voltage low
- 8) Cell impedance
- 9) Cell SOC low
- 10) Cell SOH
- 11) Cell temperature

String Alarms

Cell alarms

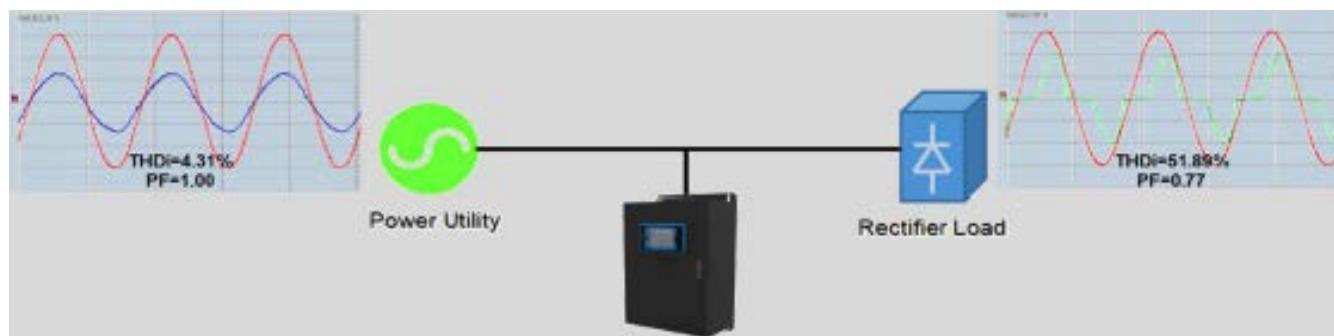
Alarms available over  
TCP IP ,SNMP  
(Optional)



# Active Power filter

## Active Power filter (60~100A)

- 3 Level IGBT Technology for Top Performances
- Wall-mounting Installation
- For Building and Industrial Applications where Space Restrictions Exist
- Compensate up to 51st Harmonics Orders
- Power Factor Correction for Both Leading and Lagging Power Factor, also input THDi
- Correct Unbalance Three Phase Utility
- Different Current Rating Units Can Operate in Parallel
- Advanced Operations Interface: 7" Color LCD Touch Screen
- Display Voltage/Current Waveform, Parameter and Harmonic Spectrum



Power Is   $\mathcal{N}$



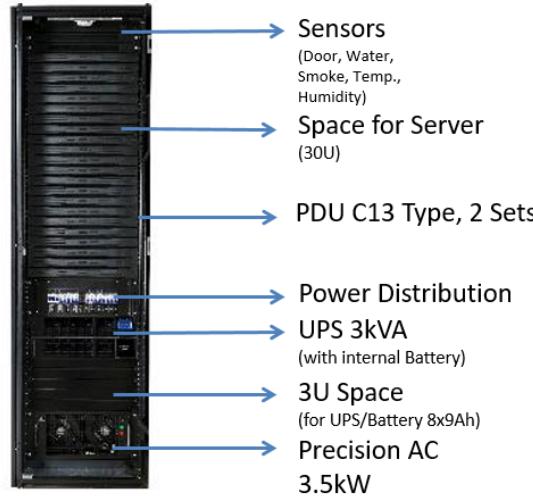
# IDU Smart Racks

---

# IDU (Smart Cabinet)

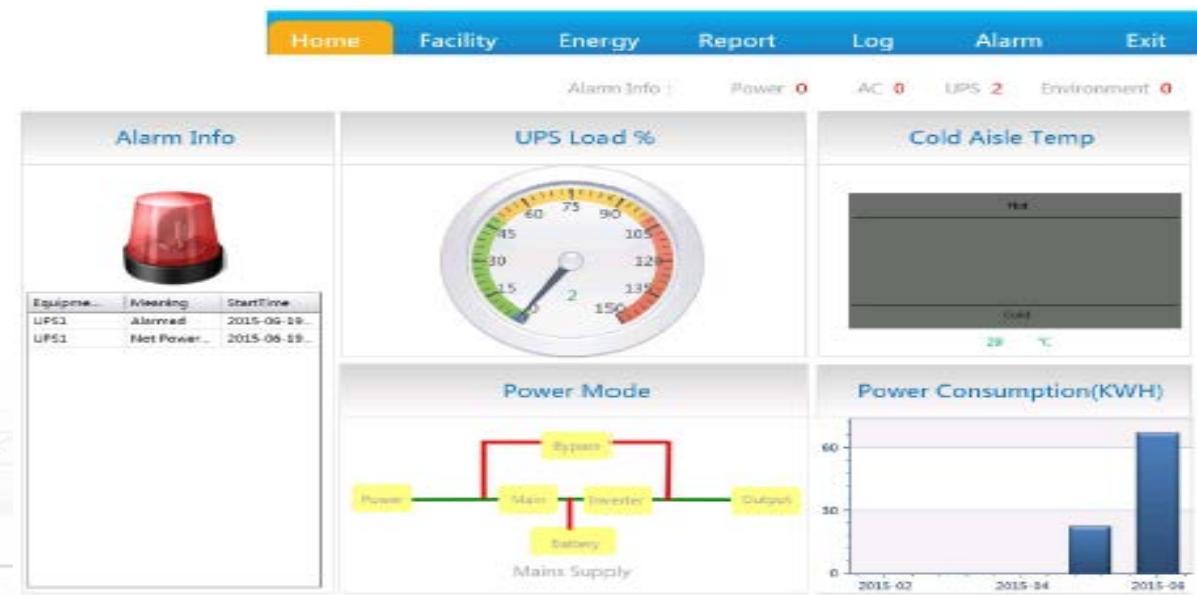
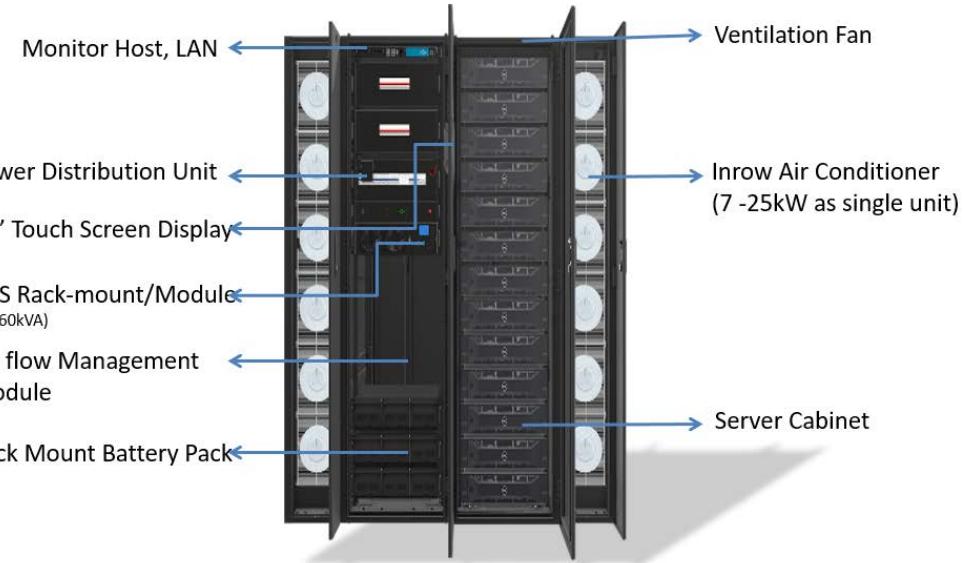
Power Is  $\mathbb{Q}^N$

**BPS**<sup>®</sup>  
Strategic Power Solutions



Dimensions: (w x d x h: 600 x 1200 x 2000mm, 42U)

Weight : 150Kg



# Flexible Configuration



CRAC + Power cabinet + IT cabinet + CRAC



CRAC + Power cabinet + IT cabinet + IT cabinet  
+ IT cabinet + IT cabinet + CRAC

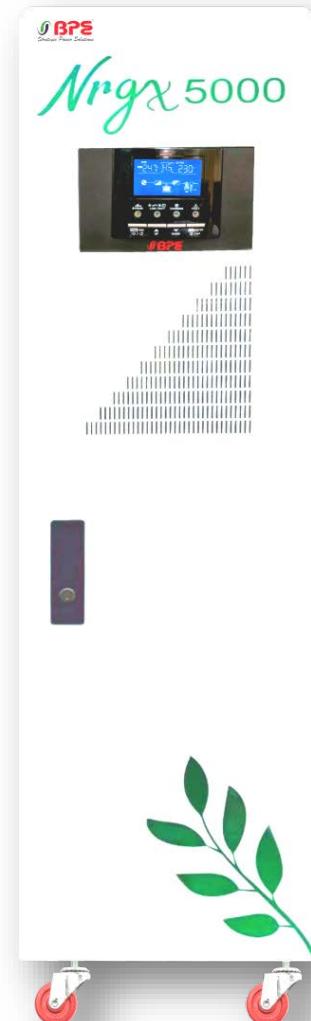
# Energy Storage System (ESS)

---

## Nrgx Series, 1:1, (1~7.5kVA)

### Key Features

- True online, Double conversion UPS with Li-ion Battery
- Wide input voltage range (110 – 300Vac)
- High input power factor  $\geq 0.99$
- IGBT based Rectifier & Inverter
- High efficiency UPS (On-line mode 94%, ECO mode 99%)
- Parallel expansion up to 9 units
- 3 units can be connected & configured as 3:3 Phase
- Fast charging, 0-100% within 2-hrs.
- Manual Bypass Switch and cold start
- 1 hour back-up at 4kW load
- Solar Compatibility (Optional)
- Charging Current 60A (*can be set through Display*)
- Multiple communication  
SNMP, USB, RS232, Modbus, PFC



## Nrgx Series, Higher rating – Key Features

Input & Output Breaker Panel

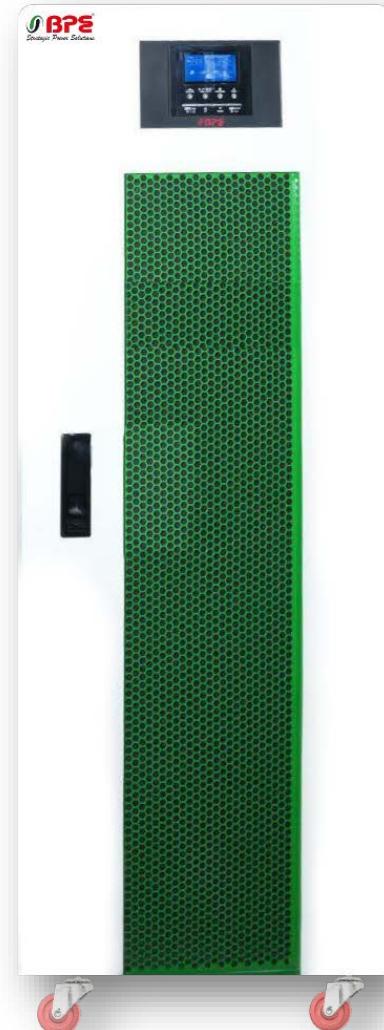
Common Centralized Display

Power Module

Individual Display in each  
Power Module

Li-ion Batteries

Air filter to prevent dust



\*Power expansion upto 45kVA

Power Is  $\mathcal{N}$



# Li-ion Based Solution

## Li-ion Based Solution

### 1-Phase solution



2x2kVA with 45 mins inbuilt LiB



1kVA with 1 hour LiB



2x10kVA with 1 hour LiB

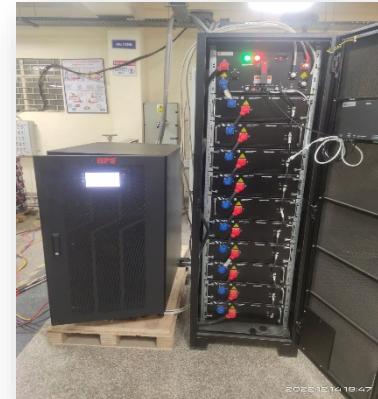
### 3-Phase solution



40kVA with 45 mins LiB



500kVA with 10 mins LiB



50kVA with 10 mins LiB

Power Is  $\mathcal{Q}^N$

**BPS**<sup>®</sup>  
Strategic Power Solutions

# 247PWR Li-ion Batteries for Higher DC Voltage

Power Is  $\mathcal{Q}^N$

BPS®  
Strategic Power Solutions



BMS



BMS

192~614.4V DC

Power Is 

