# KEOR HP

## THREE-PHASE UPS from 100 to 800 kVA


**GLOBAL SPECIALIST** IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES

legrand

# 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**
**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

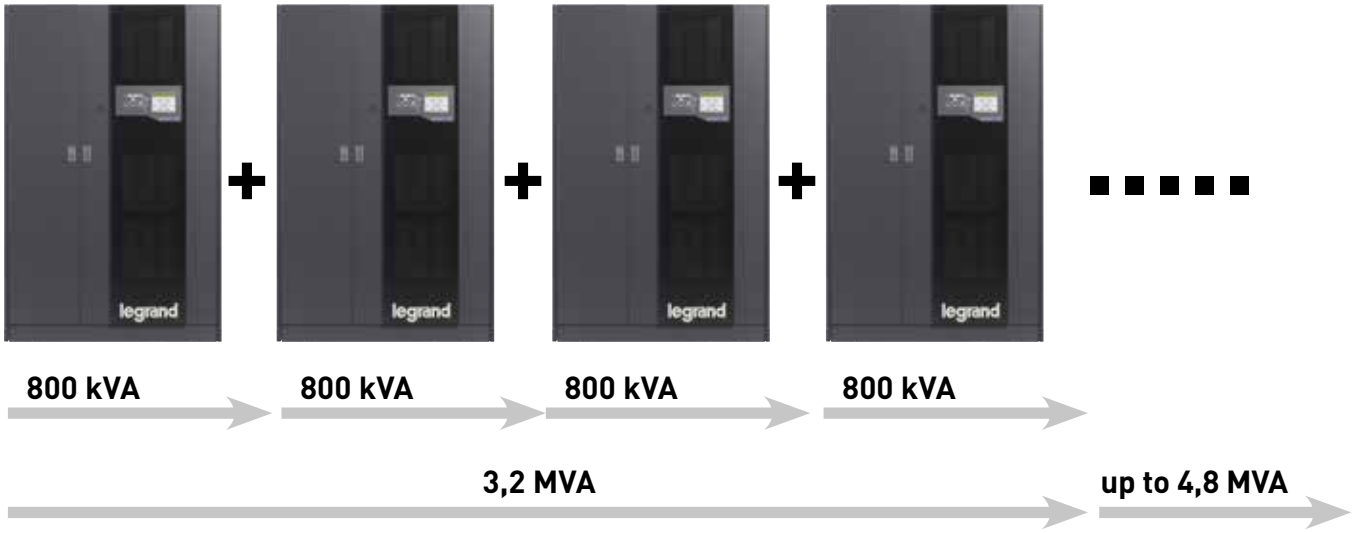
## EASY INSTALLATION AND MAINTENANCE

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

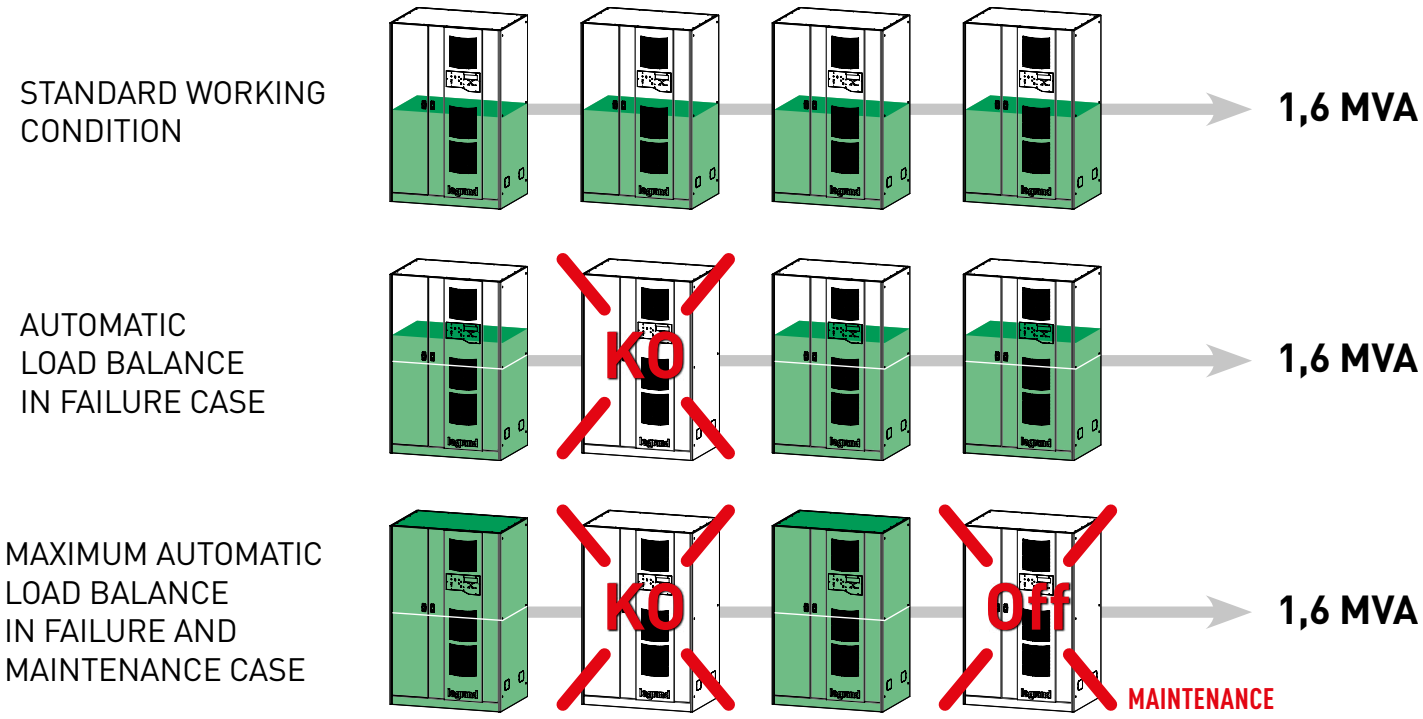
**TO INCREASE THE POWER**

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 100-125-160-200-250-300

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


KEOR HP 100


KEOR HP 200

## UPS (without batteries)

| Pack | Model | Nominal power kVA | Active power kW | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | KEOR HP 100 | 100 | 90 | 1670 x 815 x 825 | 625 |
| 1 | KEOR HP 125 | 125 | 112,5 | 1670 x 815 x 825 | 660 |
| 1 | KEOR HP 160 | 160 | 144 | 1670 x 815 x 825 | 715 |

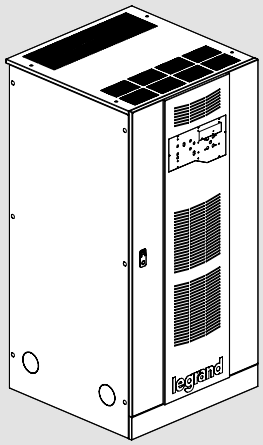
## UPS (without batteries)

| | | Nominal power kVA | Active power kW | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | KEOR HP 200 | 200 | 180 | 1905 x 1220 x 870 | 970 |
| 1 | KEOR HP 250 | 250 | 225 | 1905 x 1220 x 870 | 1090 |
| 1 | KEOR HP 300 | 300 | 270 | 1905 x 1220 x 870 | 1170 |

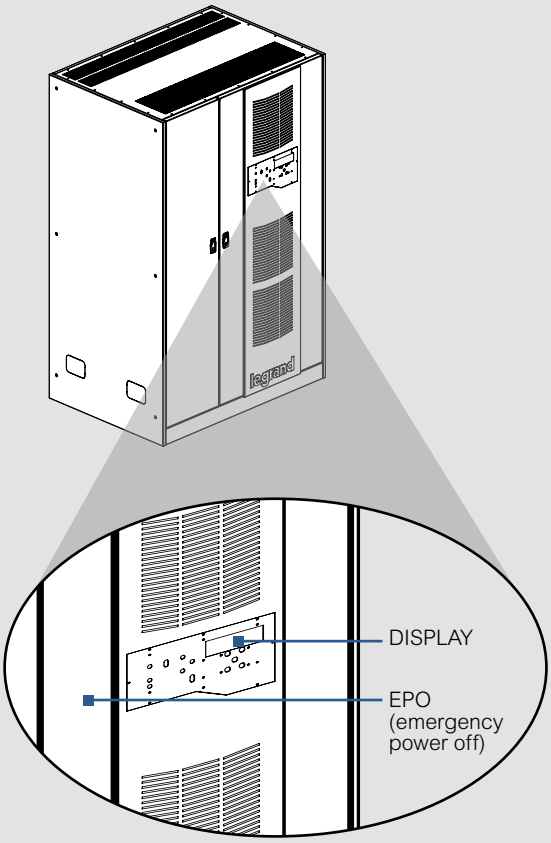
## Options

| | | Description |
|---|---|---|
| 1 | | Empty battery cabinet with cables and protection |
| 1 | | Batteries 5 years / 10 years life time in cabinets or racks |
| 1 | | Battery switch box with protection: fuses |
| 1 | | Battery monitoring system |
| 1 | | BY PASS insulation transformer |
| 1 | | External maintenance by-pass |
| 1 | | Top entry cable cabinet |
| 1 | | Remote control panel |

### Keor HP 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 100-125-160-200-250-300

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

## Characteristics

| General characteristics | 100 | 125 | 160 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|
| Nominal power (kVA) | 100 | 125 | 160 | 200 | 250 | 300 |
| Active power (kW) | 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) | 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 | | | 0÷40 | | |
| Relative humidity (%) | < 95% not condensing | | | < 95% not condensing | | |
| Protection index | IP20 | | | IP20 | | |
| Noise at 1 m (dBA) | < 60 | | | < 62 | | |
| **Certifications** | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | |

# KEOR HP 400-500-600-800

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

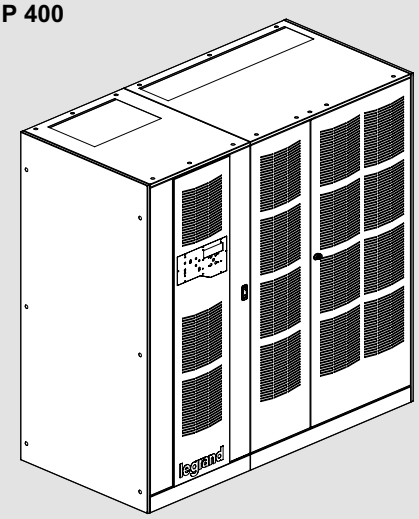

KEOR HP 400

| Pack | Model | UPS (without batteries) Nominal power kVA | Active power kW | Dimensions A X L X P (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | KEOR HP 400 | 400 | 360 | 1920 x 1990 x 965 | 1820 |
| 1 | KEOR HP 500 | 500 | 450 | 2020 x 2440 x 950 | 2220 |
| 1 | KEOR HP 600 | 600 | 540 | 2020 x 2440 x 950 | 2400 |
| 1 | KEOR HP 800 | 800 | 720 | 1920 x 3640 x 950 | 3600 |

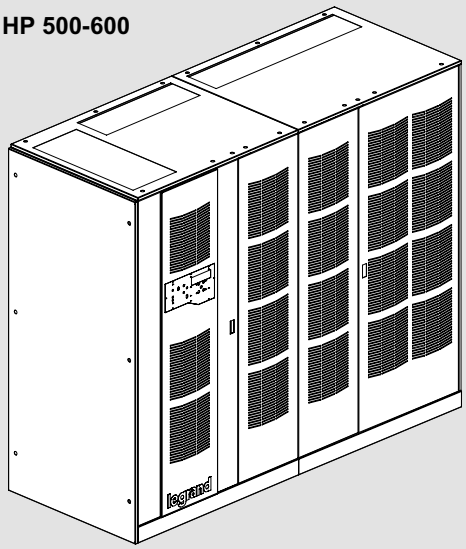
## Options

| Description |
|---|
| Empty battery cabinet with cables and protection |
| Batteries 5 years / 10 years life time in cabinets 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 |

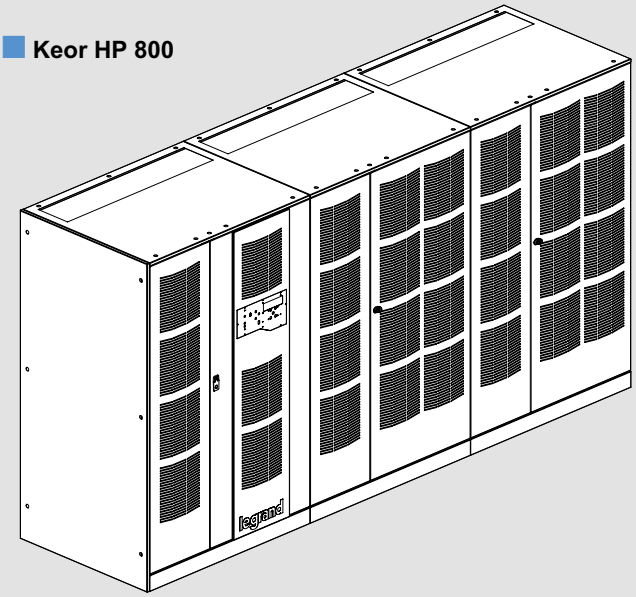
**Keor HP 400**




**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**

## Caratteristiche

| 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 | | | |
| **Certifications** | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | |

# 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 24/7/365 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

# SERVICES

## 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 KEOR HP 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

**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 KEOR HP, 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.

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