

NUMERIC®

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# Keor HPE

## THREE-PHASE UPS

From 60 to 500 kW



NEW ENERGY  
TO POWER



[www.numericups.com](http://www.numericups.com)

# Keor HPE

## THREE-PHASE UPS

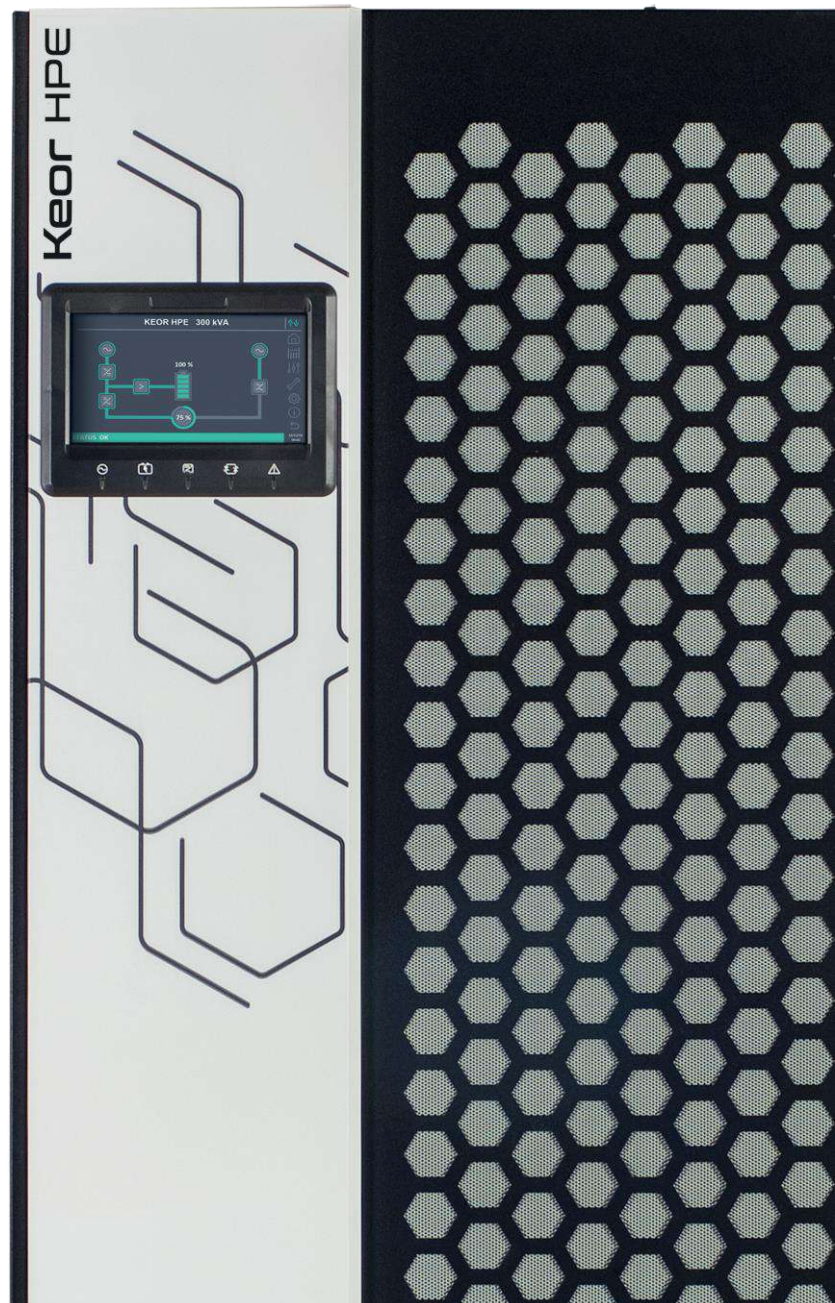
**Keor** HPE UPS is a high efficiency Online Double Conversion UPS with latest generation 3-level IGBT technology. It supplies a rated power of 60-80-100-125-160-200-250-300-400-500 kW and can be connected in parallel and have N + X redundancy up to a maximum of 6 units.

**Keor** HPE is the ideal solution for medium and large power critical applications (tertiary, hospital, industry, transport) where continuity of service, high quality power supply and reduced consumption are required.



## New aesthetics

The refinement of the design and the careful choice of materials reflect the performance and reliability characteristics of the **Keor** HPE family. The new door with white panel, the new touch screen displays and the hexagonal motif, also reflected in the ventilation grids enrich the product, combining technology and design.



## Smart Display

The new **Keor** HPE is equipped with smart, interactive, simple and intuitive displays, thanks to which it is possible to view the operating parameters of the UPS, selecting the preferred language. The displays are supplied in 2 different versions: 7 inch LCD for 60 -160 kW models  
10 inch touch screen LCD for 200-500 kW models.

# Keor HPE

## High efficiency and low TCO

**Keor HPE** is designed to reduce losses and lower management costs. The high yields (certified by external laboratories) guarantee low operating costs. Transformer-free technology and configurations with internal batteries facilitate installation and optimise space in technical rooms.

## Greater power density

The 60 and 80 kW models have optimised dimensions in a volume of 0.78 m<sup>3</sup>.

## Power factor

The modern power circuit architecture allows for load supply with maximum active power.

## Input phase auto correction

UPS rectifier is designed to operate in mains even during the mains input phase reversal, avoid discharge of batteries, which increases life cycle of the batteries.

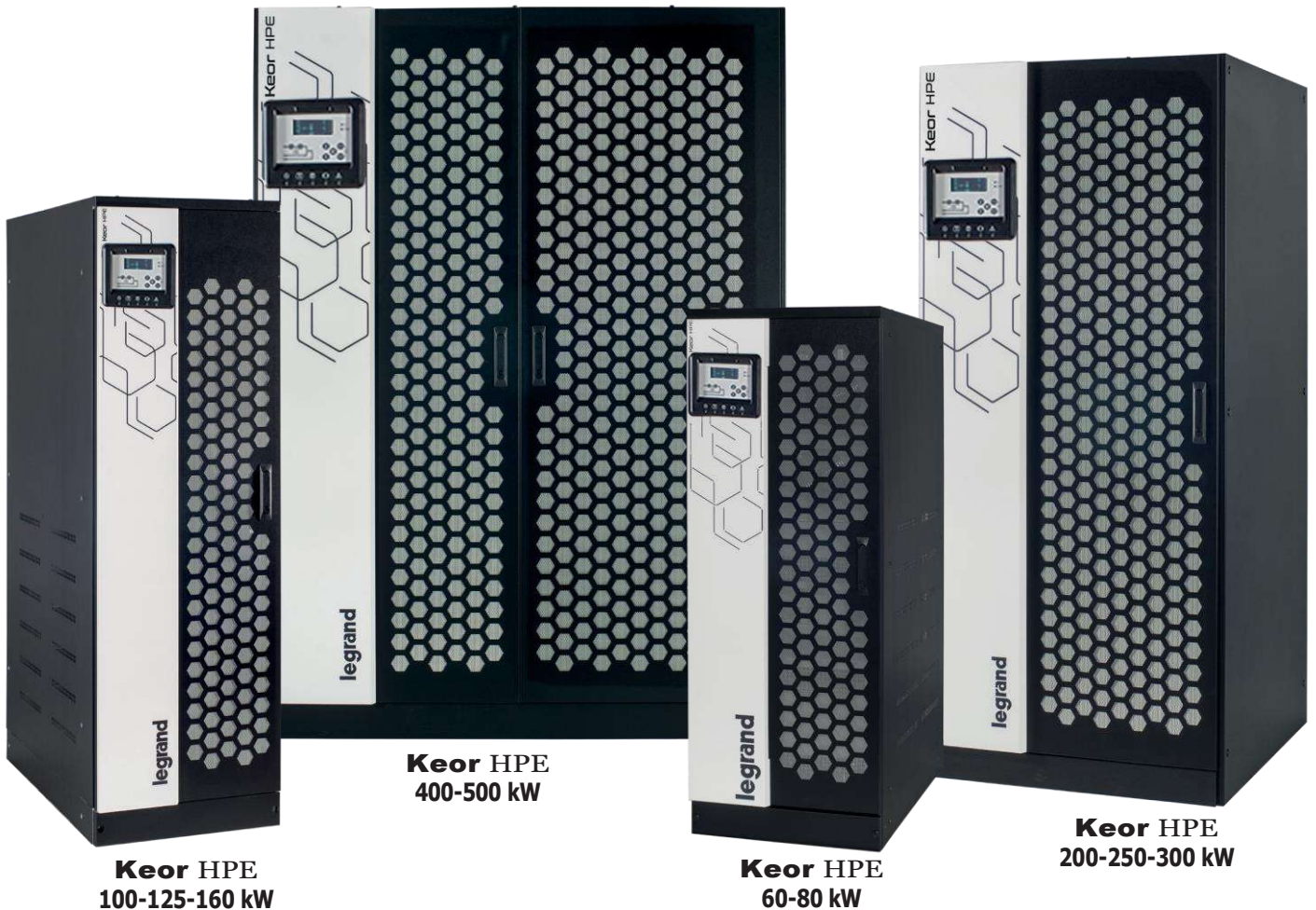
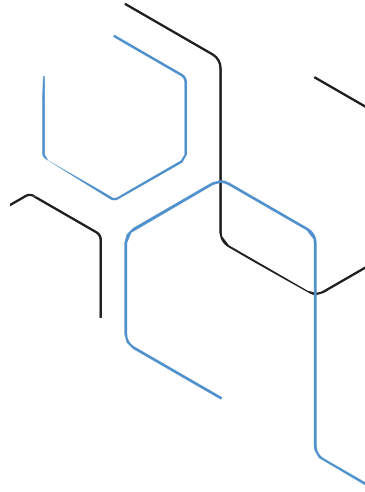


## Front internal access

The **Keor** HPE UPS is designed to be installed and maintained from the front. All the protection switches and communication ports are located on the front of the UPS. A practical internal door also allows you to reach the parts installed on the bottom of the UPS, in order to have maximum access to all the components. The simplicity of access to all parts subject to maintenance, significantly reduces **MTTR**, that is the **average machine repair time**.

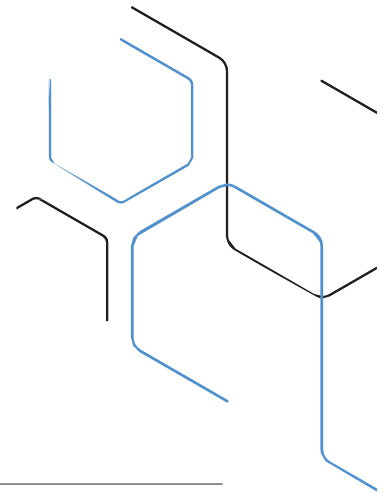
## Internal batteries

The 60 and 80 kW versions can contain batteries, allowing standard levels of autonomy without relying on external batteries.



NOTE: front internal access is not possible in the 2 60 and 80 kW compact models.

# Keor HPE



## Parallel capacity

Up to 6 units can be connected in parallel, achieving maximum 3 MW power.

## Redundancy

The possibility of connecting up to 6 UPSs in parallel allows for maximum service continuity and system safety.

## Back feed detection

All units have contacts to activate (optional) voltage back feed protection.

## Isolation transformers

Available for the entire **Keor** HPE family, as optional external accessories. Inbuilt option available for 60 & 80 kVA.

## OPTIMAL BATTERY MANAGEMENT

**Keor** HPE includes advanced battery charging and management functions, which guarantee the best performance and maximum operating life.

### Intermittent charging

with adjustable cycle (27-3 standard), to extend the effective life and obtain maximum energy savings.

### Automatic current charging

regulation with load power priority, to quickly charge batteries for long autonomies.

### Voltage charge

compensation according to temperature, to avoid excessive charges and overheating. Temperature probe included in all units.



# Keor HPE 60-80-100-125-160-200-250-300-400-500

Conventional UPS - Online three-phase double conversion VFI



### Characteristics

- Power from 60 to 500 kW
- Three-phase UPS
- IGBT rectifier
- High efficiency
- Digital signal processor (DSP)
- High input power factor (PFC) value
- High output power factor value
- Low input and output harmonic distortion values (THD)
- Compatibility with power supply units
- Parallel capacity up to 6 units
- Communication ports
- RS-485 ModBus interface
- Optimised cooling system

Model	UPS (with internally installable batteries)				
	Apparent power (kVA)	Active power (kW)	Autonomy (min.)	Dimensions H x W x D (mm)	Net weight (kg)
9 605 66	60	60	up to 16	1500 x 560 x 940	250
9 605 68	80	80	up to 11	1500 x 560 x 940	300

Model	UPS (without batteries)				
	Apparent power (kVA)	Active power (kW)	Autonomy (min.)	Dimensions H x W x D (mm)	Net weight (kg)
9 605 65	60	60	-	1500 x 560 x 940	250
9 605 67	80	80	-	1500 x 560 x 940	300
9 605 69	100	100	-	1800 x 560 x 940	320
9 605 70	125	125	-	1800 x 560 x 940	360
9 605 71	160	160	-	1800 x 560 x 940	380
9 605 72	200	200	-	1975 x 850 x 953	720
9 535 00	250	250	-	1975 x 850 x 953	850
9 535 01	300	300	-	1975 x 850 x 953	900
9 535 02	400	400	-	1978 x 1430 x 970	1080
9 535 03	500	500	-	1978 x 1430 x 970	1250

### Accessories

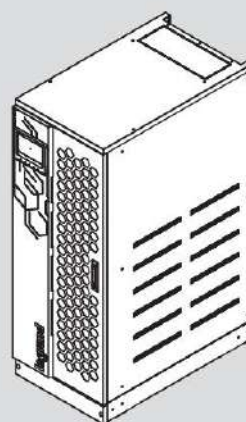
- 9 535 16 Parallel board kit
- Battery charging with temperature compensation
- Synchronisation kit on two UPS\*
- (1) Synchronisation kit on two UPS units in parallel\*
- Transformer
- 7" touch screen display (for Keor HPE 60-160)

(1) Options to be defined at order.

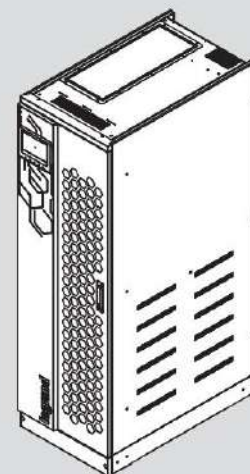
\* to create two synchronous but independent power lines (typical in Tier III, IV systems)

NOTE: the stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.

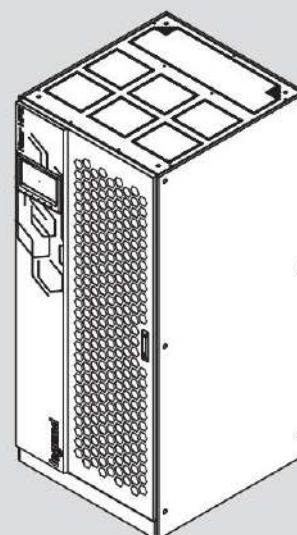
### Keor HPE 60-80 kW



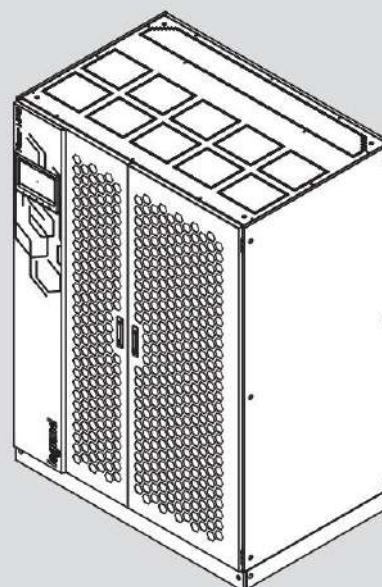
### Keor HPE 100-125-160 kW



### Keor HPE 200-250-300 kW



### Keor HPE 400-500 kW



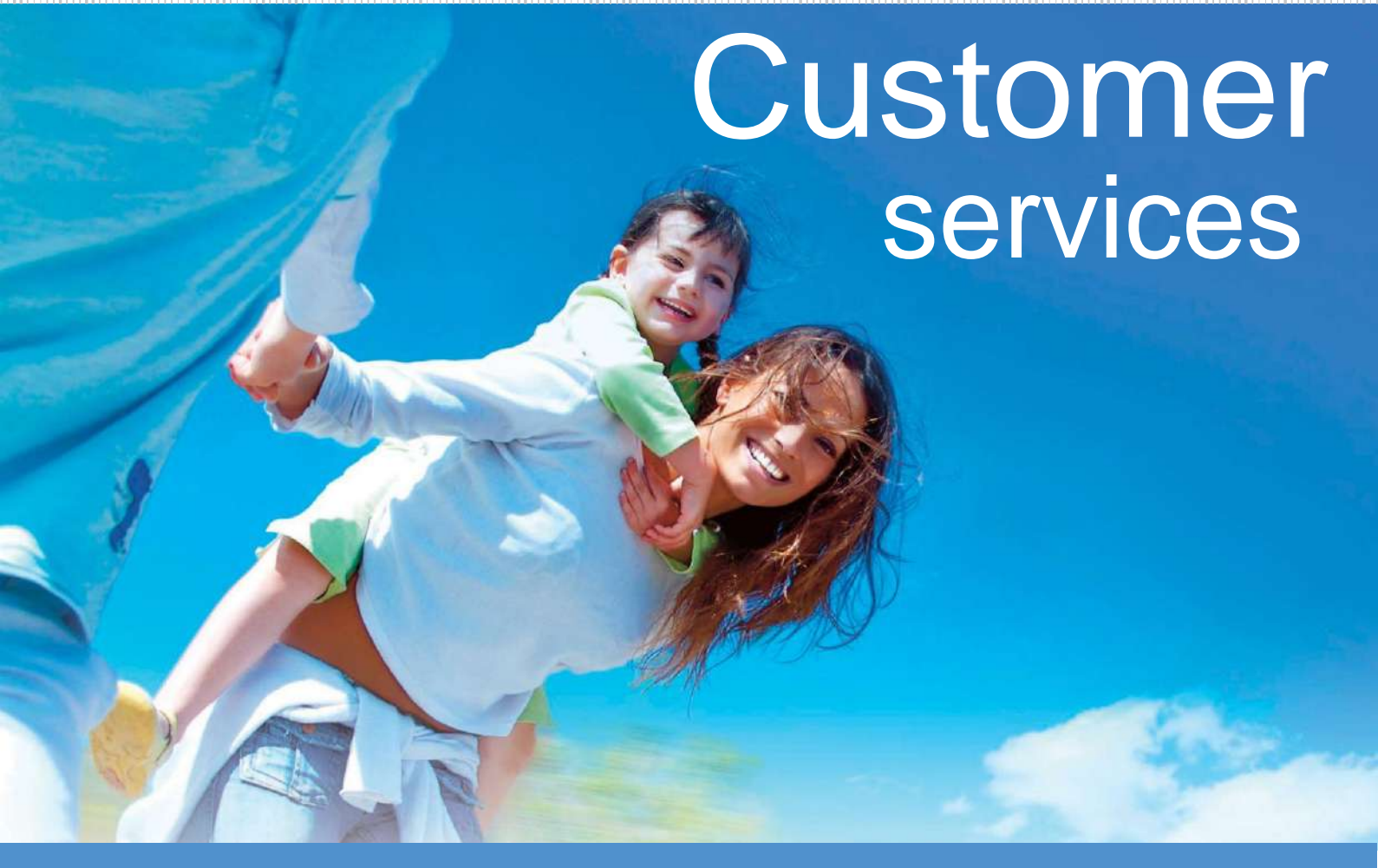
# Keor HPE 60-80-100-125-160-200-250-300-400-500

## Conventional UPS - Online three-phase double conversion VFI

### Characteristics

General specifications	60	80	100	125	160	200	250	300	400	500	
Apparent power (kVA)	60	80	100	125	160	200	250	300	400	500	
Active power (kW)	60	80	100	125	160	200	250	300	400	500	
Technology	On-Line Double Conversion VFI-SS-111										
Waveform	Sinusoidal										
UPS architecture	Conventional UPS with parallel capacity up to 6 units										
<b>Input</b>											
Input voltage	380-400-415 V 3Ph+N										
Input frequency	50-60 Hz (45-65Hz)										
Input voltage range	400 V -20% / + 15%										
THD Input Current	< 3% (with rated load)										
Compatibility with power supply units	Configurable to achieve synchronism between the input and output frequencies also for larger frequency ranges										
Input power factor	> 0.99 (with rated load)										
<b>Output</b>											
Output voltage	380, 400, 415 V 3Ph+N										
Efficiency	Up to 96%					Up to 96.4%					
Output frequency (apparent)	50 /60 Hz										
Crest factor	3:1										
THD Output Voltage	<1% (with linear load), <5% (with non-linear load)										
Output voltage tolerance	± 1% (with balanced load)										
Overload capacity	10 minutes at 125%, 30 seconds at 150% 0.1 seconds >150%					10 minutes at 110%, 5 minutes at 125%, 30 seconds at 150%, 0.1seconds >150%					
Efficiency in Eco Mode	> 98%										
Bypass	Automatic and maintenance bypass										
<b>Batteries</b>											
Internal battery autonomy (min.)	12	11	-	-	-	-	-	-	-	-	
Autonomy expansion	Yes with additional battery cabinets										
Battery series type/voltage	VRLA - AGM Lead-acid, sealed, maintenance-free										
Battery test	Automatic or manual										
Battery charger	IU (DIN41773)										
<b>Communication and management</b>											
LCD display	LCD and LED display for real-time monitoring of the UPS status 4 buttons for menu navigation (7" touch display optional)					10" touch-screen display to monitor UPS status in real-time					
Communication ports	Relay contact board, RS232, USB, Net Interface Slot (Optional: Mod-Bus RS485, SNMP-Ethernet)										
Alarms and signals	Configurable acoustic alarms and signals										
Emergency Power Off (EPO)	Yes										
Remote management	Available										
Battery temperature probe	Yes (optional)										
<b>Mechanical features</b>											
Dimensions (H x L x D) (mm)	1500 x 560 x 940			1800 x 560 x 940			1975 x 850 x 966			1978 x 1430 x 970	
Net weight (kg)	250	300	320	360	380	720	850	900	1080	1250	
<b>Ambient Conditions</b>											
Operating temperature (°C)	0 - 40										
Relative humidity (%)	< 95% non condensing										
Protection rating	IP20										
Noise at 1 mt from the unit (dBA)	< 60					< 65			< 72		
<b>Conformity</b>											
Certifications	EN 62040-1, EN 62040-2, EN 62040-3										





# 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.

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