Keor HP

THREE-PHASE UPS
from 60 to 800 kVA





GLOBAL SPECIALIST IN ELECTRICAL
AND DIGITAL BUILDING INFRASTRUCTURES

legrand®

SUSTAINABILITY

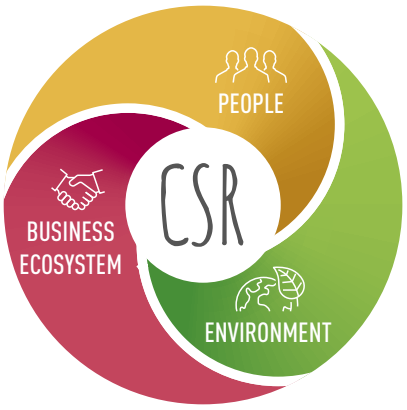
Corporate Social Responsibility

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.



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.

Legrand **UPS**

SUPERIOR performance
SERVICE continuity
and ENERGY efficiency

Legrand, world leader in the manufacture of electrical equipment, offers an extensive range of solutions to meet all the needs of service sector installations, from structured cabling systems for data networks through to control and management of the installation, including trunking and distribution systems.

Incorporating an environmentally-friendly approach to technological development and to address a constantly changing market, Legrand is now offering its new range of UPS and additional functions to ensure maximum continuity of service for all installations.



Keor HP

the UPS with power up to 800kVA



Keor HP

Power UPS

The Three-Phase UPS range is available in three types of cabinet with total power rating up to 4.8 MVA





Keor HP 60-80-100-125-160

Compact size with the best balance between footprint and power

Integrated transformer for the galvanic separation between AC/DC side

Easy installation and maintenance

High efficiency up to 95%

Parallelable up to 4,8MVA

Output power factor 0,9



Keor HP 200-250-300



Keor HP 400-500-600-800

Keor HP

Flexible solutions

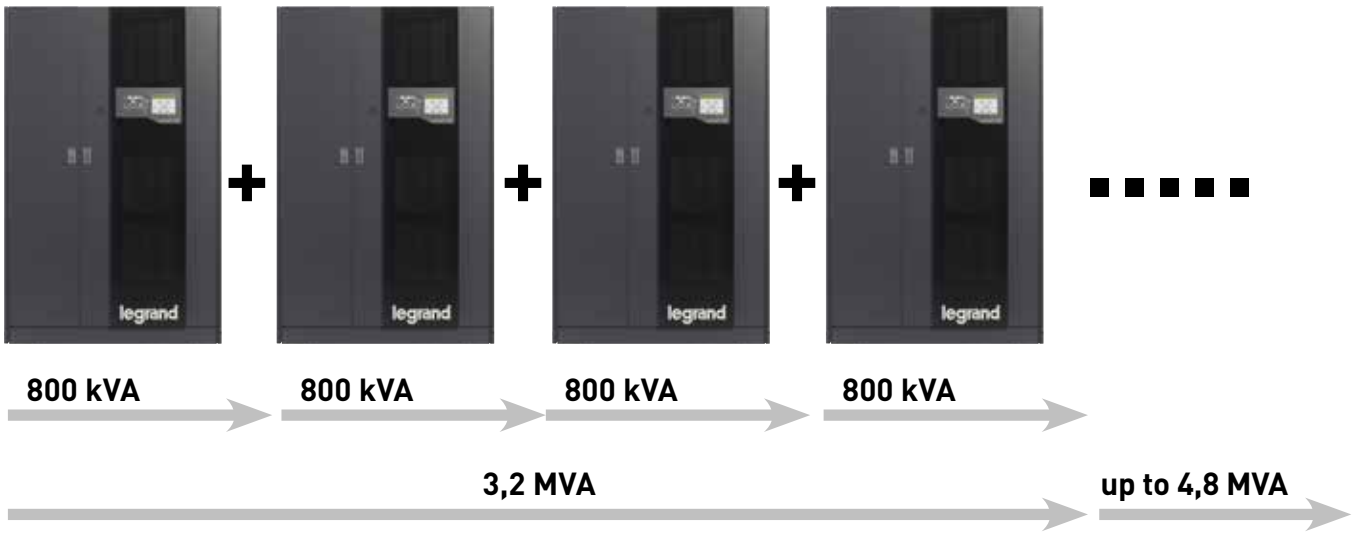
Easy installation and maintenance

The optimised cooling system enables to position the UPS against the wall and side by side with other equipment without affecting performance. Full front access permits easy installation and fast maintenance operation.

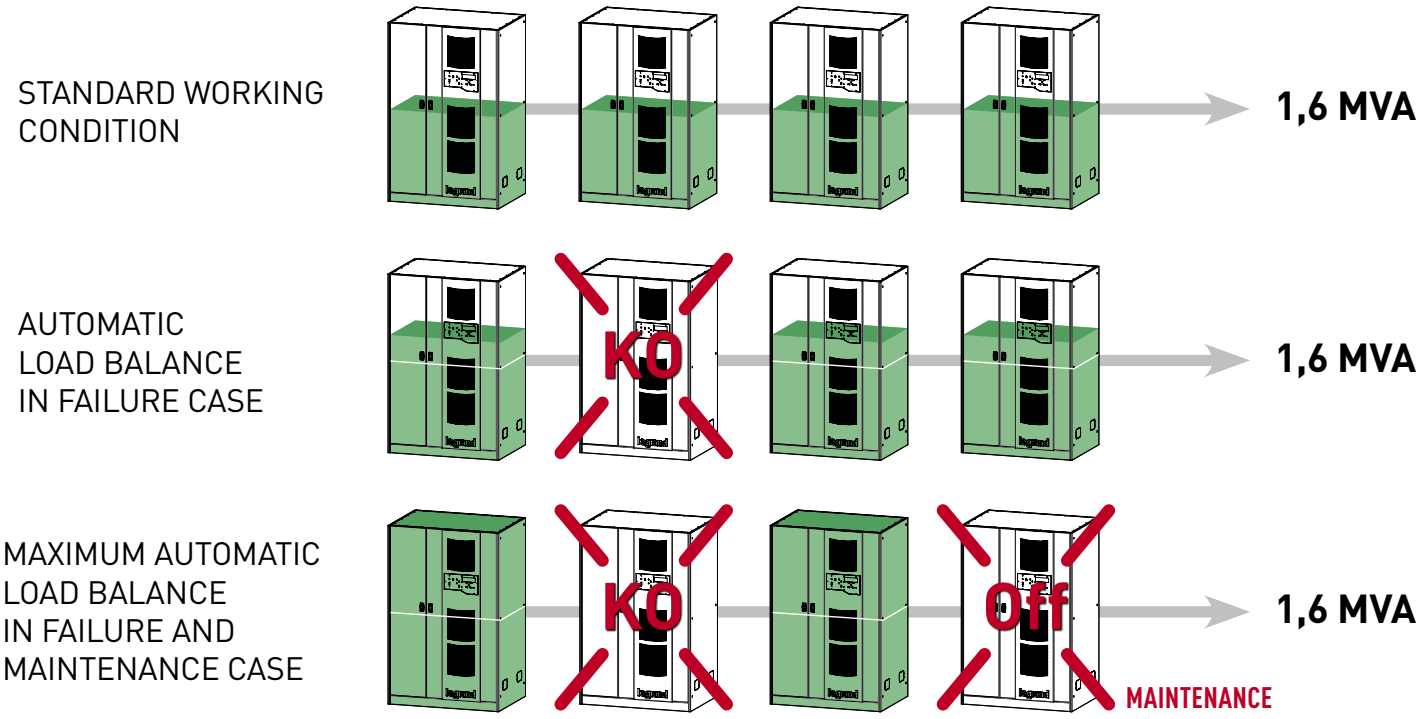


Parallelable up 6 units

TO INCREASE THE POWER
Depending on the power demand, it is possible to connect in parallel operation up to 6 units of the same power rating. This allows delivery of total power up to 4.8 MVA.



TO INCREASE THE SERVICE CONTINUITY
The parallel connections between the UPS enables to realize different levels of redundancy and obtain the maximum continuity of service.



Keor HP

When POWER takes care of the ENVIRONMENT







HIGH
EFFICIENY UP TO 95%

Replacing an existing UPS with the Keor HP allows immediate power savings for the same operational load.











HIGH
TECHNOLOGY (IGBT RECTIFIER)

Thanks to the input circuit with integrated PFC (IGBT rectifier technology) , the harmonic distorsion on the input line is significantly reduced (THDi<3%). The input power factor is almost unity (> 0.99).
These features make it highly compatible with the system upstream of the UPS without requiring additional filtering or over sizing.



LOW
ENVIRONMENTAL IMPACT 30% less CO_2 emission

The innovative technology of Keor HP allows:
- high performances
- reduction in power and cooling consumption
- minimum footprint
- minimum cost of infrastructure and management.

KEOR HP 60-80-100-125-160-200-250-300

Conventional UPS - Three-phase On-line double conversion VFI



KEOR HP 100



KEOR HP 200

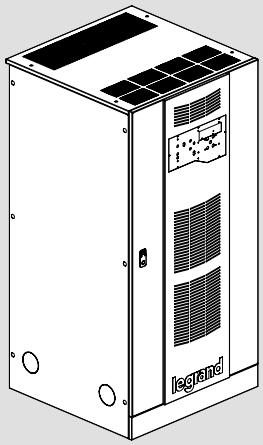
Model	UPS (without batteries)			
	Nominal power kVA	Active power kW	Dimensions H x W x D (mm)	Net weight (kg)
Keor HP 60	60	54	1670 x 815 x 825	570
Keor HP 80	80	72	1670 x 815 x 825	600
Keor HP 100	100	90	1670 x 815 x 825	625
Keor HP 125	125	112,5	1670 x 815 x 825	660
Keor HP 160	160	144	1670 x 815 x 825	715

Model	UPS (without batteries)			
	Nominal power kVA	Active power kW	Dimensions H x W x D (mm)	Net weight (kg)
Keor HP 200	200	180	1905 x 1220 x 870	970
Keor HP 250	250	225	1905 x 1220 x 870	1090
Keor HP 300	300	270	1905 x 1220 x 870	1170

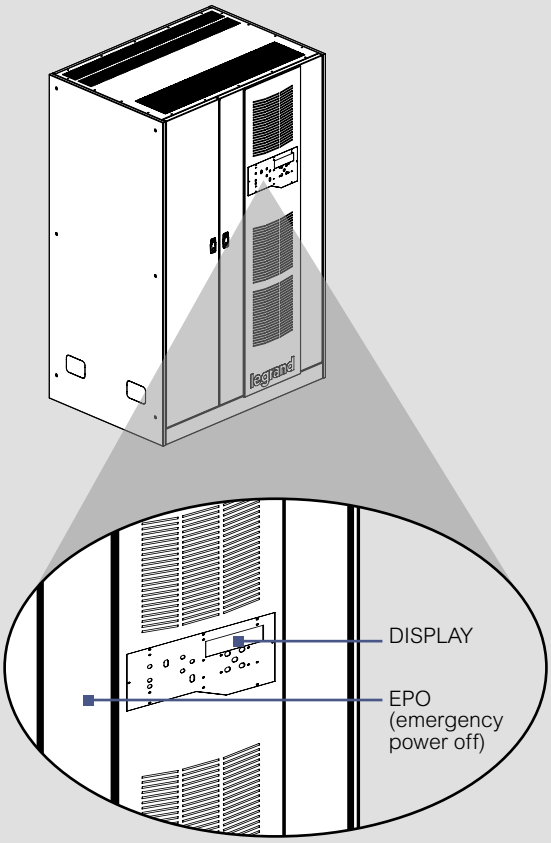
Options

Description
Empty battery cabinet with cables and protection
Batteries 5 years / 10 years life time in cabinets or racks
Battery switch box with protection: fuses
Battery monitoring system
BY PASS insulation transformer
External maintenance by-pass
Top entry cable cabinet
Remote control panel

Keor HP 60-80-100-125-160



Keor HP 200-250-300



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

KEOR HP 60-80-100-125-160-200-250-300

Conventional UPS - Three-phase On-line double conversion VFI

Characteristics

General characteristics	60	80	100	125	160	200	250	300
Nominal power (kVA)	60	80	100	125	160	200	250	300
Active power (kW)	54	72	90	112,5	144	180	225	270
Technology	On-line double conversion VFI-SS-111							
Waveform	Sinusoidal							
Architecture	Conventional UPS, parallelable up to 6 unit							
Input characteristics								
Input voltage	380-415 V 3Ph+N							
Input frequency	50-60 Hz ± 10% autosensing							
Input voltage range	400 V -20% / + 15%							
THD of input current	< 3%							
Compatibility with diesel generators	Configurable for synchronism between the input and output frequencies, even for the highest frequency variations							
Input power factor	> 0,99							
Output characteristics								
Output voltage	380, 400, 415 V 3Ph+N selected							
Efficiency	up to 95%							
Output frequency (nominal)	50 /60 Hz selected ± 0,001%							
Crest factor	3:1							
THD of output voltage	<5% (with non-linear load)							
Output voltage tolerance	± 1% (with balance load)							
Overload capacity	10 minutes at 125%, 60 seconds at 150%, 10 seconds at 200%							
Efficiency in Eco mode	98%							
Bypass	Built-in Automatic and Maintenance By-pass							
Batteries								
Backup time extension	Scalable with additional battery cabinets							
Battery type	VRLA - AGM Maintenance-free Lead Acid Batteries							
Battery test	Automatic or manual							
Battery Recharge Profile	IU (DIN41773)							
Communication and management								
LCD Display	Four LED's to show status at a glance. Four menu-driven interface buttons. Four status at a glance LEDs							
Communication Ports	RS232 and USB serial ports (Optional RS485)							
Audible Alarm	Acoustic alarms and warnings, configurable delays							
Configuration Setting	Auto configuration by firmware, or manual by service engineer							
Net Interface Slot	Built-in dry contact PCB, optional SNMP card							
Emergency Power Off (EPO)	Yes							
Remote Management	Available							
Battery temperature probe	Yes							
Physical characteristics								
Dimensions H x W x D (mm)	1670 x 815 x 825					1905 x 1220 x 870		
Net Weight (kg)	570	600	625	660	715	970	1090	1170
Dimensions battery cabinet H x W x D (mm)	1900 x 1400 x 830 (50 batteries) 1900 x 2800 x 830 (100 batteries)					1900 x 1400 x 860 (50 batteries) 1900 x 2800 x 860 (100 batteries)		
Ambient conditions								
Operating temperature (°C)	0÷40							
Relative humidity (%)	< 95% not condensing							
Protection index	IP20							
Noise at 1 m (dBA)	< 60					< 62		
Estimated content of circular economy derived materials	**11%**							
Recyclability rate calculated using the method described in technical report IEC/TR 62635*	**69%**							
Certifications								
Reference product standards	EN 62040-1, EN 62040-2, EN 62040-3							

*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.

KEOR HP 400-500-600-800

Conventional UPS - Three-phase On-line double conversion VFI



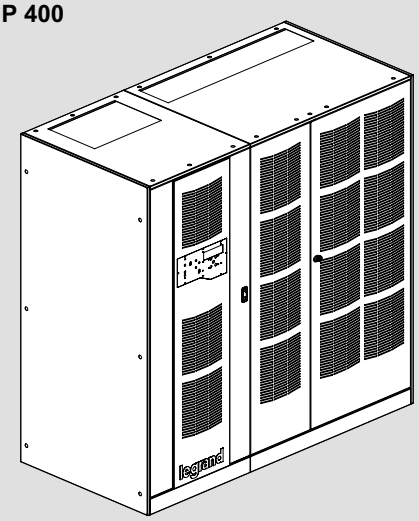
KEOR HP 400

Model	UPS (without batteries)			
	Nominal power kVA	Active power kW	Dimensions A X L X P (mm)	Net weight (kg)
Keor HP 400	400	360	1920 x 1990 x 965	1820
Keor HP 500	500	450	2020 x 2440 x 950	2220
Keor HP 600	600	540	2020 x 2440 x 950	2400
Keor HP 800	800	720	1920 x 3640 x 950	3600

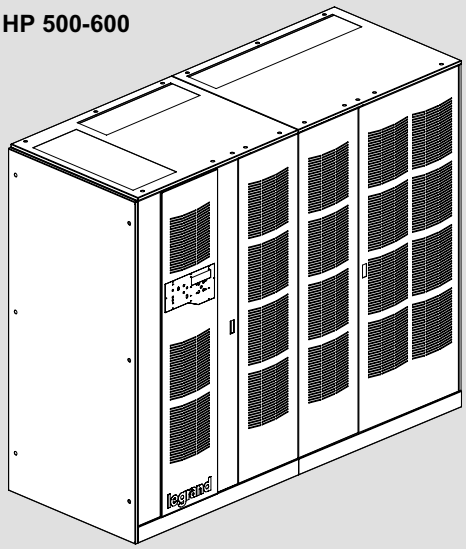
Options

Description
Empty battery cabinet with cables and protection
Batteries 5 years / 10 years life time in cabinets
Battery switch box with protection : fuses
Battery monitoring system
BY PASS insulation transformer
External maintenance by-pass
Top entry cable cabinet
Remote control panel

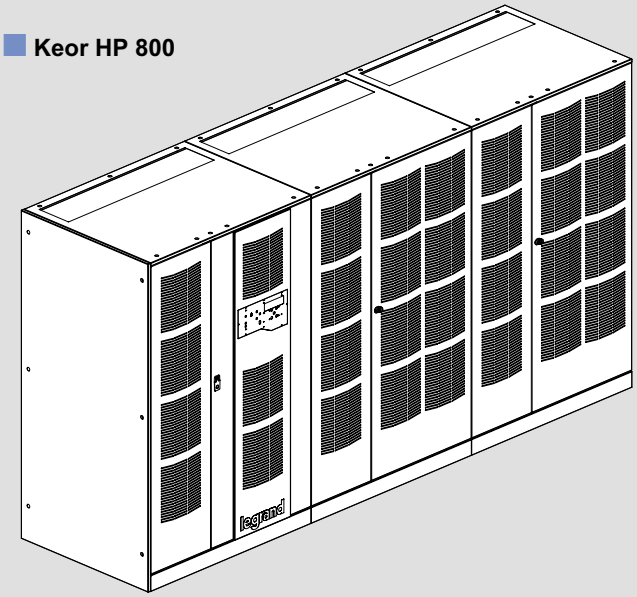
Keor HP 400



Keor HP 500-600



Keor HP 800



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

KEOR HP 400-500-600-800

Conventional UPS - Three-phase On-line double conversion VFI

Characteristics

General characteristics	400	500	600	800
Nominal power (kVA)	400	500	600	800
Active power (kW)	360	450	540	720
Technology	On-line double conversion VFI-SS-111			
Waveform	Sinusoidal			
Architecture	Conventional UPS, parallelable up to 6 unit			
Input characteristics				
Input voltage	380-415 V 3Ph+N			
Input frequency	50-60 Hz ± 10% autosensing			
Input voltage range	400 V -20% / + 15%			
THD of input current	<3%			
Compatibility with diesel generators	Configurable for synchronism between the input and output frequencies, even for the highest frequency variations			
Input power factor	>0,99			
Output characteristics				
Output voltage	380, 400, 415 V 3Ph+N selected			
Efficiency	up to 95%			
Output frequency (nominal)	50 /60 Hz selected ± 0,001%			
Crest factor	3:1			
THD of output voltage	<5% (with non-linear load)			
Output voltage tolerance	± 1% (with balance load)			
Overload capacity	10 minutes at 125%, 60 seconds at 150%, 10 seconds at 200%			
Efficiency in Eco mode	>98%			
Bypass	Built-in Automatic (optional Maintenance Bypass)			
Batteries				
Backup time extension	Scalable with additional battery cabinets			
Battery type	VRLA - AGM Maintenance-free Lead Acid Batteries			
Battery test	Automatic or manual			
Battery Recharge Profile	IU (DIN41773)			
Communication and management				
LCD Display	Four LED's to show status at a glance. Four menu-driven interface buttons. Four status at a glance LEDs			
Communication Ports	RS232 and USB serial ports (Optional RS485)			
Audible Alarm	Acoustic alarms and warnings, configurable delays			
Configuration Setting	Auto configuration by firmware, or manual by service engineer			
Net Interface Slot	Built-in dry contact PCB, optional SNMP card			
Emergency Power Off (EPO)	Yes			
Remote Management	Available			
Battery temperature probe	Yes			
Physical characteristics				
Dimensions H x W x D (mm)	1920 x 1990 x 965	2020 x 2440 x 950	2020 x 2440 x 950	1920 x 3640 x 950
Net Weight (kg)	1820	2220	2400	3600
Dimensions battery cabinet H x W x D (mm)	1900 x 2800 x 860 (100 batteries)		-	
Ambient conditions				
Operating temperature (°C)	0÷40			
Relative humidity (%)	<95% not condensing			
Protection index	IP20			
Noise at 1 m (dBA)	<62			
Estimated content of circular economy derived materials	**11%**			
Recyclability rate calculated using the method described in technical report IEC/TR 62635*	**69%**			
Certifications				
Reference product standards	EN 62040-1, EN 62040-2, EN 62040-3			

*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 more than 70 countries and servicing its products in more than 150 countries worldwide, a team of qualified engineers is available to support your UPS system to ensure power quality and availability to the most critical loads.

Excellent

Legrand's competitive edge lies in its ability to provide high value-added UPS systems and services for both end users and business partners.
For Legrand, creating value means coming up with solutions for lower energy consumption, but also integrating product design into the overall development process. With around 200 000 catalogue items, the Group also provides all products required for electrical and digital building installations, particularly as integrated systems, finding solutions to fit everyone's needs.

Tailor-made

Legrand offers a complete range of specific solutions and services to meet customer requirements:
- Technical pre-sales support at the project design stage
- Factory acceptance test
- Supervision of installation, testing and commissioning, site acceptance test
- Operator training
- Site audit
- Warranty extension
- Annual maintenance contract
- Fast intervention on emergency call

SUPPORT



SITE INSPECTION, INSTALLATION SUPERVISION.
We perform a comprehensive check of the UPS environment to ensure safety and fault-free operation.
Our technical experts give manufacturer's recommendations to the site engineer or electrical contractors, and supervise the UPS installation before load power-up.

SITE TEST, COMMISSIONING.
Our Service Engineers conduct rigorous site tests and full setting-up of the UPS system before going live. They also perform site acceptance tests according to your requirements.
Commissioning operations for all UPS are carried out by qualified engineers to guarantee seamless start-up.
After the final handing over of the UPS system, a Test and Commissioning report is delivered to you.

TRAINING



We offer on-site training to ensure your equipment's safe and efficient operation.
Troubleshooting courses are also available in our plants for intensive hands-on practice on UPS training equipment.

MAINTENANCE



PREVENTIVE MAINTENANCE
Electronic equipment and power systems, such as UPS, contain life-limited components and parts that must be replaced according to the manufacturer's specifications.
To ensure optimal performance and to protect your critical application from potential downtime, it is crucial to perform preventive maintenance operations on a regular basis and replace parts when needed. Our Service Contracts include cleaning, IR thermography, measurements, functional tests, event log and power quality analysis, battery health check, hardware and software upgrades, and technical reports.
A Preventive Maintenance Plan is one of the most cost-effective actions that can preserve your initial investment and ensure your business continuity.

CORRECTIVE MAINTENANCE, EMERGENCY CALL
In the event of an Emergency Call, our worldwide service network, with engineers and spare-parts stocks strategically located as close as possible to your site, guarantees a fast intervention time with 24/7/365 assistance.
After connecting his laptop to your UPS, very powerful diagnostic software helps our engineer to identify the fault, thus ensuring short MTTR (Mean Time To Repair).
Corrective actions are performed such as part replacement, adjustments and upgrades to return the UPS system back to normal operation.

NOTES



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AD-EXLGUPS-KH22B/GB - 06/2022