NUMERIC®

A Group brand | legrand®

Keor XPE

MODULAR SCALABLE FLEXIBLE HIGH POWER UPS

from 500 kW to 2.1 MW

NEW ENERGY TO POWER

www.numericups.com

SUSTAINABILITY

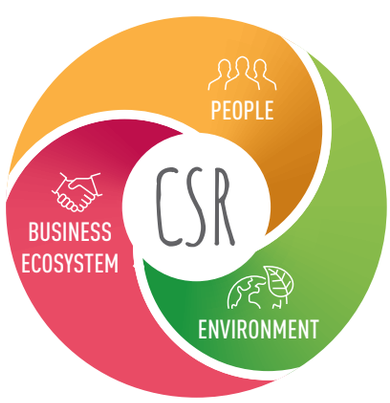
Corporate Social Responsibility

Green management and sustainable supply chain: these concepts are part of Legrand's Corporate Social Responsibility, which is the company's commitment to drawing up a strategy and implementing it with practical actions aimed at socially responsible behaviour towards everything around it, such as people, things and environment.
CSR involves the management of human resources, the organization and division of labour and the management of natural resources. CSR aims to assess the impact that the company's actions and decisions have internally, but also externally, on the stakeholders and the environment.

BUSINESS ECOSYSTEM
or how Legrand interacts ethically with the whole ecosystem of its activities.

PEOPLE
or how Legrand engages with all of its employees and stakeholders.

ENVIRONMENT
or how Legrand intends to limit the Group's environmental impact.



Circular economy

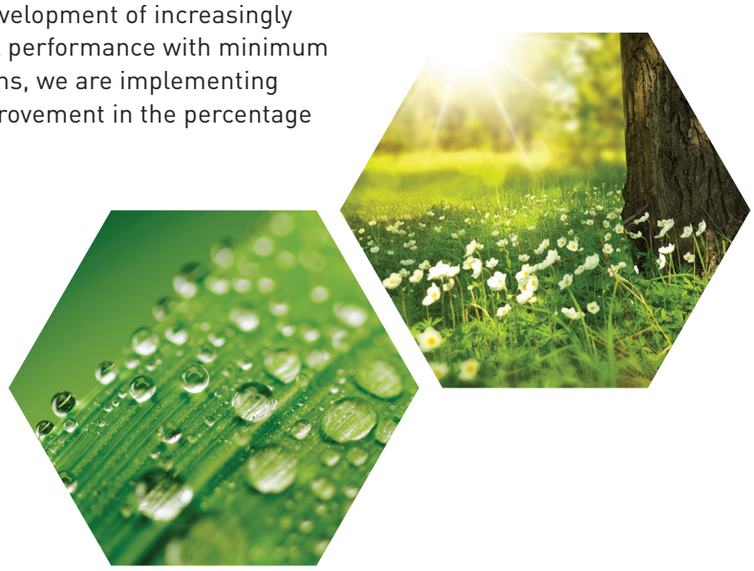
We are committed to creating a system that involves all stakeholders to share values, objectives and actions in order to control and reduce the environmental impact of all our economic and production processes, reduce waste and environmental impact and transform what would once have been defined as «waste» into new resources. Controlling these aspects has an impact on the entire life cycle of the product, starting from the design of new concepts and new specifications for the materials the UPS is made of; this is possible through responsible design and procurement processes (so-called «green procurement»), with a strong focus on research and the use of innovative materials from the circular economy and alternative raw materials. When a product ends its life, all these materials can become high value-added resources that can be used in other production cycles.

Digitalization

New information technologies allow us to reduce the use of several paper documents in favor of the digital format: in this way the information is always and everywhere accessible from a PC or smartphone and at the same time we can avoid the felling of many trees.
Digitization also becomes an important driver of the circular economy, since it allows the use of tools for performance data analysis and preventive diagnostics, both useful for optimizing the life cycle and durability of the product.

Efficiency

Our R&D team is constantly working on the development of increasingly efficient UPSs that allow high and incremental performance with minimum energy dissipation; with regard to CO_2 emissions, we are implementing processes and products that represent an improvement in the percentage of carbon footprint compared to the past.
But efficiency is not only synonymous with high performance.
For us, efficiency also means ecodesign: this implies that the UPS is designed to be easily repaired, maintained and it's easy to separate its components.
This means increasing the durability of our UPSs and the possibility of reusing and recycling them at the end of their life.



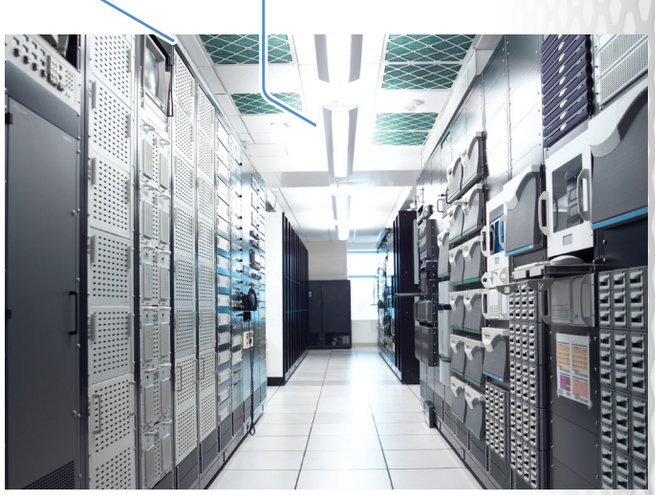
L'EPD/PEP

For each product family we draw up an EPD (Environmental Product Declaration) or PEP (Profil Environnemental Produit) in line with ISO 14025: it is a declaration that is a sort of environmental photograph of the product.
The EPD is drawn up according to the concept of Life Cycle Assessment: it examines the environmental impact of a product throughout its life cycle, from the development of product specifications to the choice of materials to be used and the end-of-life destination of the product itself.

Keor XPE

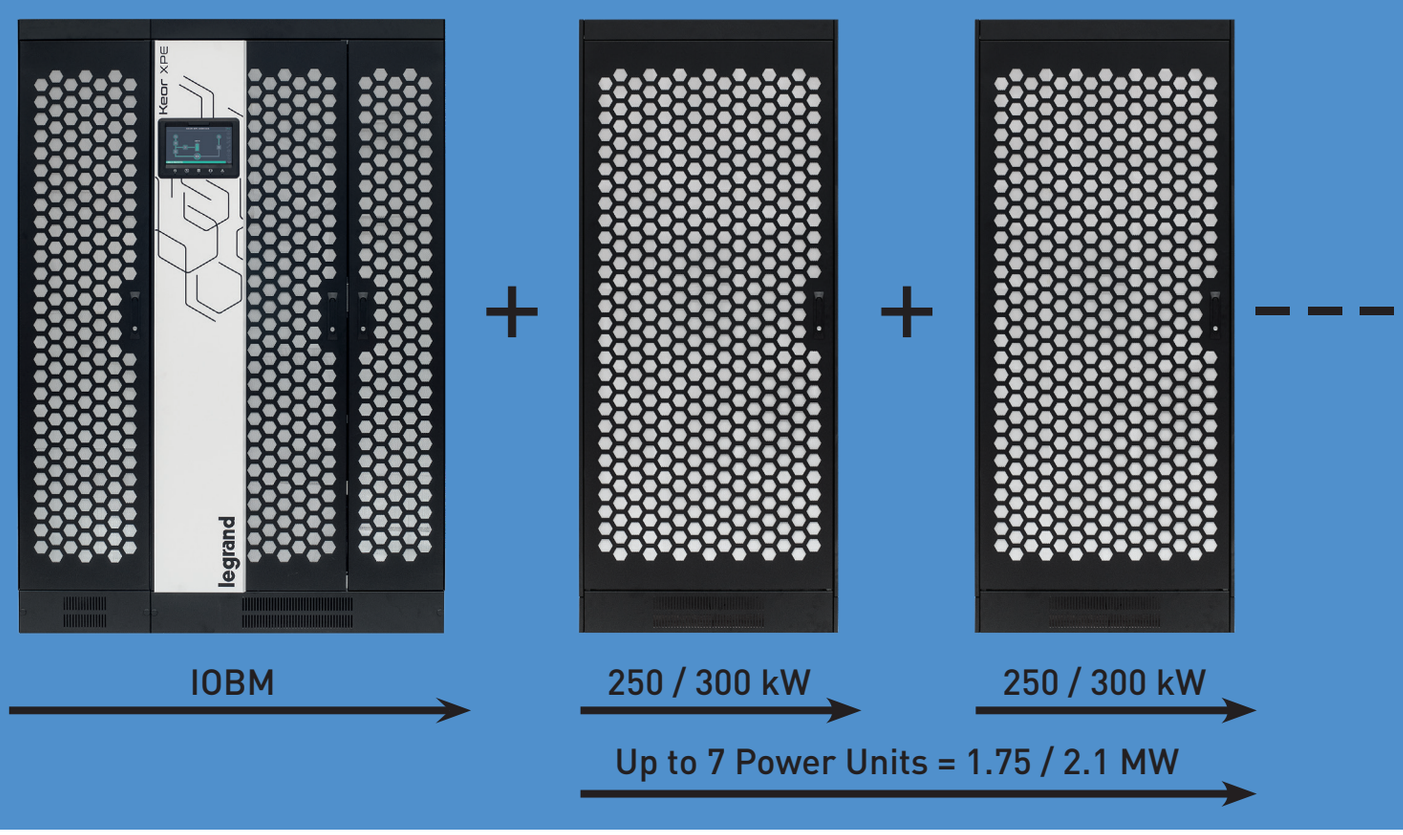
SCALABLE ARCHITECTURE

Keor XPE is a complete scalable UPS system based on 250 kW or 300 kW power units up to 2.1 MW.
Each power unit with its individual logic control, can be combined with others to reach the needed power, or implement redundant configurations.
Power expansion can be easily carried out at a later stage by installing additional power units.
Keor XPE is the ideal solution for datacenter and large power critical applications (tertiary, hospital, industry, transport) where continuity of service, high quality power supply and reduced consumption are required.



Keor XPE is a modular UPS system according to your power needs.
Up to 7 power units can be added to the main bypass module (IOBM), each of 250 or 300 kW.

From 500 kW to 2.1 MW



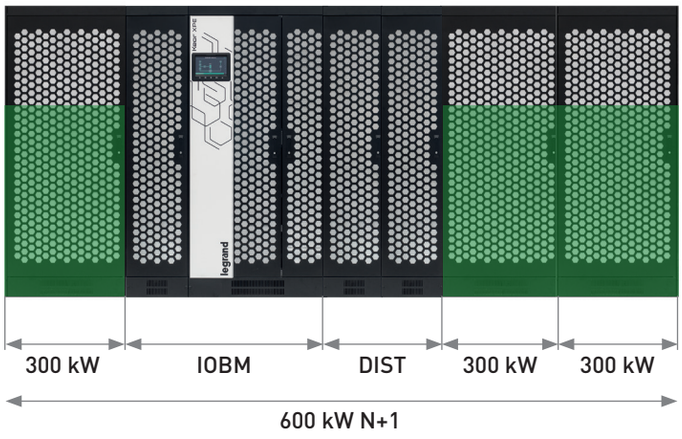
Smart Display

The centralized 10'' touch screen display, with intuitive and user friendly interface, allows to the user to fully monitor and control both the overall system and the single power units.
The display also provides full diagnostics, systems logs and a wide set of advanced settings and fine tuning functions in 10 different languages.

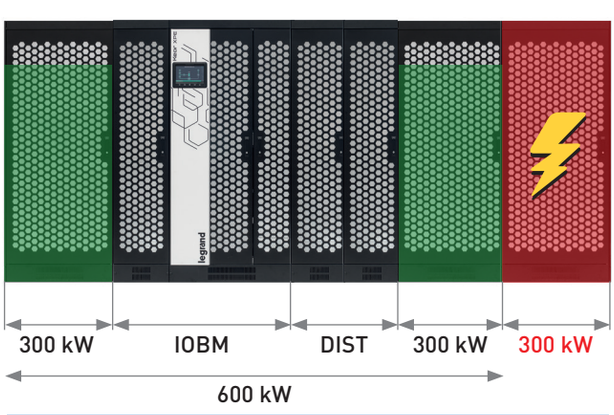
Keor XPE

Redundancy and Hot Service

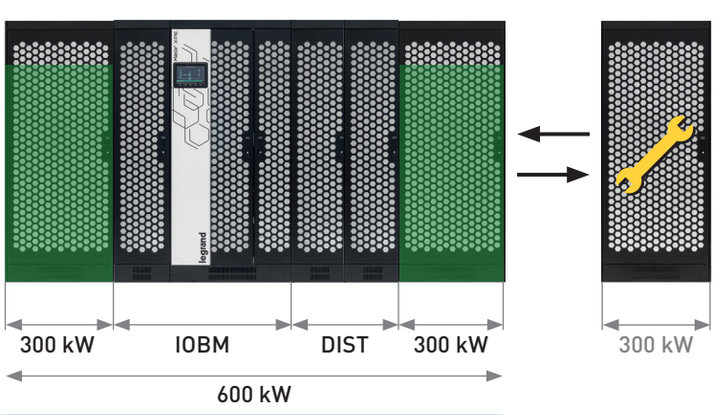
In case of redundant configurations, **Keor XPE** is hot serviceable for each of its components, as standard.
As optional, the power units can be connected, removed or replaced while the rest of the system is continuously feeding and protecting the critical load.



Run in Redundancy



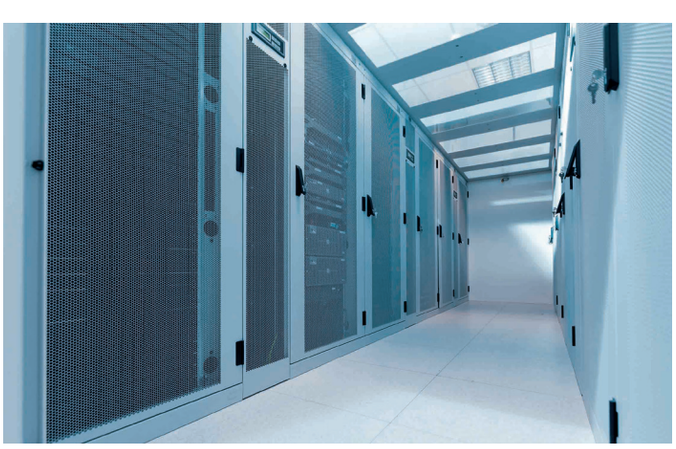
Run in Failure



Repair/Replacement

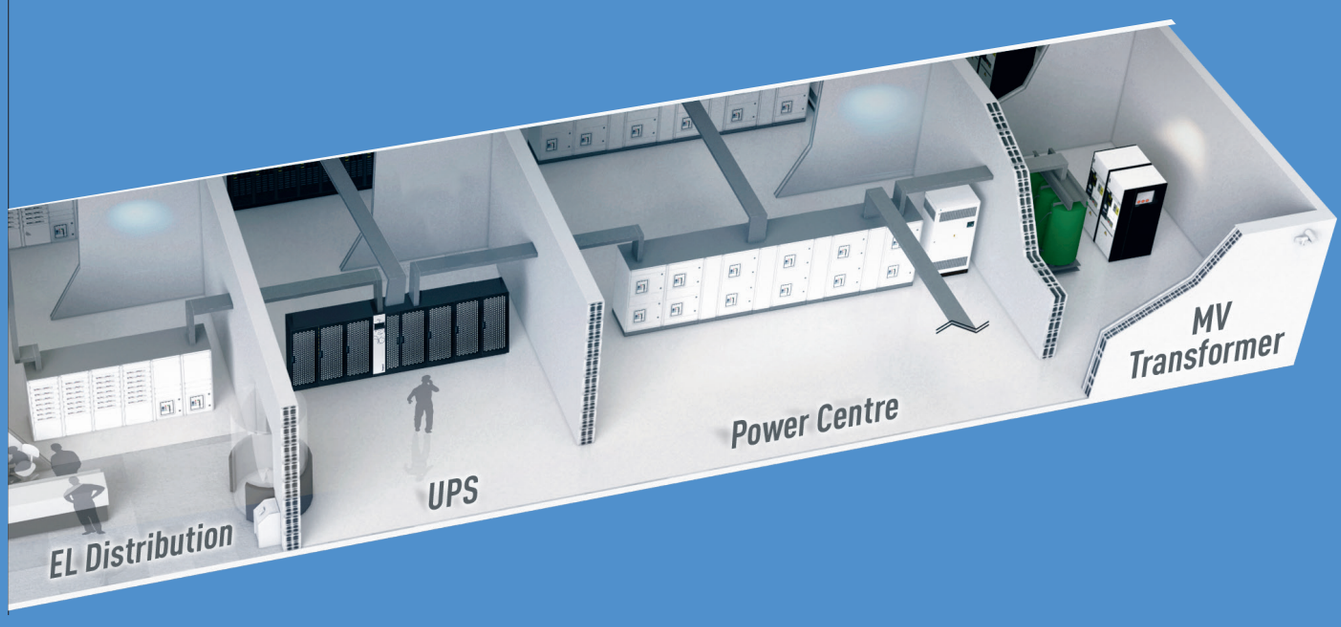
High reliability and availability

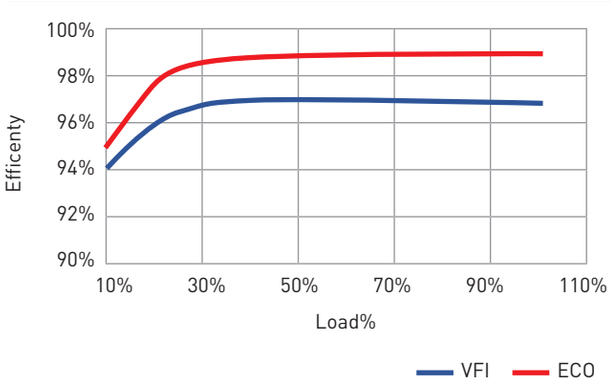
The possibility to keep two independent **Keor XPE** in synchro allows to supply 2 independent and redundant lines in order to reach the highest availability level, typical of hyper critical datacenter.



Infrastructure integration

The versatility of **Keor XPE** allows you to choose between different grounding systems, upper or lower input lines, cable or busbar connections, centralized or distributed batteries and much more. All of these features make **Keor XPE** exceptionally suitable and adaptable for integration into a wide range of infrastructures. **Keor XPE** can be perfectly integrated with the offer of the Legrand Group.





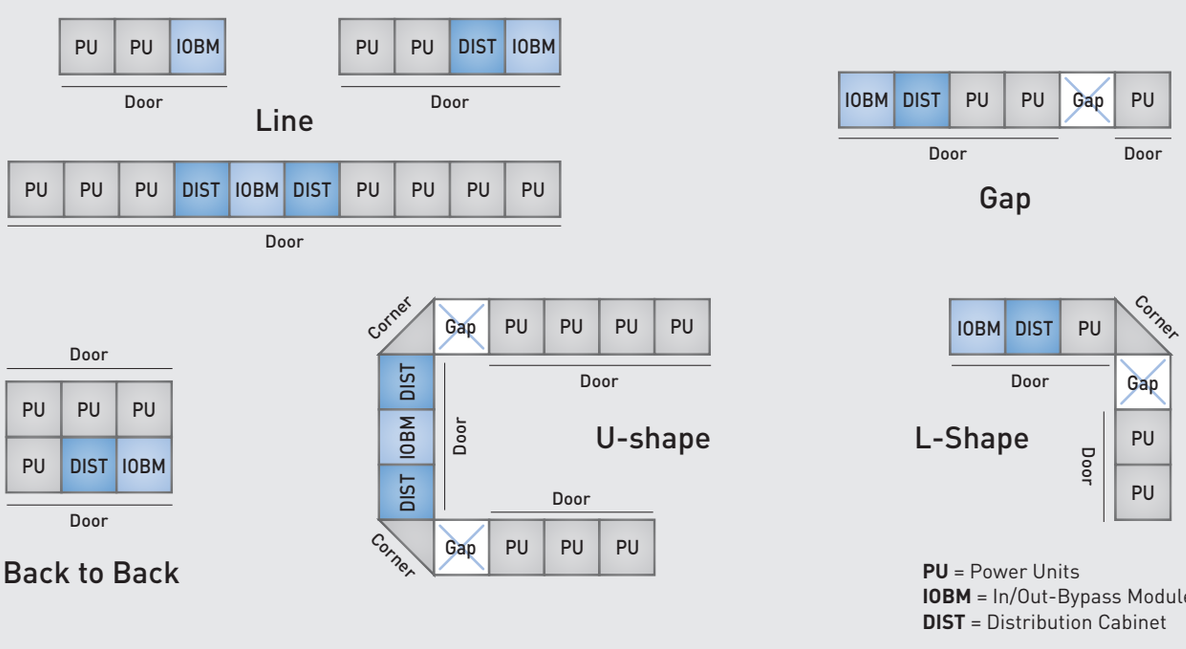
High efficiency and low TCO

Keor XPE is specially designed to reduce losses and lower the management costs.
Transformer free technology, 3 level converters, high efficiency even at low load level, combined with optimized ventilation and smart battery management ensure maximum protection at minimum consumption.

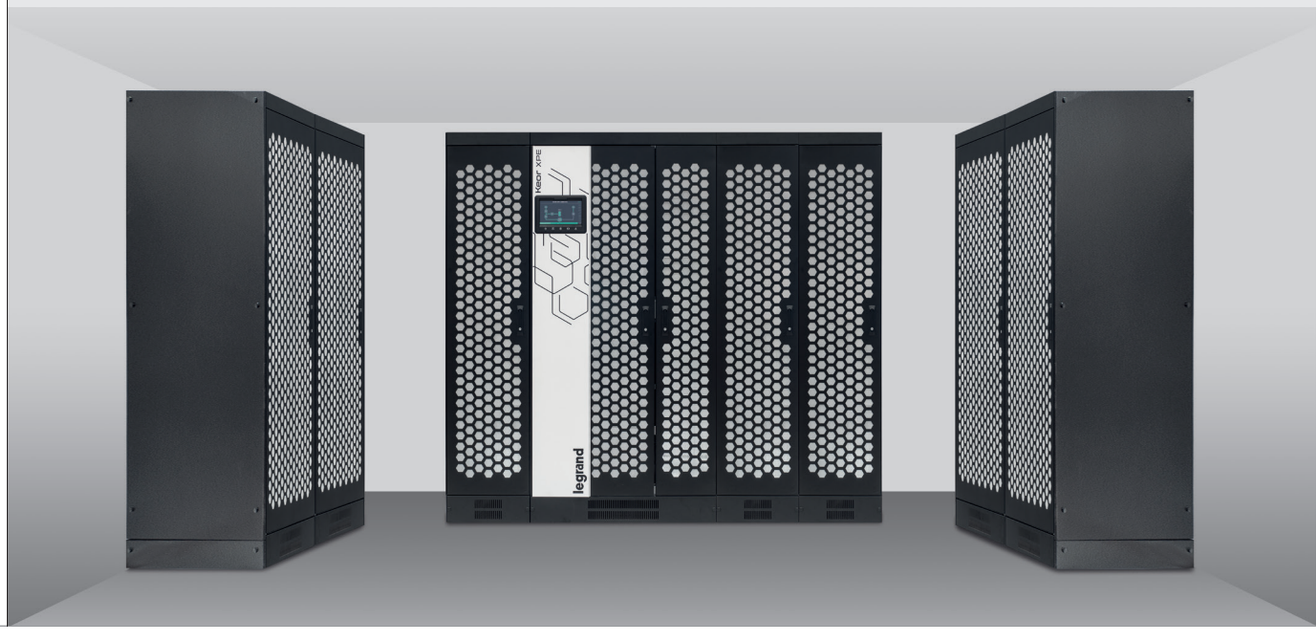
Keor XPE

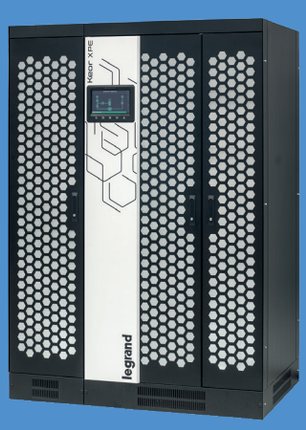
Flexible design and physical layouts

Keor XPE meets your diverse business needs, either to grow or to revamp your mission-critical applications. In fact, the flexibility of **Keor XPE** permits the realization of different architectural layouts: in-line, back to back, L-shape, U shape. It is also possible to keep a gap between the different cabinets that are part of the system.



PU = Power Units
IOBM = In/Out-Bypass Module
DIST = Distribution Cabinet





In/Out-Bypass Module

Power Units Up to 7 Units

Distribution Cabinet (Optional)

Only 3 main components

To create and customize the system, you only need to combine three types of units, choosing their number, order and physical layout within the room.

Possible configurations

- TNC/TNS grounding system
- Dual/Single input
- Top/Bottom entry line
- Cable/Busbar connection
- Centralized/Distributed battery
- Lithium battery compatible
- Icw 50-100 kA short circuit capability
- Various layouts

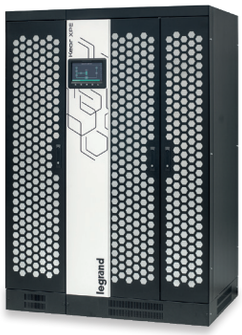
Full communication interfaces

- USB-RS232
- ModBus 485 (optional accessory)
- SNMP net card (optional accessory)
- EPO contact
- Dry contacts port
- Backfeed contact
- External bypass contact
- External battery switch contact
- Genset friendly
- Battery temperature sensor

CONFIGURATION EXAMPLE: KEOR XPE 1 MW N+1 HOT SWAP

PU 250 kW | PU 250 kW | DIST CAB | IOBM 1000 kW | DIST CAB | PU 250 kW | PU 250 kW | PU 250 kW

Keor XPE 500 kW to 2.1 MW



In/Out-Bypass Module

Power Units Up to 7 Units

Distribution Cabinet (Optional)

Characteristics

- OnLine Double Conversion VFI SS 111
- 3Level IGBT Transformer Free
- Output Power Factor 1 without derating up to 40°C in continuous operation
- Configurable internal redundancy (N+1 or N+N).
- Hot maintainable modules (VFI)
- Hot Scalability (optional)
- Up to 97% VFI efficiency even at low power
- ECO mode up to 99% efficiency.
- Embedded BackFeed Protection
- Automatic battery test function.
- Genset compatibility with adaptive Ramp-In
- Compact footprint.
- Low audible noise.
- Synch 2N

UPS XPE Components

Model	Nominal power (kW)	Active power (kW)	Dimensions W x D x H (mm)
POWER UNIT	250	250	880x979x2100
POWER UNIT	300	300	880x979x2100
IOBM 600	600	600	1002x979x2100
IOBM 750	750	750	1450x979x2100
IOBM 900-1000	1000	1000	1500x979x2100
IOBM 1200-1500	1500	1500	1850x1000x2100
IOBM 1800-2100	2100	2100	2300x1200x2100
DISTRIBUTION CABINET*	2 lines 300 kW		800x979x2100
DISTRIBUTION CABINET*	3 lines 300 kW		800x979x2100
DISTRIBUTION CABINET*	4 lines 300 kW		800x979x2100
DISTRIBUTION CABINET*	5 lines 300 kW		800x979x2100

*** for hot scalability**

Optionals

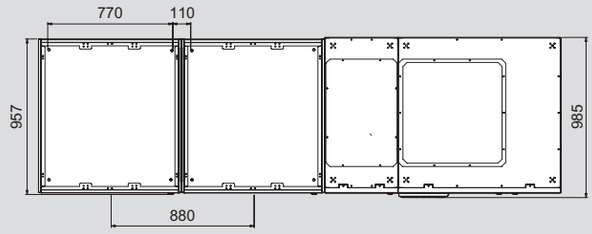
Description
Future Scalability
Hot Scalability
Input Line: Dual/Single
Connection Entrance: Bottom/Top
Connection Type: Cable/Busbar
Grounding System: TNC/TNS
Icw limitation kit
Battery set: Centralized/Distributed
Central or side IOBM
Special distribution kits for customized Cabitets Layouts
IP21 Kit

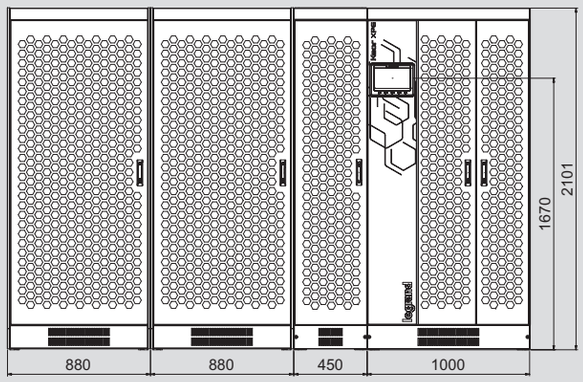
Accessories

Description
Battery Cabinets
Battery fuse switch box
Synch box
MODBUS RS485 card
Net Interface Ethernet Cards

For configuration details and accessories, please contact Numeric.

Dimensions





Keor XPE 500 kW -to 2.1 MW

Scalable UPS - Online three-phase double conversion VFI

Characteristics

General specifications	IOBM 600	IOBM 600	IOBM 750	IOBM 900	IOBM 1000	IOBM 1200	IOBM 1250	IOBM 1500	IOBM 1800	IOBM 2100
Nominal Power = Active Power (kW)	500	600	750	900	1000	1200	1250	1500	1800	2100
Power Unit power (kW)	250	300	250	300	250	300	250	300	300	300
Number of Power Units (+1 if Redundant)	2+1	2+1	3+1	3+1	4+1	4+1	5+1	5+1	6+1	7
Technology	On-line double conversion VFI-SS-111									
Architecture	Decentralized Logic, Centralized Static Bypass, Scalable, Redundant, Hot Service (Hot Plug Optional)									
Input										
Input Voltage	400 Vac 3-phase (rectifier), 380/400/415 Vac 3-phase (Bypass)									
Input Frequency	50/60 Hz; range 45-65 Hz									
Input Voltage Range (Ph-Ph)	-20%, +15% (rectifier); ±10% (bypass)									
THD of input current	< 3%									
Compatibility with Diesel Generators	Yes									
Input power factor	> 0.99									
Output										
Output Voltage	380, 400, 415V (3Ph+N+PE)									
Efficiency Online	up to 96.4%									
Efficiency in GREEN mode	up to 99%									
Output frequency (nominal)	50 /60 Hz (Adjustable from front panel)									
Output frequency tolerance	±0,1%Synch with Mains; ±0,01% Free Run									
Crest Factor	up to 3:1									
THD of output voltage	< 1% at full linear load									
Output power factor	0.7 leading to 0.5 lagging without derating									
Output voltage Regulation VFI	Static ± 1%; Dynamic Class1 IEC/EN62040-3									
Overload Capability	Inverter: 125% for 5 min, 150% for 30 sec;									
Bypass										
Type	Static Automatic no break, Manual Bypass optional									
Input Voltage	380-400-415V ± 20%; (3Ph+N+PE)									
Input Frequency	50-60Hz ± 10%									
Nominal Current (A)	725	870	1090	1304	1450	1739	1810	2175	2609	3044
Max Icw	50 kA as per IEC 62040-1 (100 kA Optional)									
DC Characteristics										
Battery/Storage Compatibility	VRLA, NiCd, Li-Ion									
Battery Connection	Distribuited or Centralized									
Communication and management										
Control Panel Display	10'' Touch screen, 1024x600 pixels									
Communication ports	Serial RS232 and USB; ModBus-RTU (RS485). Net Card Slot (SNMP & ModBus-TCP/IP) (Optional)									
Input signal ports and aux.contact.	Remote emergency power off (REPO), diesel mode, Temperature Probe, battery circuit breaker. Auxiliary contact of external circuit breakers: battery, external maintenance bypass, output remote transfer to bypass mode									
Output signal ports	5 dry contacts, external BackFeed									
Physical characteristics										
Connection Lines	Hardwired 3PH TNC or TNS Output, rectifier and bypass (single input as optional)									
Cennection Entrance and Type	Bottom (top as optional), cable (busbars as optional)									
Transport Packaging	"Carton Boxes on Pallets. SeaBag and Woden Box (Optional) "									
Color	RAL9003 (White) on Front Door of IOBM; RAL 9005 (Black) Body and Side panels all cabinets									
UPS dimensions WxDxH (mm)*	2770x970x2100		4090x970x2100		4970x980x2100	5370x980x2100	6250x980x2100		7580x1200x2100	8460x1200x2100
UPS weight (kg)*	2250		3150	3300	4000	4250	4900	5200	6400	7300
Environmental conditions										
Operating Temperature (°C)	0 - 40 °C (Recommended temperature for longer Battery Life: 20-25°C)									
Relative Humidity Range	20-95% (Non-Condensing)									
Protection degree	IP20 (IP21 Optional)									
Acoustic Noise at 1m (dBA)	< 65									
Estimated content of circular economy derived materials%)	**≃ 20%**									
Recyclability rate calculated using the method described in technical report IEC/TR 62635 (%)**	**≃ 60%**									
Compliance										
Reference product standards	IEC/EN 62040-1, IEC/EN 62040-2, IEC/EN 62040-3									

*** The weights and dimensions depend on the chosen configuration and refer to the complete basic system (no redundant, no hot-scalable). Variance ± 1%**
**** This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for end-of-life of this product.**

Customer services

Reliable

Directly present in 250+ locations across India to ensure quick support, a team of 900 factory qualified engineers are available 24/7/365 to support your UPS system to ensure availability to the most critical loads.

Excellent

Numeric competitive edge lies in its ability to provide high value-added UPS systems and service for customers.
For Numeric, creating value means providing solutions with low energy consumption. The Legrand Group also provides all products required for electrical and digital building installations, particularly as an integrated system, with solution to fit customer needs.

Tailor-made

We offer a complete range of specific solutions and services to meet customer requirements:
- Technical pre-sales support
- UPS sizing and solution
- Supervision of installation, testing and commissioning.
- Operator training
- Site audits
- Warranty extension offers
- Annual maintenance contract

SERVICES

Today a business is in always ON mode with zero-tolerance for downtime. Numeric offers a wide range of products that promise seamless quality power solutions for all kinds of consumers – industrial, commercial and residential. The range of power solutions covers 3P, 2P and LI across power needs.

Support

SITE INSPECTION, INSTALLATION SUPERVISION.
Numeric UPS' safe and fault-free operations start at the time of installation. A team of technical experts from Numeric visit the UPS site to perform a comprehensive check of the environment. The site engineer or electrical contractor is informed of their recommendations. The installation is supervised by the Numeric technical team.

SITE TEST, COMMISSIONING.
After the installations, the UPS is subjected to rigorous site tests. The UPS is configured according to user's requirements and completely set-up before going live. After successful testing, the UPS is handed over with the installation report.

Training

TRAINING
On-site training is made available to ensure the safe and efficient operation of the equipment. Hands-on training for the client's engineers and technical team can be arranged at Numeric's plants

Maintenance

PREVENTIVE MAINTENANCE
Optimal performance of the UPS require regular preventive maintenance operations, with parts replaced when needed. Numeric offers Service Contracts with Preventive Maintenance that include cleaning, UPS measurements, functional tests, technical reports (optional), battery health check up and software upgrades.

CORRECTIVE MAINTENANCE, EMERGENCY CALL
Engineers and spare parts stocks have been strategically located to handle emergencies. A powerful diagnostic software helps engineers identify the fault quickly and ensure short MTTR (Mean Time To Repair). The diagnosis further helps corrective actions such as part replacement, adjustments to be performed and return the UPS system back to normal.

Head Office

10th Floor, Prestige Center Court,
Office Block, Vijaya Forum Mall, 183,
N.S.K Salai, Vadapalani,
Chennai - 600 026.
Phone: +91 44 4656 5555

Regional Offices

New Delhi
A 25, 1st Floor, Mohan Co-Operative
Industrial Estate, Mathura Road,
New Delhi - 110 044.
Phone : +91 11 26990028 / 29 / 30

Kolkata
Bhakta Tower, Plot No. KB22,
2nd & 3rd Floor, Salt Lake City,
Sector - III, Kolkata - 700 098.
Phone : +91 33 4021 3535 / 3536

Mumbai
C/203, Corporate Avenue, Atul Projects,
Near Mirador Hotel, Chakala,
Andheri Ghatkopar Link Road,
Andheri (East), Mumbai - 400 099.
Phone : +91 22 3385 6201

Chennai
10th Floor, Prestige Center Court,
Office Block, Vijaya Forum Mall,
183, N.S.K Salai, Vadapalani,
Chennai - 600 026.
Phone : +91 44 3024 7236 / 200

Branch Offices

Chandigarh
SCO 4, First Floor, Sector 16,
Panchkula, Chandigarh - 134 109.
Phone : +91 93160 06215

Dehradun
Unit-1 and 2, Chakrata Road,
Vijay Park Dehradun – 248001.
Uttrakhand
Phone : +91 135 272 9649

Jaipur
Plot No. J-6, Scheme-12B,
Sharma Colony, Bais Godown,
Jaipur - 302 019.
Phone : +91 141 221 9082

Lucknow
209/B, 2nd Floor, Cyber Heights,
Vibhuti Khand, Gomti Nagar,
Lucknow - 226 018.
Phone : +91 93352 01364

Bhubaneswar
N-2/72 Ground Floor, IRC Village,
Nayapally, Bhubaneswar - 751 015.
Phone: +91 674 255 0760

Guwahati
House No 02,
Rajgarh Girls High School Road
(Behind Rajgarh Girls High School),
Guwahati - 781 007.
Phone : +91 361 245 0322/245 1987

Patna
204, Fraser Road, Hemplaza,
2nd Floor, Patna - 800 001.
Phone : +91 612 220 0657

Ranchi
202 & 203, Bardwan Compound,
Lalpur, 2nd Floor, Ranchi - 834 001.
Phone : +91 651 221 4071

Ahmedabad
A-101/102, Mondeal Heights,
Beside Hotel Novotel, Near Iscon Circle,
S G Highway, Ahmedabad - 380 015.
Phone : +91 79 6134 0555

Bhopal
Plot No. 2, 221, 2nd Floor,
Akansha Complex, Zone-1,
M.P.Nagar, Bhopal– 462 011.
Phone : +91 755 276 4202

Nagpur
Plot.No.174, H.No.4181/C/174, 1st Floor,
Loksewa Housing Society, Near Dr. Umathe
& Mokhare College, Bhamti Road,
Lokseva Nagar, Nagpur - 440 022.
Phone : +91 712 228 6991 / 228 9668

Pune
Pinacle 664 park avenue, 8th floor,
Plot no 102+103, CTS No. 66/4,
Final, 4, Law College Rd, Erandwane,
Pune, Maharashtra - 411 004.
Phone : +91 84 5201 4036

Bengaluru
No-58, First Floor, Firoze White Manor,
Bowring Hospital Road,
Shivajinagar, Bangalore -560 001.
Phone : +91 80 6822 0000

Coimbatore
No. B-15, Thirumalai Towers, No. 723,
4th Floor, Avinashi Road, Coimbatore - 641 018.
Phone : +91 422 420 4018

Hyderabad
No. 205-208, 2nd Floor, Block 2,
White House Kundan Bag, Begumpet,
Hyderabad - 500 016.
Phone : +91 40 4567 1732

Kochi
Door No. 50/1107A9, JB Manjooran Estate,
3rd Floor, Bypass Junction,
Edappally, Kochi – 682 024.
Phone : +91 484 2801 921

Madurai
12/2, Dsp Nagar,
Madurai - 625 016.
Phone : +91 452 260 4555

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NUMERIC®

A Group brand | legrand®

Sales - enquiry.numeric@numericups.com
Service - support.numeric@numericups.com
TOLL FREE No.: 1800 425 3266
www.numericups.com