

Liebert® NXc, 400V, 50Hz, 10-60kVA

Reliable and flexible secure power in a fully integrated package solution



FAQs

1. What are the key features of Liebert NXc?

The Liebert NXc UPS supply high quality AC power to small & medium power equipment loads. It consists of the following key attributes.

- A. Enhanced energy savings
 - i. Up to 95.5% from 30 to 70% loading in online mode
 - ii. Up to 99% in ECO mode
- B. Integrated transformer option
- C. Integrated battery autonomy option
- D. Built in parallel & LBS functionality
- E. Rugged internal architecture further augments system reliability
- F. Transformer free design (output isolation transformer is available as an option item)
- F. Supports common battery configuration
- G. Configured to deliver single or three phase output up to 40kVA
- H. Full front access for easy replacement
- I. Full compatibility with any stand by generator
- J. Enhanced Power Quality
- K. Smart connectivity- Support SNMP, MODBUS, Dry contact and Life services connectivity etc

2. How can I save on electricity bill?

- A. In online mode, the Liebert NXc delivers the highest efficiency up to 95.5% even at typical operating load conditions i.e. 30-70%, saves significant energy units approx. 13,315 kWhr/year for 60kVA load compared to the traditional UPS.
- B. Improved input power factor up to 0.99, reduces the kVA demand. It also optimizes the size of capacitor banks required on upstream distribution for kVAR correction.
- C. The maximum current THD injected into the mains (THDi) will be less than 5% at maximum input power, reduces the impact on overall power factor thus save on the energy bills.

3. How can I get the highest availability and protection?

- A. Modular construction enhances the fault tolerance level.
- B. Robust mechanical and innovative air channel design protects all the sensitive PCB components from hot air thus enhances the reliability of overall system further.
- C. Advanced DSP controller further optimizes system efficiency, advances battery management, improves output voltage regulation, better bypass capability, and enable faster communications
- D. Tolerate the widest voltage and frequency fluctuations through robust component design.
- E. Higher capacity of battery charger gives more flexibility to opt for prolong backup power requirements.
- F. Flexible battery configuration enhances the availability and reduces the complexity.
- G. LIFETM Services – proactive remote monitoring and diagnostics to reduce the time to repair

4. How does it protect and extend the battery life?

- In order to protect and enhance the battery life, following advanced measures have been incorporated in UPS system.
- A. Wide input voltage window- avoiding frequent transfer to the battery
 - B. Temperature compensation battery charging
 - C. EOD self adjusting function
 - D. Self discharging test
 - E. Capacity forecast
 - F. Reserve time forecast
 - G. Battery voltage low alarm

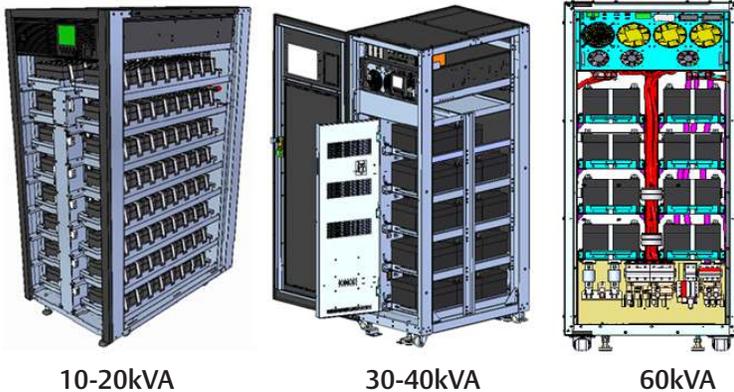
5. What is the maximum battery backup does it provide with its integrated battery configuration?

Below table describes the different battery configurations and corresponding backup details for each rating.

Battery Configuration	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA
1 X 32 X 9Ah	9min	5min	-	-	-	-
2 X 32 X 9Ah	23min	14min	9min	-	-	-
3 X 32 X 9Ah	38min	23min	16min	-	-	-
4 X 32 X 9Ah	55min	34min	23min	-	-	-
1 X 32 X 34Ah	-	-	-	14min	9min	5min
1 X 40 X 34Ah	-	-	-	19min	12min	7min

* All run times are defined at full load @0.9 PF

Arrangement as shown below:



6. What kind of safety factors are embedded considering integrated battery configuration?

The UPS is fitted with a fuse to protect the internal battery against electrical faults and also disconnectors have been considered for each battery sub rack to isolate batteries safely for maintenance purpose. Apart from these, other protections like DC voltage abnormal & temp compensated battery charging etc mentioned in Question No. 4 are being considered to protect and extend the life of the batteries.

Besides electrical protections, following mechanical protections have also been considered

- Batteries are housed in bottom portion of UPS which is fully isolated from the heat source.
- Modular arrangement is made inside the cubicle for housing the batteries for safe transportation and easy maintenance.
- Small capacity SMF VRLA batteries are considered which do not emit significant hydrogen gas however we have considered extra ventilation system thus further curtails the formation of hydrogen gas inside the cubicle.

7. What is the cycle life of the integrated batteries?

Currently only CSB batteries are being considered for integrated option. These batteries are highly efficient, leak proof and maintenance free and are designed to deliver standby service up to 5years or more than 260cycles at 100% discharge in cycle service at 25Deg C.

8. Is it required to use Battery Circuit Breaker (BCB) for external batteries?

Yes. In order to protect the external batteries, BCB is recommended. The external batteries are connected via BCB. This BCB can be operated manually and is also fitted with an electronic tripping device that is controlled by the UPS control circuit.

The BCB provides the following advantages:

- Safe and reliable battery isolation
- Short circuit protection
- In case of battery under voltage, the circuit breaker will open automatically in order to protect battery from over discharging
- If the remote EPO button is installed, the EPO button can be used to disconnect the circuit breaker to protect against incorrect operations

The BCB is recommended to be installed in proximity to battery cabinet, and length of power and signal cables which are connected between the UPS & BCB should be chosen considering the permissible voltage drop.

9. For what kind of applications transformer is needed?

Transformer is required to fix following:

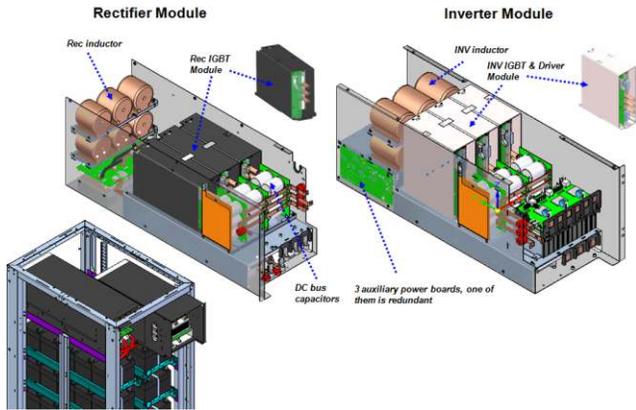
- Generating the isolated neutral for computer grounding
- Voltage transformation
- Noise filtration
- Reducing the fault current
- Blocking the multiples of third harmonic components

Some of the applications stated below requires transformer. In Datacenter, it is required for data protection and neutral grounding. And also, transformer is placed near to load to reduce the N-G potential further and avoids the double neutral conductor across the upstream distribution. Therefore, now increasing number of data center designers are considering to place transformer in PDU section. However in certain circumstance, transformer may be required to place externally or in the UPS.

In Health care applications, it is required for ICU, CCU, Cath lab, and for some of the diagnostic equipments like MRI/City scan machines. All these equipments are more sensitive to electrical noise.

10. What are additional key features incorporated in 60kVA UPS?

Liebert NXc 60 kVA makes use of standardized, modular and sub modular assemblies that can be quickly removed and swapped in case of need for easy onsite replacement and reduced MTTR.



11. Explain “Regen mode” or “smart capacity test”?

Liebert NXc includes “Regen Mode”. In this mode, UPS can burn up to 80% of its capacity without using any external load and hence no need for costly load banks for UPS testing.

12. Does it compatible with 3-wire input supply?

No. It requires 4-wire input supply independent of the load.

13. Is Cold start possible in NXc UPS system?

Yes. Cold start is possible with NXc UPS system. During the cold start, batteries will supply the power to the load.

14. How can I extend the power capacity?

Liebert NXc system power capacity can be expanded up to 240 kVA by putting up to four units in parallel configuration for added reliability and serviceability. The Liebert NXc is compatible with Liebert unique LBS technology which is integrated feature.

15. Does it has any provision to enhance system efficiency during the parallel mode?

Yes. Liebert NXc features intelligent paralleling function. It manages the number of active UPS supporting the critical load to maximize total system efficiency.

16. Can I connect the Liebert UPS with other brand UPS in LBS configuration?

Yes. Liebert NXc can be connected with other brand UPS in LBS configuration though the “LBS adapter”. It is optional device and is designated to realize the synchronization up to 150m between two UPS in a dual bus system.

17. Is NXc capable of handling regenerative loads?

No, the Liebert NXc is designed for IT and light industrial applications.

18. Can I replace the communication card online?

Yes, the communication card can be replaced online without shutdown

19. Can I replace the mimic panel online?

No, the mimic panel cannot be replaced online without shutdown.

20. How does it integrate with existing BMS and DCIM systems?

Liebert NXc offers a unique communication card (i.e. UNITY). This communication card seamlessly integrates with the multiple monitoring platforms like BMS, DCIM solution, and LIFE services through IP and MODBUS RTU protocols.

21. Can I get the hardwired contacts? If yes how many does it generates?

Yes, following major parameters can be monitored to know the actual status of UPS system

- A. Low Battery
- B. UPS fault
- C. On Battery
- D. On UPS
- E. On bypass
- F. Summary Alarm

22. Can I configure SMS facility in case of any notifications?

Yes. You can configure SMS facility either via dry contacts or site monitor software. The hardware, which is required to activate these functionality uses different hardware and need to be chosen optionally. Kindly contact our application team for proper selection of these items.

Documents available for product promotions of Liebert NXc:

Liebert Nxc Product Brochure



Liebert Nxc Product Presentation



Liebert Nxc Battle Cards

